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# Closing times for **ORDINARY WEEKLY** **2019** **GOVERNMENT GAZETTE**

*The closing time is 15:00 sharp on the following days:*

- **27 December 2018**, Thursday for the issue of Friday **04 January 2019**
- **04 January**, Friday for the issue of Friday **11 January 2019**
- **11 January**, Friday for the issue of Friday **18 January 2019**
- **18 January**, Friday for the issue of Friday **25 January 2019**
- **25 January**, Friday for the issue of Friday **01 February 2019**
- **01 February**, Friday for the issue of Friday **08 February 2019**
- **08 February**, Friday for the issue of Friday **15 February 2019**
- **15 February**, Friday for the issue of Friday **22 February 2019**
- **22 February**, Friday for the issue of Friday **01 March 2019**
- **01 March**, Friday for the issue of Friday **08 March 2019**
- **08 March**, Friday for the issue of Friday **15 March 2019**
- **14 March**, Thursday for the issue of Friday **22 March 2019**
- **22 March**, Friday for the issue of Friday **29 March 2019**
- **29 March**, Friday for the issue of Friday **05 April 2019**
- **05 April**, Friday for the issue of Friday **12 April 2019**
- **11 April**, Thursday for the issue of Thursday **18 April 2019**
- **17 April**, Wednesday for the issue of Friday **26 April 2019**
- **25 April**, Thursday for the issue of Friday **03 May 2019**
- **03 May**, Friday for the issue of Friday **10 May 2019**
- **10 May**, Friday for the issue of Friday **17 May 2019**
- **17 May**, Friday for the issue of Friday **24 May 2019**
- **24 May**, Friday for the issue of Friday **31 May 2019**
- **31 May**, Friday for the issue of Friday **07 June 2019**
- **07 June**, Friday for the issue of Friday **14 June 2019**
- **13 June**, Thursday for the issue of Friday **21 June 2019**
- **21 June**, Friday for the issue of Friday **28 June 2019**
- **28 June**, Friday for the issue of Friday **05 July 2019**
- **05 July**, Friday for the issue of Friday **12 July 2019**
- **12 July**, Friday for the issue of Friday **19 July 2019**
- **19 July**, Friday for the issue of Friday **26 July 2019**
- **26 July**, Friday for the issue of Friday **02 August 2019**
- **01 August**, Thursday for the issue of Friday **08 August 2019**
- **08 August**, Thursday for the issue of Friday **16 August 2019**
- **16 August**, Friday for the issue of Friday **23 August 2019**
- **23 August**, Friday for the issue of Friday **30 August 2019**
- **30 August**, Friday for the issue of Friday **06 September 2019**
- **06 September**, Friday for the issue of Friday **13 September 2019**
- **13 September**, Friday for the issue of Friday **20 September 2019**
- **19 September**, Thursday for the issue of Friday **27 September 2019**
- **27 September**, Friday for the issue of Friday **04 October 2019**
- **04 October**, Friday for the issue of Friday **11 October 2019**
- **11 October**, Friday for the issue of Friday **18 October 2019**
- **18 October**, Friday for the issue of Friday **25 October 2019**
- **25 October**, Friday for the issue of Friday **01 November 2019**
- **01 November**, Friday for the issue of Friday **08 November 2019**
- **08 November**, Friday for the issue of Friday **15 November 2019**
- **15 November**, Friday for the issue of Friday **22 November 2019**
- **22 November**, Friday for the issue of Friday **29 November 2019**
- **29 November**, Friday for the issue of Friday **06 December 2019**
- **06 December**, Friday for the issue of Friday **13 December 2019**
- **12 December**, Thursday for the issue of Friday **20 December 2019**
- **18 December**, Wednesday for the issue of Friday **27 December 2019**

# LIST OF TARIFF RATES FOR PUBLICATION OF NOTICES

**COMMENCEMENT: 1 APRIL 2018**

## NATIONAL AND PROVINCIAL

Notice sizes for National, Provincial & Tender gazettes 1/4, 2/4, 3/4, 4/4 per page. Notices submitted will be charged at R1008.80 per full page, pro-rated based on the above categories.

Pricing for National, Provincial - Variable Priced Notices		
Notice Type	Page Space	New Price (R)
Ordinary National, Provincial	1/4 - Quarter Page	252.20
Ordinary National, Provincial	2/4 - Half Page	504.40
Ordinary National, Provincial	3/4 - Three Quarter Page	756.60
Ordinary National, Provincial	4/4 - Full Page	1008.80

## EXTRA-ORDINARY

All Extra-ordinary National and Provincial gazette notices are non-standard notices and attract a variable price based on the number of pages submitted.

The pricing structure for National and Provincial notices which are submitted as **Extra ordinary submissions** will be charged at **R3026.32** per page.

## GOVERNMENT PRINTING WORKS - BUSINESS RULES

The **Government Printing Works (GPW)** has established rules for submitting notices in line with its electronic notice processing system, which requires the use of electronic *Adobe* Forms. Please ensure that you adhere to these guidelines when completing and submitting your notice submission.

### CLOSING TIMES FOR ACCEPTANCE OF NOTICES

1. The *Government Gazette* and *Government Tender Bulletin* are weekly publications that are published on Fridays and the closing time for the acceptance of notices is strictly applied according to the scheduled time for each gazette.
2. Please refer to the Submission Notice Deadline schedule in the table below. This schedule is also published online on the Government Printing works website [www.gpwonline.co.za](http://www.gpwonline.co.za)

All re-submissions will be subject to the standard cut-off times.

**All notices received after the closing time will be rejected.**

Government Gazette Type	Publication Frequency	Publication Date	Submission Deadline	Cancellations Deadline
National Gazette	Weekly	Friday	Friday 15h00 for next Friday	Tuesday, 15h00 - 3 working days prior to publication
Regulation Gazette	Weekly	Friday	Friday 15h00 for next Friday	Tuesday, 15h00 - 3 working days prior to publication
Petrol Price Gazette	Monthly	Tuesday before 1st Wednesday of the month	One day before publication	1 working day prior to publication
Road Carrier Permits	Weekly	Friday	Thursday 15h00 for next Friday	3 working days prior to publication
Unclaimed Monies (Justice, Labour or Lawyers)	January / September 2 per year	Last Friday	One week before publication	3 working days prior to publication
Parliament (Acts, White Paper, Green Paper)	As required	Any day of the week	None	3 working days prior to publication
Manuals	Bi- Monthly	2nd and last Thursday of the month	One week before publication	3 working days prior to publication
State of Budget (National Treasury)	Monthly	30th or last Friday of the month	One week before publication	3 working days prior to publication
<i>Extraordinary Gazettes</i>	As required	Any day of the week	<i>Before 10h00 on publication date</i>	<i>Before 10h00 on publication date</i>
Legal Gazettes A, B and C	Weekly	Friday	One week before publication	Tuesday, 15h00 - 3 working days prior to publication
Tender Bulletin	Weekly	Friday	Friday 15h00 for next Friday	Tuesday, 15h00 - 3 working days prior to publication
Gauteng	Weekly	Wednesday	Two weeks before publication	3 days <b>after</b> submission deadline
Eastern Cape	Weekly	Monday	One week before publication	3 working days prior to publication
Northern Cape	Weekly	Monday	One week before publication	3 working days prior to publication
North West	Weekly	Tuesday	One week before publication	3 working days prior to publication
KwaZulu-Natal	Weekly	Thursday	One week before publication	3 working days prior to publication
Limpopo	Weekly	Friday	One week before publication	3 working days prior to publication
Mpumalanga	Weekly	Friday	One week before publication	3 working days prior to publication

## GOVERNMENT PRINTING WORKS - BUSINESS RULES

Government Gazette Type	Publication Frequency	Publication Date	Submission Deadline	Cancellations Deadline
Gauteng Liquor License Gazette	Monthly	Wednesday before the First Friday of the month	Two weeks before publication	3 working days <b>after</b> submission deadline
Northern Cape Liquor License Gazette	Monthly	First Friday of the month	Two weeks before publication	3 working days <b>after</b> submission deadline
National Liquor License Gazette	Monthly	First Friday of the month	Two weeks before publication	3 working days <b>after</b> submission deadline
Mpumalanga Liquor License Gazette	Bi-Monthly	Second & Fourth Friday	One week before publication	3 working days prior to publication

### EXTRAORDINARY GAZETTES

3. *Extraordinary Gazettes* can have only one publication date. If multiple publications of an *Extraordinary Gazette* are required, a separate Z95/Z95Prov *Adobe* Forms for each publication date must be submitted.

### NOTICE SUBMISSION PROCESS

4. Download the latest *Adobe* form, for the relevant notice to be placed, from the **Government Printing Works** website [www.gpwonline.co.za](http://www.gpwonline.co.za).
5. The *Adobe* form needs to be completed electronically using *Adobe Acrobat / Acrobat Reader*. Only electronically completed *Adobe* forms will be accepted. No printed, handwritten and/or scanned *Adobe* forms will be accepted.
6. The completed electronic *Adobe* form has to be submitted via email to [submit.egazette@gpw.gov.za](mailto:submit.egazette@gpw.gov.za). The form needs to be submitted in its original electronic *Adobe* format to enable the system to extract the completed information from the form for placement in the publication.
7. Every notice submitted **must** be accompanied by an official **GPW** quotation. This must be obtained from the *eGazette* Contact Centre.
8. Each notice submission should be sent as a single email. The email **must** contain **all documentation relating to a particular notice submission**.
  - 8.1. Each of the following documents must be attached to the email as a separate attachment:
    - 8.1.1. An electronically completed *Adobe* form, specific to the type of notice that is to be placed.
      - 8.1.1.1. For National *Government Gazette* or *Provincial Gazette* notices, the notices must be accompanied by an electronic Z95 or Z95Prov *Adobe* form
      - 8.1.1.2. The notice content (body copy) **MUST** be a separate attachment.
    - 8.1.2. A copy of the official **Government Printing Works** quotation you received for your notice. (*Please see Quotation section below for further details*)
    - 8.1.3. A valid and legible Proof of Payment / Purchase Order: **Government Printing Works** account customer must include a copy of their Purchase Order. **Non-Government Printing Works** account customer needs to submit the proof of payment for the notice
    - 8.1.4. Where separate notice content is applicable (Z95, Z95 Prov and TForm 3, it should **also** be attached as a separate attachment. (*Please see the Copy Section below, for the specifications*).
    - 8.1.5. Any additional notice information if applicable.

**GOVERNMENT PRINTING WORKS - BUSINESS RULES**

9. The electronic *Adobe* form will be taken as the primary source for the notice information to be published. Instructions that are on the email body or covering letter that contradicts the notice form content will not be considered. The information submitted on the electronic *Adobe* form will be published as-is.
10. To avoid duplicated publication of the same notice and double billing, Please submit your notice **ONLY ONCE**.
11. Notices brought to **GPW** by “walk-in” customers on electronic media can only be submitted in *Adobe* electronic form format. All “walk-in” customers with notices that are not on electronic *Adobe* forms will be routed to the Contact Centre where they will be assisted to complete the forms in the required format.
12. Should a customer submit a bulk submission of hard copy notices delivered by a messenger on behalf of any organisation e.g. newspaper publisher, the messenger will be referred back to the sender as the submission does not adhere to the submission rules.

**QUOTATIONS**

13. Quotations are valid until the next tariff change.
  - 13.1. **Take note:** **GPW**'s annual tariff increase takes place on **1 April** therefore any quotations issued, accepted and submitted for publication up to **31 March** will keep the old tariff. For notices to be published from 1 April, a quotation must be obtained from **GPW** with the new tariffs. Where a tariff increase is implemented during the year, **GPW** endeavours to provide customers with 30 days' notice of such changes.
14. Each quotation has a unique number.
15. Form Content notices must be emailed to the *eGazette* Contact Centre for a quotation.
  - 15.1. The *Adobe* form supplied is uploaded by the Contact Centre Agent and the system automatically calculates the cost of your notice based on the layout/format of the content supplied.
  - 15.2. It is critical that these *Adobe* Forms are completed correctly and adhere to the guidelines as stipulated by **GPW**.
16. **APPLICABLE ONLY TO GPW ACCOUNT HOLDERS:**
  - 16.1. **GPW** Account Customers must provide a valid **GPW** account number to obtain a quotation.
  - 16.2. Accounts for **GPW** account customers **must** be active with sufficient credit to transact with **GPW** to submit notices.
    - 16.2.1. If you are unsure about or need to resolve the status of your account, please contact the **GPW** Finance Department prior to submitting your notices. (If the account status is not resolved prior to submission of your notice, the notice will be failed during the process).
17. **APPLICABLE ONLY TO CASH CUSTOMERS:**
  - 17.1. Cash customers doing **bulk payments** must use a **single email address** in order to use the **same proof of payment** for submitting multiple notices.
18. The responsibility lies with you, the customer, to ensure that the payment made for your notice(s) to be published is sufficient to cover the cost of the notice(s).
19. Each quotation will be associated with one proof of payment / purchase order / cash receipt.
  - 19.1. This means that **the quotation number can only be used once to make a payment.**

**GOVERNMENT PRINTING WORKS - BUSINESS RULES****COPY (SEPARATE NOTICE CONTENT DOCUMENT)**

20. Where the copy is part of a separate attachment document for Z95, Z95Prov and TForm03
- 20.1. Copy of notices must be supplied in a separate document and may not constitute part of any covering letter, purchase order, proof of payment or other attached documents.
- The content document should contain only one notice. (You may include the different translations of the same notice in the same document).
- 20.2. The notice should be set on an A4 page, with margins and fonts set as follows:
- Page size = A4 Portrait with page margins: Top = 40mm, LH/RH = 16mm, Bottom = 40mm;  
Use font size: Arial or Helvetica 10pt with 11pt line spacing;
- Page size = A4 Landscape with page margins: Top = 16mm, LH/RH = 40mm, Bottom = 16mm;  
Use font size: Arial or Helvetica 10pt with 11pt line spacing;

**CANCELLATIONS**

21. Cancellation of notice submissions are accepted by **GPW** according to the deadlines stated in the table above in point 2. Non-compliance to these deadlines will result in your request being failed. Please pay special attention to the different deadlines for each gazette. Please note that any notices cancelled after the cancellation deadline will be published and charged at full cost.
22. Requests for cancellation must be sent by the original sender of the notice and must be accompanied by the relevant notice reference number (N-) in the email body.

**AMENDMENTS TO NOTICES**

23. With effect from 01 October 2015, **GPW** will not longer accept amendments to notices. The cancellation process will need to be followed according to the deadline and a new notice submitted thereafter for the next available publication date.

**REJECTIONS**

24. All notices not meeting the submission rules will be rejected to the customer to be corrected and resubmitted. Assistance will be available through the Contact Centre should help be required when completing the forms. (012-748 6200 or email [info.egazette@gpw.gov.za](mailto:info.egazette@gpw.gov.za)). Reasons for rejections include the following:
- 24.1. Incorrectly completed forms and notices submitted in the wrong format, will be rejected.
- 24.2. Any notice submissions not on the correct *Adobe* electronic form, will be rejected.
- 24.3. Any notice submissions not accompanied by the proof of payment / purchase order will be rejected and the notice will not be processed.
- 24.4. Any submissions or re-submissions that miss the submission cut-off times will be rejected to the customer. The Notice needs to be re-submitted with a new publication date.

**GOVERNMENT PRINTING WORKS - BUSINESS RULES****APPROVAL OF NOTICES**

25. Any notices other than legal notices are subject to the approval of the Government Printer, who may refuse acceptance or further publication of any notice.
26. No amendments will be accepted in respect to separate notice content that was sent with a Z95 or Z95Prov notice submissions. The copy of notice in layout format (previously known as proof-out) is only provided where requested, for Advertiser to see the notice in final Gazette layout. Should they find that the information submitted was incorrect, they should request for a notice cancellation and resubmit the corrected notice, subject to standard submission deadlines. The cancellation is also subject to the stages in the publishing process, i.e. If cancellation is received when production (printing process) has commenced, then the notice cannot be cancelled.

**GOVERNMENT PRINTER INDEMNIFIED AGAINST LIABILITY**

27. The Government Printer will assume no liability in respect of—
  - 27.1. any delay in the publication of a notice or publication of such notice on any date other than that stipulated by the advertiser;
  - 27.2. erroneous classification of a notice, or the placement of such notice in any section or under any heading other than the section or heading stipulated by the advertiser;
  - 27.3. any editing, revision, omission, typographical errors or errors resulting from faint or indistinct copy.

**LIABILITY OF ADVERTISER**

28. Advertisers will be held liable for any compensation and costs arising from any action which may be instituted against the Government Printer in consequence of the publication of any notice.

**CUSTOMER INQUIRIES**

Many of our customers request immediate feedback/confirmation of notice placement in the gazette from our Contact Centre once they have submitted their notice – While **GPW** deems it one of their highest priorities and responsibilities to provide customers with this requested feedback and the best service at all times, we are only able to do so once we have started processing your notice submission.

**GPW** has a 2-working day turnaround time for processing notices received according to the business rules and deadline submissions.

Please keep this in mind when making inquiries about your notice submission at the Contact Centre.

29. Requests for information, quotations and inquiries must be sent to the Contact Centre **ONLY**.
30. Requests for Quotations (RFQs) should be received by the Contact Centre at least **2 working days** before the submission deadline for that specific publication.



## GOVERNMENT PRINTING WORKS - BUSINESS RULES

### PAYMENT OF COST

31. The Request for Quotation for placement of the notice should be sent to the Gazette Contact Centre as indicated above, prior to submission of notice for advertising.
32. Payment should then be made, or Purchase Order prepared based on the received quotation, prior to the submission of the notice for advertising as these documents i.e. proof of payment or Purchase order will be required as part of the notice submission, as indicated earlier.
33. Every proof of payment must have a valid **GPW** quotation number as a reference on the proof of payment document.
34. Where there is any doubt about the cost of publication of a notice, and in the case of copy, an enquiry, accompanied by the relevant copy, should be addressed to the Gazette Contact Centre, **Government Printing Works**, Private Bag X85, Pretoria, 0001 email: [info.egazette@gpw.gov.za](mailto:info.egazette@gpw.gov.za) before publication.
35. Overpayment resulting from miscalculation on the part of the advertiser of the cost of publication of a notice will not be refunded, unless the advertiser furnishes adequate reasons why such miscalculation occurred. In the event of underpayments, the difference will be recovered from the advertiser, and future notice(s) will not be published until such time as the full cost of such publication has been duly paid in cash or electronic funds transfer into the **Government Printing Works** banking account.
36. In the event of a notice being cancelled, a refund will be made only if no cost regarding the placing of the notice has been incurred by the **Government Printing Works**.
37. The **Government Printing Works** reserves the right to levy an additional charge in cases where notices, the cost of which has been calculated in accordance with the List of Fixed Tariff Rates, are subsequently found to be excessively lengthy or to contain overmuch or complicated tabulation.

### PROOF OF PUBLICATION

38. Copies of any of the *Government Gazette* or *Provincial Gazette* can be downloaded from the **Government Printing Works** website [www.gpwonline.co.za](http://www.gpwonline.co.za) free of charge, should a proof of publication be required.
39. Printed copies may be ordered from the Publications department at the ruling price. The **Government Printing Works** will assume no liability for any failure to post or for any delay in despatching of such *Government Gazette*(s)

## GOVERNMENT PRINTING WORKS CONTACT INFORMATION

**Physical Address:**
**Government Printing Works**

149 Bosman Street

Pretoria

**Postal Address:**

Private Bag X85

Pretoria

0001

**GPW Banking Details:**
**Bank:** ABSA Bosman Street

**Account No.:** 405 7114 016

**Branch Code:** 632-005

**For Gazette and Notice submissions:** Gazette Submissions:

**For queries and quotations, contact:** Gazette Contact Centre:

**E-mail:** [submit.egazette@gpw.gov.za](mailto:submit.egazette@gpw.gov.za)
**E-mail:** [info.egazette@gpw.gov.za](mailto:info.egazette@gpw.gov.za)
**Tel:** 012-748 6200

**Contact person for subscribers:** Mrs M. Toka:

**E-mail:** [subscriptions@gpw.gov.za](mailto:subscriptions@gpw.gov.za)
**Tel:** 012-748-6066 / 6060 / 6058

**Fax:** 012-323-9574

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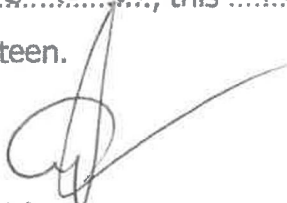
**PROCLAMATIONS • PROKLAMASIES**

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**PROCLAMATION NO. 15 OF 2019***by the***President of the Republic of South Africa****COMMENCEMENT OF CERTAIN PROVISIONS OF THE PUBLIC  
ADMINISTRATION MANAGEMENT ACT, 2014 (ACT NO. 11 OF 2014)**

In terms of section 20 of the Public Administration Act, 2014 (Act No. 11 of 2014) read with section 13 of the Interpretation Act, 1957 (Act No. 33 of 1957), I hereby determine 1 April 2019 as the date on which the Public Administration Management Act, 2014, except for sections 5, 6, 7, 9, 11, 12 and 19, take effect.

Given under my Hand and the Seal of the Republic of South Africa at CAPE TOWN, this 18 day of MARCH, Two Thousand and Nineteen.

**President**

By order of the President-in-Cabinet:

**Minister of the Cabinet**

**ISIHLOKOMISO***esenziwa***nguMongameli weRiphabliki yoMzantsi-Afrika****UKUQALISA UKUSEBENZA KWEZIQUENDU EZITHILE ZOMTHETHO  
WOKULAWULWA KOBURHULUMENTE 11 KA-2014**

Ngokwesiqendu 20 soMthetho Wokulawulwa KobuRhulumente 11 ka-2014, kunye nesiqendu 13 se*Interpretation Act* 33 ka-1957, ndigqiba kwelokuba umhla woku-1 kuEpreli 2019 kube ngumhla oqala ngawo ukusebenza uMthetho Wokulawulwa KobuRhulumente ka-2014, ngaphandle kwesiqendu 5, 6, 7, 9, 11, 12 nese-19.

Sigunyazwe siSandla sam nangeTywina leRiphabliki yoMzantsi-Afrika e...KAPA....., ngalo mhla ...18..... kwinyanga ka...KWINDLA....., kuNyaka Wamawaka Amabini Aneshumi Elinethoba.

  
**uMongameli**

ngoMyalelo kaMongameli-kwiKhabhinethi:

  
**uMphathiswa kwiKhabhinethi**

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**GOVERNMENT NOTICES • GOEWERMENTSKENNISGEWINGS**

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**DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES**

NO. 470

29 MARCH 2019

**REVISED TARIFFS FOR SERVICES RENDERED IN TERMS OF THE SUB DIVISION OF AGRICULTURAL LAND ACT, ACT NO 70 OF 1970 AND CONSERVATION OF AGRICULTURAL RESOURCES ACT, ACT NO. 43 OF 1983****NOTICE FOR PUBLIC**

I, Senzeni Zokwana,, Minister of Agriculture, Forestry and Fisheries hereby give notice to all interested institutions, organizations and individuals on the revised tariffs for services rendered in terms of the Subdivision of Agricultural Land Act, Act no 70 of 1970 and Conservation of Agricultural Resources Act, Act no 43 of 1983.

**Key revision includes:**

Updating and new tariffs for the goods, services or supplies rendered under the two legislations being the Subdivision of Agricultural Land Act, Act no 70 of 1970 (SALA) and Conservation of Agricultural Resources Act, Act no 43 of 1983 (CARA).

**1. Sub division of Agricultural Land Act, Act No. 70 of 1970 (SALA)**

1.1 Appeal tariff applicable from 1 April 2018 is R 5 693.00 per appeal

**2. Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) [CARA]**

2.1 Appeal tariff applicable from 1 April 2018 is 1 170.00 per appeal.

2.2 Tariff for control of listed species of the genus *Opuntia* and *Nasella* is R 1 170.00 per hectare.

For more information please contact the Executive Officer for Conservation of Agricultural Resources Act, Act No. 43 of 1983 (CARA) and Sub division of Agricultural Land Act, Act No. 70 of 1970 (SALA), using the details below: The Director: Land Use and Soil Management , Attention Ms R.L. Bosoga.

Post to: Private Bag X 120, Pretoria, 0001; or

Deliver To: 244 Delpen Building, Corner Annie Botha and Union Street, Riviera, Pretoria; or Enquiries in relation to Conservation of Agricultural Resources Act, Act No. 43 of 1983 (CARA), may be emailed to : [MpumeN@daff.gov.za](mailto:MpumeN@daff.gov.za) alternatively (012) 319 7567 and for the Sub division of Agricultural Land Act, Act No. 70 of 1970 (SALA) emailed to: [MashuduMa@daff.gov.za](mailto:MashuduMa@daff.gov.za) alternatively (012) 319 7619.

**TARIFFS, RATES AND SCALES FOR SERVICES, GOODS AND SUPPLIES PROVIDED BY THE  
DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES**

**TARIFF STRUCTURE (2019/20)**

NATURE OF SERVICE, GOODS OR SUPPLIES PROVIDED	TARIFF APPLICABLE FROM 1 APRIL 2018	TARIFF APPLICABLE FROM 1 APRIL 2019	REMARKS/ EXPLANATION
<b>LAND USE AND SOIL MANAGEMENT</b>			
1. Subdivision of Agricultural Land Act, 1970 (Act No. 70 of 1970)			
1.1 Appeal	R 5 712.00 per appeal	R 5 963.00 per appeal	
2. Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)			
2.1 Appeal under section 21	R1 120.00 per appeal	R1 170.00 per appeal	
2.2 Performance of certain acts in accordance with the Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)			
2.2.1 Subsidy on weed control in terms of Weed Control Scheme	50% of average cost of herbicide for control of listed species of the genus Opuntia and Nasella by farmers. Listed species are as follows:	50% of average cost of herbicide for control of listed species of the genus Opuntia and Nasella by farmers. Listed species are as follows:	

NATURE OF SERVICE, GOODS OR SUPPLIES PROVIDED	TARIFF APPLICABLE FROM 1 APRIL 2018	TARIFF APPLICABLE FROM 1 APRIL 2019	REMARKS/ EXPLANATION
2.2.2 Control of weeds by Weed Teams	<p>Nassella tenuissima (Trin.) Barkworth (= Stipa tenuissima Trin.)</p> <p>Nassella trichotoma (Nees) Arech. (= Stipa trichotoma Nees)</p> <p>Opuntia exaltata A. Berger (= Austrocylindropuntia exaltata (A.Berger) Backeb.)</p> <p>Opuntia fulgida Engelm. (O. rosea misapplied in South Africa.)</p> <p>Opuntia imbricata (Haw.) DC. (= Cylindropucata (Haw.) Knuth)</p> <p>Opuntia lindheimeri Engelm. (= O. tardospina Griffiths)</p> <p>Opuntia spinulifera Salm-Dyck</p> <p>Cost per hectare for control of listed species of the genus Opuntia and Nassella</p> <p>R1 120.00 per hectare for control of listed species of the genus Opuntia and Nassella</p>	<p>Nassella tenuissima (Trin.) Barkworth (= Stipa tenuissima Trin.)</p> <p>Nassella trichotoma (Nees) Arech. (= Stipa trichotoma Nees)</p> <p>Opuntia exaltata A. Berger (= Austrocylindropuntia exaltata (A.Berger) Backeb.)</p> <p>Opuntia fulgida Engelm. (O. rosea misapplied in South Africa.)</p> <p>Opuntia imbricata (Haw.) DC. (= Cylindropucata (Haw.) Knuth)</p> <p>Opuntia lindheimeri Engelm. (= O. tardospina Griffiths)</p> <p>Opuntia spinulifera Salm-Dyck</p> <p>Opuntia spinulifera Salm-Dyck</p> <p>Cost per hectare for control of listed species of the genus Opuntia and Nassella</p> <p>R1 170.00 per hectare for control of listed species of the genus Opuntia and Nassella</p>	

## DEPARTMENT OF AGRICULTURE, FORESTRY AND FISHERIES

NO. 471

29 MARCH 2019

**FERTILIZERS, FARM FEEDS, AGRICULTURAL REMEDIES AND STOCK  
REMEDIES ACT, 1947 (ACT NO. 36 OF 1947)****REGULATIONS RELATING TO THE TARIFFS FOR THE REGISTRATION OF  
FERTILIZERS, FARM FEEDS, AGRICULTURAL REMEDIES, STOCK REMEDIES,  
STERILIZING PLANTS AND PEST CONTROL OPERATORS, APPEALS AND  
IMPORTS: AMENDMENT**

The Minister for Agriculture, Forestry and Fisheries, has under Section 23 of the Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947), made the regulations in the Schedule.

The above-mentioned Regulation Relating to Fertilizer, Farm Feeds, Agricultural Remedies and Stock Remedies, Sterilizing Plants and Pest Control Operators, Appeals, Imports and other services tariffs is available on DAFF website: [www.daff.gov.za](http://www.daff.gov.za) for public access at the following address route: Branch→ Agricultural Production, Health & Food Safety →Agriculture Inputs Control→ Gazette and notices→ press enter

**SCHEDULE****Definition**

1. In this Schedule “the Regulations” means the regulations published by Government notice No. R. 1449 of 1 July 1983, as amended by government Notices Nos. R. 96 of January 1984, R. 2055 of 14 September 1984, R. 1053 of 3 June 1988, R. 1242 of 9 June 1990, r. 1409 of 6 August 1993, R.1592 of 30 September 1996, r. 1017 of 14 August 1998, R. 216 of 10 March 2000, R. 964 of 5 October 2001, R. 1096 of 30 August 2002, R. 1475 of 17 October 2003, R. 3448 of 15 April 2005, R.1139 of 2 December 2005, R. 225 of 17 March 2006, R935 of 22 September 2006, R. 956 of 29 September 2006, R. 1086 of 3 November 2006, R. 1087 of 3 November 2006, R. 250 of 23 March 2007, R. 483 of 8 June 2007, R.755 of 18 July 2008, R.112 of 13 February 2009, R.72 of 12 February 2010 and R.97 of 18 February 2011, R.75 of 8 February 2013, R259 of 5 April 2013, R 207 of 1 April 2014, R 285 of 31 March 2015, R 372 of 29 March 2016, No R 310 of 31 March 2017, No R 394 of 28 March 2018

**Substitution of Table 1 of the Regulations R 394 of March 2018**

2. The Regulation is hereby amended by the substitution of Table 1 of the following table:

ECONOMIC DEVELOPMENT DEPARTMENT

NO. 472

29 MARCH 2019



***competition*commission**  
***south africa***

**AMENDED TERMS OF REFERENCE FOR THE DATA  
SERVICES MARKET INQUIRY**

**March 2019**



## 1. BACKGROUND

The Competition Commission (“the Commission”) initiated a market inquiry into Data Services in South Africa in terms of Chapter 4A of the Competition Act, No. 89 of 1998 (as amended) (“the Act”) because it has reason to believe that there are features of the sector that prevent, distort or restrict competition, and/or to achieve the purposes of the Act.

The Commission gave notice in the Government Gazette<sup>1</sup> on 18 August 2017 announcing the establishment of the Data Services Market Inquiry (“the Inquiry”) in terms of Section 43B(2) of the Act. In terms of the notice, the Inquiry was expected to be completed by 31 August 2018. On 31 August 2018 the Commission gave notice in the Government Gazette<sup>2</sup> amending the timeline for completion of the Inquiry to 31 March 2019.

## 2. AMENDMENT OF THE TERMS OF REFERENCE

In terms of section 43B(5) of the Act, the Commission may, by way of an amendment to the Terms of Reference, amend the scope of the Inquiry, or the time within which the Inquiry is expected to be completed, by further notice in the Gazette.

Having regard to the comments, submissions and information gathered by the Inquiry to date, the Commission has decided to further amend the completion date. This is to allow for further analysis of extensive evidence gathered by the Inquiry (especially following the public hearings held from 17 October 2018 to 19 October 2018), further consultations with key stakeholders, and to finalise a report of its investigation. In terms of the amendment, the Inquiry will be completed by **31 December 2019**. The scope of the Inquiry remains unchanged.

## 3. NEXT STEPS

The Commission intends to release a provisional report by **30 April 2019**. The Commission will invite submissions on the provisional report. It will then engage in further consultations with key stakeholders before completing its assessment. Any changes to this timetable will be communicated by the Commission.

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<sup>1</sup> Gazette No. 41054

<sup>2</sup> Gazette No. 41870

ECONOMIC DEVELOPMENT DEPARTMENT

NO. 473

29 MARCH 2019



**competitioncommission**  
south africa

***Guidelines for the determination of administrative penalties for failure to notify mergers and implementation of mergers contrary to the Competition Act No 89 of 1998, as amended.***

March 2019

Final

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## PREFACE

These guidelines have been prepared in terms of section 79(1) of the Competition Act No. 89 of 1998, as amended (“the Act”) which allows the Competition Commission (“Commission”) to prepare guidelines to indicate its policy approach on any matter falling within its jurisdiction in terms of the Act.

In recent years there has been a growing number of cases involving the failure to notify mergers as well as the implementation of mergers contrary to Chapter 3 of the Act. In order to deter firms from failing to notify mergers which are notifiable (“failure to notify”) and/or implementing notifiable mergers without first obtaining approval from the competition authorities (“prior implementation”), the Commission has developed a methodology setting out its approach in determining penalties in cases of failure to notify and/or prior implementation.

These guidelines present the general methodology that the Commission will follow in determining administrative penalties when concluding consent or settlement agreements and seeking an administrative penalty in the Competition Tribunal in cases of failure to notify and/or prior implementation. The Commission recognises that the imposition of administrative penalties is not a precise science. Therefore these guidelines will not preclude the Commission from exercising its discretion on a case-by-case basis. The primary objective of these guidelines is to provide objectivity, certainty and transparency in the method of determining administrative penalties in cases of failure to notify and/or prior implementation.

## 1 DEFINITIONS

1.1. Unless the context indicates otherwise, the following terms are applicable to these guidelines –

1.1.1. “**Acquiring firm**” means a firm –

- (a) that, as a result of a transaction in any circumstances set out in section 12 of the Act, would directly or indirectly acquire, or establish direct or indirect control over, the whole or part of the business of another firm;
- (b) that has direct or indirect control over the whole or part of the business of a firm contemplated in paragraph (a); or
- (c) the whole or part of whose business is directly or indirectly controlled by a firm contemplated in paragraph (a) or (b).

1.1.2. “**The Act**” means the Competition Act No. 89 of 1998, as amended and includes the regulations made under the Act;

1.1.3. “**Administrative penalty**” means a monetary penalty that may be imposed by the Tribunal in terms of section 59 of the Act;

1.1.4. “**The CAC**” means the Competition Appeal Court as established in terms of section 36 of the Act;

1.1.5. “**The Commission**” means the Competition Commission, a juristic person established in terms of section 19 of the Act;

- 1.1.6. **“Competition authorities”** means the Commission and/or the Tribunal and/or the CAC as the case may be;
- 1.1.7. **“Failure to notify”** means the failure to notify a notifiable transaction as contemplated in section 13A(1) of the Act;
- 1.1.8. **“Filing Fee”** means the filing fee payable in respect of either an intermediate merger or a large merger in terms of regulations pursuant to Competition Commission Rule 10(5);
- 1.1.9. **“Firm”** includes a person (juristic or natural), partnership or a trust;
- 1.1.10. **“Firm’s annual turnover”** means the firm’s annual turnover in the Republic and its exports from the Republic during the firm’s preceding financial year as contemplated in section 59(2) of the Act;
- 1.1.11. **“Holding company”** means holding company as defined in section 1 of the Companies Act No.71 of 2008, as amended;
- 1.1.12. **“Intermediate merger”** means a merger or proposed merger with a value between the lower and higher thresholds established in terms of regulations pursuant to section 11(1)(a) of the Act;
- 1.1.13. **“Large merger”** means a merger or proposed merger with a value at or above the higher thresholds established in terms of regulations pursuant to section 11(1)(a) of the Act;
- 1.1.14. **“Merger”** means a merger as defined in section 12(1) of the Act;
- 1.1.15. **“Merging parties”** or **“parties”** include the acquiring firm(s), the Target firm(s) and the Transferred firm(s) which may be party to a notifiable merger in accordance with the Act;

1.1.16. “**Month**” means a calendar month or part thereof. For the sake of clarity part of a calendar month will be deemed to be a month;

1.1.17. “**Prior implementation**” means the premature implementation of a notifiable merger prior to obtaining the necessary approval of the competition authorities as contemplated in section 13A(3) of the Act;

1.1.18. “**Target firm**” means a firm –

- (a) the whole or part of whose business would be directly or indirectly controlled by an acquiring firm as a result of a transaction in any circumstances set out in section 12 of the Act;
- (b) that, as a result of a transaction in any circumstances set out in section 12 of the Act, would directly or indirectly transfer direct or indirect control of the whole or part of, its business to an acquiring firm; or
- (c) the whole or part of whose business is directly or indirectly controlled by a firm contemplated in paragraph (a) or (b) above;

1.1.19. “**Transferred firm**” means -

- (a) a firm, or the business or assets of the firm, that as a result of a transaction in any circumstances set out in section 12 of the Act, would become directly or indirectly controlled by an acquiring firm; and
- (b) any other firm, or business or assets of the firm, the whole or part of whose business is directly or indirectly controlled by a firm contemplated in paragraph (a);

1.1.20. **“The Tribunal”** means the Competition Tribunal, a juristic person established in terms of section 26 of the Act; and

1.1.21. **“Year”** means 12 (twelve) months.



## 2 PURPOSE AND INTRODUCTION

- 2.1. The primary objective of these guidelines is to provide transparency, certainty and objectivity in how the *Commission* will determine *administrative penalties* in cases of *failure to notify* and *prior implementation*.
- 2.2. *Failure to notify* and *prior implementation* of notifiable *mergers* denies *competition authorities* the opportunity of investigating transactions and making the determination at the time of the *merger* whether the *merger* is likely to give rise to a substantial lessening of competition that may permanently alter the structure of the market and raise public interest issues. In the context of *failure to notify* or *prior implementation*, *administrative penalties* serve as a specific deterrent against failure to notify or prematurely implementing a *merger* that could result in distortions in the market, which constitute a contravention of the *Act*. In general, *administrative penalties* in cases of *failure to notify* and/or *prior implementation* serve to ensure compliance with *merger* regulations.
- 2.3. The *Act* provides for *administrative penalties* to be imposed on *firms* if they are *parties* to a *merger* and:
- 2.3.1. fail to give notice of the *merger* as required by Chapter 3 of the *Act*; and/or<sup>1</sup>
  - 2.3.2. proceed to implement the *merger* without the approval of the *Commission* or *Tribunal*, as required by the *Act*<sup>2</sup> (whether or not the *merger* has been notified to the *competition authorities*).

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<sup>1</sup> Section 59(1)(d)(i)

<sup>2</sup> Section 59(1)(d)(iv)

2.4. The *Tribunal* has noted the need to provide guidance on how *administrative penalties* ought to be determined in cases of *failure to notify* and *prior implementation*.<sup>3</sup> The *Tribunal* has, however, cautioned against using the exact factors set out in the *Competition Commission v Aveng (Africa) Ltd and Others Case No: 84/CR/DEC09 (“Aveng”)*<sup>4</sup> six-step methodology for *failure to notify* and *prior implementation* cases. As a result, the *Tribunal* has provided guidance on the methodology that should be used in calculating fines in *failure to notify* and *prior implementation* cases.<sup>5</sup> Accordingly, being mindful of the fact that *failure to notify* and *prior implementation* cases involve different considerations from cartel and abuse of dominance contraventions, the *Commission* decided to issue separate guidelines on the determination of penalties for *failure to notify* and *prior implementation*. These guidelines will consider factors specific to *failure to notify* and *prior implementation* cases.

2.5. In developing these guidelines, the *Commission* conducted a review and comparison of guidelines developed by other competition authorities including India, Brazil, the European Commission and the US Fair Trade Commission, as well as the Act, the *Tribunal*’s decisions in *failure to notify* and *prior implementation* cases<sup>6</sup> and the principles laid out by the *Tribunal* (and endorsed by the CAC) in the *Aveng* case. In doing so, the *Commission*

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<sup>3</sup> *Competition Commission and Fruit & Veg Holdings (Pty) Ltd and others* – consent agreement (Case No. FTN131Sep15)

<sup>4</sup> *The Competition Commission v Aveng (Africa) Limited t/a Steeledale and others* (84/CR/DEC09)

<sup>5</sup> See *Competition Commission v Deican Investments (Pty) Ltd and New Seasons Investments Holding (Pty) Ltd* (FTN151Aug15 / *Competition Commission v Dickerson Investments (Pty) Ltd and Nodus Equity (Pty) Ltd* (FTN127Aug15) and *Competition Commission v Standard Bank of South Africa Ltd* (FTN228Feb16).

<sup>6</sup> The cases include, *inter alia*, *The Competition Commission v Aveng (Africa) Limited t/a Steeledale and others* (84/CR/DEC09), *Competition Commission v Deican Investments (Pty) Ltd and New Seasons Investments Holding (Pty) Ltd* (FTN151Aug15 / *Competition Commission v Dickerson Investments (Pty) Ltd and Nodus Equity (Pty) Ltd* (FTN127Aug15), *Competition Commission and Fruit & Veg Holdings (Pty) Ltd and others* (Case No. FTN131Sep15), *Competition Commission / Edgars Consolidated Stores Limited and others* (95/FN/Dec02), *Competition Commission / Structa Technology (Pty) Ltd and others* (83/LM/Nov02), *Competition Commission / The Tiso Consortium and others* (82/FN/Oct04), *Competition Commission v Standard Bank of South Africa Ltd* (FTN228Feb16).

was mindful of the nuances and variations in each jurisdiction, including the statutory mandate that the competition authorities in these jurisdictions have to impose *administrative penalties*. The *Commission* was further mindful of the different considerations for prohibited practices under Chapter 2 of the *Act* and *failure to notify* and *prior implementation* contraventions under Chapter 3 of the *Act*.

### 3 LEGISLATIVE FRAMEWORK

- 3.1. These guidelines have been prepared in terms of section 79(1) of the *Act* which allows the *Commission* to prepare guidelines to indicate its policy approach on any matter falling within its jurisdiction in terms of the *Act*. These guidelines are aimed at providing guidance in terms of section 79(2)(b) of the *Act* and are not binding on the *Commission*, the *Tribunal* or the *CAC* in the exercise of their respective discretion, or their interpretation of the *Act*.
- 3.2. Section 13A(1) of the *Act* obliges a party to an *intermediate* or *large merger* to notify the *Commission* of that *merger* in the prescribed manner and form.
- 3.3. Section 13A(3) prohibits *parties* to an *intermediate* or *large merger* from implementing that *merger* until it has been approved, with or without conditions, by the *Commission* in terms of section 14(1)(b), the *Tribunal* in terms of section 16(2) or the *CAC* in terms of section 17 of the *Act*.
- 3.4. In terms of section 59(1)(d) of the *Act*, the *Tribunal* may impose an *administrative penalty* if the *parties* have:
  - “(i) *failed to give notice of the merger as required by Chapter 3 of the Act*;

- (ii) *proceeded to implement the merger in contravention of a decision by the Commission or Tribunal to prohibit that merger;*
- (iii) *proceeded to implement the merger in a manner contrary to a condition for the approval of that merger imposed by the Commission in terms of section 13 or 14, or the Tribunal in terms of section 16; or*
- (iv) *proceeded to implement the merger without the approval of the Commission or Tribunal, as is required by this Act.”*

3.5. In respect of section 59(1)(d)(iv), the need for approval only arises if the *merger* is notifiable under the *Act*. Approval is thus required prior to implementation of the *merger*.

3.6. Pursuant to sections 49D and 58(1)(b) of the *Act*, the *Commission* and the respondent may reach an agreement on the terms of an appropriate order, which may be confirmed by the *Tribunal*. The terms of such order may include an agreement on the payment of an appropriate *administrative penalty*.

3.7. In terms of section 27(1)(b) of the *Act*, the *Tribunal* may adjudicate on any matter that may in terms of the *Act* be considered by it and upon making a determination, may make any order provided for in the *Act*. In terms of section 58(1)(a)(iii), orders that the *Tribunal* may make include the imposition of an *administrative penalty*.

#### 4 METHODOLOGY - NOTIFICATION AND/OR IMPLEMENTATION OF A MERGER CONTRARY TO CHAPTER 3 OF THE ACT

4.1. As a general approach, the *Commission* will apply the following methodology when determining the *administrative penalty* that a *firm* will be liable to pay for contravening sections 13A(1) and/or 13A(3) of the *Act*.

4.2. This methodology will be applied in the following way:

- 4.2.1. Step 1: Determination of the nature or type of contravention;
- 4.2.2. Step 2: Determination of the base amount;
- 4.2.3. Step 3: Duration of the contravention;
- 4.2.4. Step 4: Consideration of factors that might mitigate and/or aggravate the amount reached in step 3, and
- 4.2.5. Step 5: Rounding off this amount if it exceeds the cap provided for in section 59(2) of the *Act*.

#### 4.3. Step 1: Determination of the nature or type of contravention

4.3.1. The *Commission* will first look at the nature of the conduct which gave rise to the *failure to notify* and/or *prior implementation* contravention. A *failure to notify* or *prior implementation* contravention can take different forms and the *Commission* will consider how the *failure to notify* and/or *prior implementation* occurred.

4.3.2. In the event that the relevant conduct is a section 4(1)(b) contravention, such as if the *merging parties* are competitors and agree on prices or, allocate customers prior to approval of a *merger*

being granted, the *Commission* will assess such conduct under section 4(1)(b), and any such penalty will be determined under the *Commission's Guidelines for the Determination of Administrative Penalties for Prohibited Practices*.<sup>7</sup>

4.3.3. Should the *Commission* determine that the relevant conduct is wilful or deliberate, these guidelines will not apply to such conduct and *Commission* will seek the maximum allowable penalty as stipulated in section 59(2) of the *Act* as well as a divestiture, where appropriate.

4.3.4. For the sake of clarity, it should be noted that no amount is calculated under step 1 of the methodology of these guidelines.

#### 4.4. Step 2: Determination of the base amount

4.4.1. The *Act* requires that an *intermediate* or *large merger* must be notified to the *Commission* and such *merger* may not be implemented until it has been approved, with or without conditions, by the relevant *competition authorities*.

4.4.2. Under this step, the base amount for the calculation of the *administrative penalty for failure to notify and/or prior implementation of intermediate or large mergers*, will be an amount equal to double the applicable *filing fee*.<sup>8</sup>

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<sup>7</sup> Effective 1 May 2015

<sup>8</sup> The Tribunal has indicated that a turnover based methodology for calculating penalties in failure to notify and/or prior implementation cases may be inappropriate.

#### 4.5. Step 3: Duration of the contravention(s)

4.5.1. Once the *Commission* has established the base amount, for each month of the contravention i.e. duration, it will add to the base amount an amount calculated in accordance with the formulae set out below.

##### ***Contraventions not exceeding a year***

4.5.2. For contraventions that do not exceed a *year*, each *month* of the contravention will attract an additional amount equal to 50% of the base amount. The applicable formula is as follows:

$$(50\% \times \text{base amount}) \times \text{number of months of contravention}$$

##### ***Contraventions exceeding a year but less than 2 years***

4.5.3. For contraventions that exceed a *year* but less than 2 (two) *years*, each *month* of the contravention will attract an additional amount equal to 75% of the base amount. The applicable formula is as follows:

$$(75\% \times \text{base amount}) \times \text{number of months of contravention}$$

##### ***Contraventions exceeding 2 years***

4.5.4. For contraventions that exceed 2 (two) *years*, each *month* of the contravention will attract an additional amount equal to 100% of the base amount. The applicable formula is as follows:

$$(100\% \times \text{base amount}) \times \text{number of months of contravention}$$

4.5.5. For the sake of clarity, the amount derived in this step will be added to the base amount calculated in step 2.

#### 4.6. Step 4: Aggravating and Mitigating Factors

- 4.6.1. Once the amount in step 3 has been determined, the *Commission* will adjust this figure based on the relevant aggravating and mitigating factors as contemplated in section 59(3)<sup>9</sup> of the *Act*.
- 4.6.2. This assessment will consider all of the factors contemplated under section 59(3) of the *Act*. The weighing of aggravating and mitigating factors may result in the amount derived in step 3 being upwardly or downwardly adjusted, depending on the circumstances of each case.

#### **Aggravating factors**

- 4.7. The factors which the *Commission* may consider as aggravating include, but are not limited to:
- 4.7.1. If the *parties* failed to notify the *merger* transaction in order to take advantage of a time-bound *merger* deal or to avoid the *merger* approval process at the outset;
- 4.7.2. If the *parties* were negligent;
- 4.7.3. If the *parties* were trying to avoid scrutiny of the transaction by the *competition authorities*;
- 4.7.4. If the duration of the contravention subsisted for an extended length of time;

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<sup>9</sup> See *Competition Commission v Standard Bank of South Africa Ltd* (FTN228Feb16) at para 27 and the remaining factors listed under section 59(3) of the *Act*.



- 4.7.5. If the transaction resulted in the substantial lessening of competition or raises public interest concerns;
- 4.7.6. If there was an undue and unexplained delay by the *parties* in approaching the *Commission* once the *parties* had become aware of their contravention of section 13A;
- 4.7.7. If the *parties* derived profits from the contravention of section 13A(1) and/or (3) which profits they were not entitled to unless they had obtained prior approval from the *competition authorities*;
- 4.7.8. If the *parties* have previously been found to have contravened any other provisions of the *Act*;
- 4.7.9. If the *parties* delayed or obstructed or failed to co-operate with any investigations of the contravention by the *competition authorities*; and/or
- 4.7.10. If the *merger* was terminated without first informing the *Commission* of the concerned *merger* and with the purpose of avoiding scrutiny by the *competition authorities*.

### ***Mitigating factors***

- 4.8. The factors which the Commission may consider as mitigating include, but are not limited to:
  - 4.8.1. If the *parties* were proactive in approaching the Commission with information of the possible contravention of section 13A of the Act;

- 4.8.2. If the *parties* co-operated with the investigations of the *competition authorities*;
- 4.8.3. If the *parties* sought competition law advice on the transaction;
- 4.8.4. If the *parties* were *bona fide* in their *failure to notify* the transaction;
- 4.8.5. If the *parties* exhibited a high degree of transparency in their dealings with the *Commission*;
- 4.8.6. If the *parties* provided full evidence, such as documents, under their control and/or possession of the contravention which was relevant to the *Commission*;
- 4.8.7. If the *parties* demonstrated willingness to expeditiously conclude a settlement with the *Commission*;
- 4.8.8. If the *merger* does not raise any competition or public interest concerns;
- 4.8.9. If the *parties* have not been found to have previously contravened the *Act*; and/or
- 4.8.10. If the *parties* have already paid the *filing fee* to the *Commission*.

#### 4.9. Step 5: Consideration of the Statutory Limit

- 4.9.1. As stipulated in section 59(2) of the *Act*, the *administrative penalty* may not exceed 10% of the *firm's* annual turnover in the Republic and its exports from the Republic during the *firm's* preceding financial year.
- 4.9.2. The *Commission* will have regard to the *acquiring* and *transferred firms'* combined turnover during their preceding financial year.
- 4.9.3. The *Commission* will have regard to the *firms'* audited financial statements. Where audited financial statements are not available, the *Commission* may consider any other reliable records reflecting the *merging parties'* turnover or estimate the turnover based on available information.
- 4.9.4. Where the *administrative penalty* determined above exceeds the maximum allowable limit of 10% of the combined annual turnover of the *acquiring* and *transferred firms* during their preceding financial year, the *Commission* will apply the maximum allowable *administrative penalty*.
- 4.9.5. The preceding financial year that the *Commission* will generally consider for the purposes of the statutory cap, will be the financial year preceding that in which the *administrative penalty* is imposed. If there is no turnover in that preceding financial year it shall be the year in which the *parties* last traded.

## 5 FAILURE TO NOTIFY AND PRIOR IMPLEMENTATION

5.1. A contravention of *failure to notify* is committed where:

- 5.1.1. the transaction constitutes a *merger* under the *Act*;
- 5.1.2. the transaction meets the thresholds for notification under the *Act*;  
and
- 5.1.3. the *parties* have failed to notify the *Commission* of the transaction as is required by section 13A(1) the *Act*.

5.2. A contravention of *prior implementation* is committed where at the point of implementation:

- 5.2.1. the transaction constitutes a *merger* under the *Act*;
- 5.2.2. the transaction meets the thresholds for notification under the *Act*;  
and
- 5.2.3. the *parties* implement the *merger* without prior approval from the *Commission*, the *Tribunal* or the *CAC*, as the case may be (whether or not the *merger* has been notified to the *Commission*).

5.3. *Failure to notify* and *prior implementation* can take various forms such as when a *firm* acquires control in terms of section 12(2) of the *Act*, in a transaction which amounts to a notifiable *merger*, but the *firm* fails to obtain the approval of the *Commission* and/or the *Tribunal* for that transaction. Section 12(2) provides that a *firm* controls another *firm*, if that *firm*:

- 5.3.1. beneficially owns more than one half of the issued share capital of the *firm*;

- 5.3.2. is entitled to vote a majority of the votes at a general meeting of a *firm*, or has the ability to control the voting of the majority of those votes, either directly or indirectly or through a controlled entity of that person;
- 5.3.3. is able to appoint or veto the appointment of the majority of the directors of a *firm*;
- 5.3.4. is a *holding company* and the *firm* is a subsidiary of that company under section 1(3)(a) of the Companies Act;
- 5.3.5. in the case of a *firm* that is a trust, has the ability to control the majority of the votes of the trustees, to appoint the majority of the trustees, or to appoint or change the majority of the beneficiaries of the trust;
- 5.3.6. owns the majority of members' interests or controls directly or has the right to control the majority of members' votes in a close corporation;  
or
- 5.3.7. has the ability to materially influence the policy of the *firm* in a manner comparable to a person who, in ordinary commercial practice, can exercise an element of control as described in the paragraphs above.
- 5.4. The *Tribunal* has held that the instances of a change of control set out under section 12(2) of the Act is not an exhaustive list.<sup>10</sup> Acquisition of control is a factual and legal question.

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<sup>10</sup> See *Bulmer SA (Pty) Ltd and Seagram Africa (Pty) Ltd / Distillers Corporation SA Limited and others* case nos. 94/FN/Nov00 and 101/FN/Dec00 at page 13, *Caxton and CTP Publishers and Printers Limited v Naspers and Others (CT16/FN/Mar04)* at para 23, *Hosken Consolidated Investments Ltd and another v Competition Commission [2017] 2 CPLR 519 (CAC)* at para 57.

### **Instances of failure to notify and prior implementation**

5.5. The following list contains examples of instances where the conduct of *parties* has been regarded as a contravention of *failure to notify* and/or *prior implementation*:

- 5.5.1. The acquisition of 30% of the issued share capital of a company and the accompanying right to veto strategic decisions of the shareholders of that company, if those strategic decisions are sufficiently material to confer material influence in terms of section 12(2)(g) of the *Act*.<sup>11</sup>
- 5.5.2. The increase of shareholding from 22% to 28% and the accompanying right to veto certain strategic decisions of the company, if those strategic decisions are sufficiently material to confer material influence in terms of section 12(2)(g) of the *Act*.<sup>12</sup>
- 5.5.3. The acquisition of a 50% share in a company due to the mistaken belief by the merging *parties* that the relevant turnover/asset values of the merging *parties* are below the minimum notification thresholds for the *transferred firm* as prescribed by the *Act*.<sup>13</sup>
- 5.5.4. The acquisition of 49% of the issued share capital of a company, irrespective of the right to appoint the majority of the directors in the company, coupled with control in the form of section 12(2)(c) of the *Act*.<sup>14</sup>

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<sup>11</sup> *Competition Commission v Deican Investments (Pty) Ltd and New Seasons Investments Holding (Pty) Ltd* (FTN151Aug15 / *Competition Commission v Dickerson Investments (Pty) Ltd and Nodus Equity (Pty) Ltd* (FTN127Aug15)

<sup>12</sup> *Ibid*

<sup>13</sup> *Competition Commission / Structa Technology (Pty) Ltd and others* (83/LM/Nov02)

<sup>14</sup> *Competition Commission v WBHO Construction (Pty) Ltd and Edwin Construction (Pty) Ltd* (69/AM/Oct10)

- 5.5.5. The acquisition by two wholly-owned subsidiaries of certain properties and the *failure to notify* those acquisition due to the mistaken belief that the transactions amounted to two small *mergers*.<sup>15</sup>
- 5.5.6. The acquisition of part of a business of a company such as its book debts which included, amongst others, all of the following; the *target firms'* customer base, the rights to its subsequent debts, the right to require it to trade on credit, and control over subsequent debtor management and information.<sup>16</sup>
- 5.5.7. Where the *acquiring firm* engages in the day-to-day operations of the *transferred firm* prior to approval of the *competition authorities* being obtained.<sup>17</sup>
- 5.5.8. Where the *merging parties* market themselves as a single entity prior to approval of the *competition authorities* being obtained.<sup>18</sup>
- 5.5.9. Where the *acquiring firm* changes the name of the *transferred firm*, and if this amounts to the exercise of material influence over the *transferred firm*.
- 5.5.10. Where there is integration or consolidation of the operations of the *merging parties*.
- 5.5.11. Where the *acquiring firm* becomes involved in the making and/or execution of strategic decisions such as:

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<sup>15</sup> *Competition Commission / Pangbourne Properties and 2 Other* (016246)

<sup>16</sup> *Competition Commission / Edgars Consolidated Stores Limited and others* (95/FN/Dec02)

<sup>17</sup> *Settlement agreement: Competition Commission v Dunlop Industrial Products (Pty) Ltd and Another* (018688)

<sup>18</sup> *Ibid*

- 5.5.11.1. targeting markets for the *transferred firm* to pursue;
- 5.5.11.2. developing new products or services;
- 5.5.11.3. influencing the ordering of raw materials;
- 5.5.11.4. amending procurement policies;
- 5.5.11.5. becoming involved in customer relations;
- 5.5.11.6. pricing or terms to be offered to customers;
- 5.5.11.7. influencing the targeting or servicing of certain customers; or
- 5.5.11.8. marketing and production of certain products lines or services;

except to the extent that such conduct constitutes engaging in planning steps in respect of post-merger integration (without such planning being implemented prior to *merger* approval being obtained).

- 5.5.12. Where the *merging parties* agree on the allocation of customers for sales to be made prior to *merger* approval being obtained.
- 5.5.13. Where the *acquiring firm* receives profits or other payments connected with the performance of the *Transferred firm*.
- 5.5.14. Where the *acquiring firm* appoints directors to the board of the *transferred firm* in circumstances where the *acquiring firm* will be acquiring control, such that it affords the *acquiring firm* the ability to materially influence and thus control the *transferred firm*.
- 5.5.15. Where there is a contractual clause in a sale agreement requiring the *acquiring firm* to make full or partial payment of the purchase price in advance for the target *firm*, which is non-refundable and amounts to material influence. This will exclude cases of deposits in escrow and trust accounts, break-up fee clauses or other similar arrangements.



- 5.5.16. In addition, *parties* may be found to have contravened the provisions in section 13A(1) of the *Act* when an exemption has been granted allowing for notification to take place, but the exemption then expires. For example, the *Commission's Practitioner Update Issue 4 on risk mitigation financial transactions as amended*,<sup>19</sup> allows financial services institutions (which include registered banks and state-owned finance institutions) registered in terms of the Banks Act 94 of 1990 to acquire control over a debtor's business assets for a period of twenty four (24) months without notifying the *Commission*.
- 5.6. The abovementioned instances do not constitute an exhaustive list of instances of *failure to notify* and/or *prior implementation* but merely serves as guidance on instances where the *Commission* may find that certain conduct contravenes section 13A(1) and/or 13A(3) of the *Act*.

## 6 DISCOUNT FOR SETTLEMENT OF CASES BY FIRM

- 6.1. The *Commission*, at its sole discretion, may offer a discount of up to 50% off the *administrative penalty* derived in applying the methodology above. In doing so, the *Commission* will be mindful of the mitigating factors set out in step 4 above.
- 6.2. *Firms* that settle their cases with the *Commission* much earlier on in the investigation are likely to enjoy a greater settlement discount than those *firms* who settle prior to referral.

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<sup>19</sup> The Commission's Practitioner Update, Issue 4 (as amended). See also *Competition Commission v Standard Bank of South Africa Ltd* (FTN228Feb16).

## 7 ABILITY TO PAY THE ADMINISTRATIVE PENALTY

- 7.1. The *Commission* may, after determining an appropriate *administrative penalty* and in exceptional circumstances, consider the *firm's* ability to pay the *administrative penalty*. This will be the exception and there must be no expectation that that the *administrative penalty* will be adjusted on this basis. In these circumstances, the *Commission* will be mindful of the *firm's* financial position and market circumstances in order to avoid imposing substantial hardship on a particular *firm* that may lead to a significant reduction in competition. This does not negate the need for consideration of the principle of proportionality and fairness.
- 7.2. To be considered for this, the *firm* must provide the *Commission* with objective evidence that the imposition of the *administrative penalty* as provided in these guidelines would irretrievably jeopardise the economic viability of the *firm* concerned and cause the *firm* to exit from the market. This evidence may include, but will not be limited to, audited financial statements attesting the veracity of the *firm's* financial position. The *Commission* will consider the financial viability of the *firm* as a whole and not of any specific division(s).
- 7.3. The mere existence of a loss making financial situation may not suffice for purposes of obtaining special discounts under this consideration.
- 7.4. If a *firm* is able to demonstrate its inability to pay the *administrative penalty* in accordance with 7.1 and 7.2 above, the *Commission* may consider the use of favourable payment terms. The *Commission* will only consider a discount on this basis if a *firm* can objectively demonstrate that, even in the long term, it will still not be in a position to pay the *administrative penalty*.

## 8 LIABILITY TO PAY

- 8.1. Generally, the *administrative penalty* will be paid by both the *acquiring firm* and the seller, jointly and severally, the one paying and the other to be absolved. However, depending on the circumstances of each case, the *Commission* at its discretion may levy the penalty:
- 8.1.1. only on the *acquiring firm*; or
  - 8.1.2. only on the seller; or
  - 8.1.3. only on the *target* or *transferred firms*; and/or
  - 8.1.4. the *holding company* of the firms referred to in paragraph 8.1.1 to 8.1.3 above.

## 9 SPECIAL PROVISIONS AND DISCRETION

- 9.1. For the avoidance of doubt, the imposition of an *administrative penalty* does not preclude the *Commission* from pursuing other remedies that seek to address the harm caused to competition as a result of the contravention, including divestiture.
- 9.2. The steps outlined above reflect the general methodology that the *Commission* will follow in the determination of *administrative penalties* in respect of a contravention of section 13A of the Act. However this does not fetter the *Commission's* discretion in seeking any appropriate *administrative penalty* in terms of section 59(2) of the Act.
- 9.3. These guidelines do not fetter the discretion of the *Commission* and/or the *Tribunal* and/or the *CAC* to consider *administrative penalties* on a case-by-case basis.

## 10 EFFECTIVE DATE AND AMENDMENTS

These guidelines become effective on 1 April 2019 and may be amended by the *Commission* from time to time.

## DEPARTMENT OF HEALTH

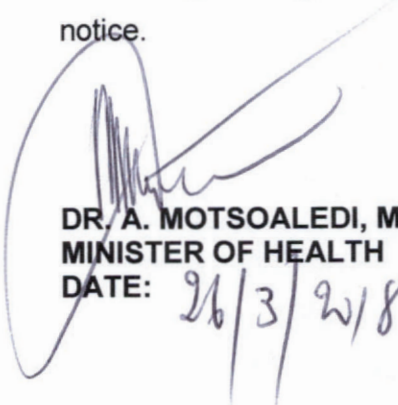
NO. 474

29 MARCH 2019

**MEDICAL SCHEMES ACT, 1998 (ACT NO.131 OF 1998)****AMENDMENT OF REGULATIONS**

The Minister of Health intends, in terms of section 67 of the Medical Schemes Act, 1998 (Act No. 131 of 1998), after consultation with the Council for Medical Schemes, to make the regulations in the Schedule.

Interested persons are invited to submit any substantiated comments in writing on the proposed amendments to the Director-General: Health, Private Bag X828, Pretoria, 0001 (for attention of the Director: Public Entities Governance, Ms M Mushwana, MushwM@health.gov.za) within three months from the date of publication of this notice.



**DR. A. MOTSOLEDI, MP**  
**MINISTER OF HEALTH**  
DATE: 26/3/2018

## SCHEDULE

### GENERAL EXPLANATORY NOTE:

- Words in bold type in square brackets indicate omissions from existing enactments.
- Words underlined with a solid line indicate insertions in existing enactments.
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### Definitions

1. In this Schedule, "the Regulations" means the regulations made in terms of section 67 of the Medical Schemes Act, 1998 (Act No. 131 of 1998), as published under Government Notice No. R.1262 of 20 October 1999, and amended by Government Notice No. R.570 of 5 June 2000, Government Notice No. R.650 of 30 June 2000, Government Notice No. R.247 of 1 March 2002, Government Notice No. R.1360 of 4 November 2002, Government Notice No. R.1397 of 6 October 2003 and Government Notice No. R.1410 of 3 December 2004, Government Notice No 969 of 2 September 2016.

### Amendment of regulation 31 of the Regulations

2. Regulation 31 of the Regulations is hereby amended—
- (a) by the substitution for paragraph (a) of the following paragraph:  
"(a) An application for registration of a medical scheme: **[R8 750,00]**R12 500,00;"
- (b) by the substitution for paragraph (c) of the following paragraph:  
"(c) to change the name of a medical scheme: **[R700,00]** R900,00;"
- (c) by the substitution for paragraph (d) of the following paragraph:

- "(d) registration of amendments, rescissions or additions to the rules of a medical scheme in terms of Section 31 of the Act, per A4 page or part thereof: **[R55,00]** R60,00;"
- (d) by the substitution for paragraph (g) of the following paragraph:
- "(g) application for accreditation or renewal of accreditation as an administrator contemplated in Section 58(4) of the Act: **[R14 000,00]** R18 000,00;"
- (e) by the substitution for paragraph (h) of the following paragraph:
- "(h) application for accreditation or renewal of accreditation as a broker contemplated in Section 65 of the Act: **[R1 400,00]** R1 800,00;"
- (f) by the substitution for paragraph (i) of the following paragraph:
- "(i) an appeal contemplated in Section 50(3) of the Act: **[R2 800,00]** R3 600,00;and"; and
- (g) by the substitution for paragraph (j) of the following paragraph:
- "(j) an application for accreditation or renewal of accreditation as a managed health care organization; **[R14 000,00]** R18 000,00."

### **Substitution of regulation 32 of the Regulations**

3. The following regulation is hereby substituted for regulation 32 of the Regulations:

#### **"Penalties**

**32.** The penalty for every day which a failure contemplated in Section 66(3) of the Act continues, is **[R1 400,00]** R1 800,00."

## DEPARTMENT OF HIGHER EDUCATION AND TRAINING

NO. 475

29 MARCH 2019

**HIGHER EDUCATION ACT, 1997 (Act No. 101 of 1997)****INSTITUTIONAL STATUTE  
UNIVERSITY OF THE FREE STATE**

I, Mrs GNM Pandor, MP, Minister of Higher Education and Training, in accordance with section 33 (1) of the Higher Education Act, 1997 (Act No. 101 of 1997, as amended), hereby publish an amendment to the Institutional Statute of the University of the Free State set out in the Schedule hereto.

  
Mrs GNM Pandor, MP

Minister of Higher Education and Training

Date: 7-3-2019



**MINISTER OF HIGHER EDUCATION AND TRAINING**  
**HIGHER EDUCATION ACT, 1997 (ACT No. 101 OF 1997)**  
**STATUTE OF THE UNIVERSITY OF THE FREE STATE**

The Council of the University of the Free State has amended the Statute of the University of the Free State (Government Notice No. 37, as published in Government Gazette No. 41399 of 26 January 2018) as set out in the schedule hereto in accordance with section 32 of the Higher Education Act, 1997 (Act No. 101 of 1997), as amended, which is, in terms of section 33 of the said Act, hereby published with the approval of the Minister of Higher Education and Training and which comes into operation on the date of its publication.

**SCHEDULE**

To amend the current Statute for the University of the Free State.

**STATUTE OF THE UNIVERSITY OF THE FREE STATE**  
**AMENDMENT**

The Statute of the University of the Free State is amended by the substitution of the following for Paragraph 33:

**“ 33. *Members***

*All persons who obtained a formal qualification from the UFS, as well as all permanent academic staff members.”*

## DEPARTMENT OF HOME AFFAIRS

NO. 476

29 MARCH 2019

**ALTERATION OF SURNAMES IN TERMS OF SECTION 26 OF THE BIRTHS AND DEATHS REGISTRATION ACT, 1992 (ACT NO. 51 OF 1992)**

The Director-General has authorized the following persons to assume the surnames printed in *italics*:

1. Monwabisi Mbongeni Masango - 000828 5196 088 - 1025 Vaalwater Street, Faerie Glen, PRETORIA, 0001 - *Mashiane*
2. Vukile Phumla Mthembu - 000803 0433 083 - 7153 Moleleki Section, KATLEHONG, 1471 - *Mdluli*
3. Armstrong Bhekisisa Mfekayi - 720619 5592 080 - P O Box 4539, NTUZUMA, 3605 - *Mdletshe*
4. Moyanatso Andries Mabitsela - 000518 5434 080 - Stand No 6, MKOBOLA, 0458 - *Mokwana*
5. Given Lebogang Shoba - 001218 5552 085 - Stand No 387, Rockdale, MIDDELBURG, 1050 - *Maredi*
6. Prince Moshumi Matsepe - 000921 5070 088 - Stand No 101, MASWIKANENG, 0400 - *Sefoloshe*
7. Emma Mmamorwa Malebo Kgaladi - 870324 0346 081 - 691 Moleli C, DENNILTON, 1030 - *Mathabathe*
8. Scebi Rich-Man Biyase - 990711 5559 087 - P O Box 1017, MTUBATUBA, 3935 - *Mkhwanazi*
9. Pfunani Redick Manganye - 970918 5693 089 - 185 Block 23, Shawela, GIYANI, 0826 - *Rikhotso*
10. Collins Mokakatlela Napyane - 991001 5322 085 - Stand No 70159, GA-MOLOI, 1059 - *Matlala*
11. Thorisho Benedicta Mothiba - 991207 0553 083 - Makotsi, LEBOWAKGOMO, 0737 - *Ledwaba*
12. Klaas Ndlovu - 911117 5766 084 - P O Box 223, GLEN COWIE, 1061 - *Malope*
13. Ernest Linda Nxumalo - 820611 5926 086 - Matsheketsheeni, MARGATE, 4275 - *Majola*
14. Lihle Fortune Cele - 990101 5389 083 - Madakana Location, MURCHISON, 4240 - *Mthembu*
15. Sihle Dladla - 990317 5502 083 - 2154 Mountain View, KWAMHLANGA, 1022 - *Mahlangu*
16. Tembisa Eunice Nocanda - 650610 0392 083 - 1724 Mlungisi Location, STUTTERHEIM, 4930 - *Cofa*
17. Sizwe Perfect Ngoma - 920310 5598 081 - Stand No 27, BHUGA, 1245 - *Mashale*
18. Thokozani Simamane - 690327 5844 081 - 136 Ezimangweni, INANDA, 4310 - *Mhlongo*
19. Sanele Thabiso Zwane - 981216 5565 085 - No 43 Oak Street, Lakeside Park, VRYHEID, 3100 - *Mtshali*
20. Zodwa Goodness Lushaba - 770404 1058 082 - Umbeni Ward 31, IZINGOLWENI, 4260 - *Sithole*
21. Asanda Mfan'zile Mheshane - 930208 5585 082 - Madwaleni Location, Ward 10, HARDING, 4682 - *Mtेशana*
22. Thandazo Maggie Kunene - 970729 0438 085 - 40 Mogafe Street, Phomolo Section, KWA THEMA, 1575 - *Matsebane*
23. Bheki Michael Malebo - 830319 5544 085 - 289 Babinaphuthi Street, Tladi, SOWETO, 1717 - *Kunene*
24. Msuri-Wa-Ngoti Phuti Michael Manyike - 991002 5121 089 - 9 Lyra Complex, Merlot Close Street, WILGEHEUWEL, 1700 - *Mdokomme*
25. Busisiwe Ncoso - 990411 0140 088 - 6759 Khoza Street, Mohlokeng, RANDFONTEIN, 1760 - *Moilakgomo*
26. Mpho Mabuza - 960129 0803 085 - 334 Emmangweni Section, TEMBISA, 1632 - *Ndou*
27. Anderson Mathibela - 931202 5346 081 - 341 Lombardy East, Donne Crescent, EDENVALE, 1610 - *Makua*
28. Xolani Abalson Mole - 960206 5408 084 - 7119 Koekoemao Crescent, Marimba Gardens, Extension 9, VOSLOORUS, 1400 - *Magaye*
29. Johannes Thato Moabelo - 910612 5551 081 - 279 Thakadu Street, Extension 3, Mailula Park, VOSLOORUS, 1475 - *Toka*
30. Tebatso Jeremia Mavalela - 941025 5455 083 - C 0017 Bolahlakgomo, ZEBEDIELA, 0631 - *Mashala*

31. Ronald Mampane - 990108 5655 082 - Ph 1 -1911, MAMELODI EAST, 0180 - *Mokolo*
32. Mandisa Perseverence Sibisi - 990916 0362 086 - 259 Mzhonti Street, Lakeside Estate, VEREENIGING, 1930 - *Masondo*
33. Mzwandile Rudolph Ntandoyenkosi Nkambule - 910521 5258 086 - A 1290 Ngwelezane, H/Way, EMPANGENI, 3880 - *Masuku*
34. S'khumbuzo Mkhize - 850707 5614 087 - 8 Mohamed Road, DUNDEE, 3000 - *Ngidi*
35. Nicholus Sdumo Cebekhulu - 741128 5438 083 - B 1761 Mpangele Road, NTUZUMA, 4359 - *Mkhize*
36. Lulamile Galela - 740101 7910 087 - 26 Sali Street, EERSTE RIVER, 7100 - *Mahamba*
37. Modingoane Abdul Rachidi - 890712 5639 086 - Ga-Nchabeleng, LEFALANE, 0741 - *Phaahla*
38. Avela Samantha Motjope - 991203 0443 086 - 2884 Ndlanzi Road, WELBEDACHT, 3610 - *Mkhizwana*
39. Sandile Xulu - 001213 5790 082 - Salven, WEENEN, 3300 - *Mncube*
40. Sithembele Mnxakwe - 831004 5711 087 - E – 210 B, Site C, KHAYELITSHA, 7784 - *Mafuya*
41. Nompumelelo Perseverance Vilakazi - 820720 0444 084 - 3328 Section H, PALM SPRINGS, 1924 - *Dube*
42. Anele Zondi - 980818 5800 080 - 180356 Kwashange Location, PIETERMARITZBURG, 3201 - *Dlamini*
43. Carrina Kurpaharam - 960203 0153 088 - 11 F Tasvir Mansions, Rydalvale, PHOENIX, 4000 - *Pillay*
44. Lebogang Betty Maria Mokhine - 920301 0395 086 - 563 Zone 16, GA-RANKUWA, 0200 - *Letoaba*
45. Nyane Joyce Makgebo - 840321 0422 083 - 2103 Rockville, HEBRON, 0193 - *Moroka*
46. Mmaphuti Johannes Maletle - 790208 5363 083 - Marais, BOCHUM, 0238 - *Huma*
47. Yonela Vincent Nodendwa - 960721 5671 085 - 22782 Ekuphumuleni Street, Extension 32, BARCELONA, 1520 - *Rasayi*
48. Ellic Louw - 960424 5505 086 - 46 Mqomo Street, BOICHOKO, 8420 - *Skyman*
49. Karabo Serite - 931105 5375 085 - 218 Borothamadi Section, DINOKANA, 2865 - *Lekwape*
50. Vusi Jan Mahlangu - 000222 5605 084 - Stand No 1350, MATHYZENSLOOP, 0458 - *Masobuka*
51. Kgotso Thabo Duncan Menong - 000930 5483 084 - 10022 A Makgori Village, MMABATHO, 2735 - *Metsi*
52. Sphiwe Matshia - 000420 5915 087 - Stand No 1232, MATHYZENSLOOP, 0458 - *Mnguni*
53. Moses Maboja - 810624 5365 082 - 2782 Extension 1, SOSHANGUVE, 0152 - *Mmatli*
54. Nqobile Happiness Dlamini - 001111 0209 084 - 1371 Kingdom Avenue, Newlands West, DURBAN, 4001 - *Shangase*
55. Paul Tobo Mailula - 750126 5125 088 - Matome, ZEBEDIELA, 0628 - *Mashimbye*
56. Ledimo Tumelo Rapolai - 000516 5379 081 - Stand No 762, Sekithing, GAKAKENENG, 0400 - *Kgaphola*
57. Muano Munarini - 000322 0791 085 - Stand No 27, VUWANI, 0952 - *Gabara*
58. Ashwynne Bontsi - 010123 5361 082 - 16 Wintergreen, BETHAL, 2310 - *Van Wyk*
59. Praise-God Delani Luvuno - 880723 5710 084 - Ezidulini Area, EMONDLO, 3105 - *Buthelezi*
60. Simon Malesela Kgomo - 750710 5340 084 - 15025 Mokwape Street, MAMELODI EAST, 0122 - *Masemola*
61. Jiyezile Mary Khoza - 740829 0390 085 - 133 Siziba Section, TEMBISA, 1632 - *Mazibuko*
62. Abiot Namane Kgosana - 750418 5514 084 - 465 Moletjie Section, Ga-Semenya, POLOKWANE, 0700 - *Semenya*
63. Cleopatra Ncane Bengu - 730817 0386 080 - J 373, UMLAZI, 4100 - *Doncabe*
64. Khayaletu Sigade - 730913 5807 087 - Ngqolowa Location, MIDDLEDRIFT, 5685 - *Sibetyu*

65. Blessing Sibusiso Mngoma - 730508 5441 083 - Morrison Location, UMZUMBE, 4225 - *Shangase*
66. Palesa Angelina Rapudi - 970416 0449 086 - 2078 Zone 2, Oliver Tambo Street, SESHEGO, 0699 - *Mojela*
67. Kgotlelelo Jappie Phalane - 890805 5731 083 - Ga-Mosotlane, ZEBEDIELA, 0628 - *Mogotlane*
68. Mpho Victor Monamodi - 810104 5268 081 - Kaallaagte, KOSTER, 0340 - *Dinkebogile*
69. Katleho Khumalo - 010111 5962 082 - 232 Zone 2, THABA NCHU, 9780 - *Kholumo*
70. Nokuthemba Tshonga - 971102 0477 082 - R 150 Sub 5, KWADABEKA, 3612 - *Radebe*
71. Lucas Mzimba - 750114 5388 088 - 563 Dlamini Street, WATTVILLE, 1400 - *Zwane*
72. Kesebelwang Primrose Masiu - 740702 0436 085 - 1123 / 189 Pula Street, Extension 27, DEVLAND, 181 - *Sibeko*
73. Rapelo Hitler Ramaila - 750801 5371 086 - Ga-Nchabeleng, LEFALANE, 0741 - *Komane*
74. Magalane Florah Maredi - 750827 0788 081 - 998 Extension 3, HLALAMIKAHLE, 1039 - *Manchidi*
75. Mphotsi Charlotte Molekoa - 980126 0344 082 - 40147 Block D, MOKOPANE, 0600 - *Lehutjo*
76. Sive Fumba - 950203 5712 088 - 3 Ries Road, Extension 6, BUTTERWORTH, 4960 - *Myendeki*
77. Siphosethu Ntozini - 811128 5736 085 - 327 Nu 13, MDANTSANE, 5219 - *Somdaka*
78. Mlindi Mayo - 830929 5345 083 - 1459 Nu 9, MDANTSANE, 5219 - *Barnes*
79. Sydney Malau - 931008 5494 080 - Stand No 627, Ga-Kopa, TAFELKOP, 0474 - *Ramatje*
80. Shaun Mothusi Shikwambana - 910919 5449 087 - House No 2002, Paledi Village, SOVENGA, 0727 - *Mkansi*
81. Karabo James Kgokolo - 971022 5666 085 - Matome, ZEBEDIELA, 0628 - *Chuene*
82. Anele Cynthia Mathebula - 920511 0353 089 - 13605 Otlega Drive, KAGISO, 1754 - *Siyobi*
83. Mvelo Muntomuhle Zungu - 001204 5453 086 - Mvutshini Area, MTUBATUBA, 3935 - *Msezane*
84. Nhlakanipho Bongani Mkhize - 000313 5846 081 - P O Box 152, THORNVILLE, 3760 - *Nqayi*
85. Mbalenhle Kholeka Sithole - 990122 0422 083 - 4866 France, Hollyfield Road, PIETERMARITZBURG, 3200 - *Mbatha*
86. Sindisiwe Faith Chonco - 810503 0566 086 - 20 Andries Pretorius Road, Pelham, PIETERMRITZBURG, 3201 - *Ndlovu*
87. Sipho Arnold Sibisi - 870623 5535 089 - House No 199311, Amatikwe Area, INANDA, 4310 - *Makhaye*
88. Thobani Bhengu - 000915 5181 085 - P O Box 13, MAHLABATINI, 3865 - *Mbatha*
89. Langelihle Thami Majola - 000522 5602 084 - 1896 Inanda Road, Newlands West, DURBAN, 4037 - *Buthelezi*
90. Livhuwani Edward Nejelele - 850916 5643 083 - P O Box 9616, SHAYANDIMA, 0945 - *Nenzhelele*
91. Siyabonga Ntshalintshali - 971118 5757 088 - 13420 Malika Street, Extension 9, TSAKANE, 1550 - *Tshabalala*
92. Melusi Ngxongo - 921215 5784 087 - Mhlangeni Area, NQUTU, 3135 - *Khulu*
93. Andile Goodenough Shezi - 880406 5420 082 - D 42 Swanekhoza Road, UMLAZI, 4001 - *Sishi*
94. Sinegugu Mteshana - 960628 0447 082 - 10441 Ilovu Township, AMANZIMTOTI, 4126 - *Sikhakhane*
95. Magutu Simon Nkosi - 360102 5189 087 - 8546 A Zone 6, DIEPKLOOF, 1700 - *Mlangeni*
96. Senzo Mchunu - 860717 5964 083 - Bhobhoyi Location, PORT SHEPSTONE, 4240 - *Shazi*
97. Timothy Lazaros Stokes - 870424 5414 080 - Phokeng, RUSTENBURG, 1508 - *Makgala*
98. Jabulani Elias Banda - 901209 5529 083 - 238 Bokisi Street, DAVEYTON, 1530 - *Malomane*

99. Koketso Molapo - 880706 5611 089 - 59 Block Tt, SOSHANGUVE, 0152 - *Khabela*
100. Tshepang Matsomola - 921211 5531 081 - 5983 Extension 4, SOSHANGUVE, 0152 - *Baloyi*
101. Mapule Maria Mathebula - 890622 0461 081 - 62501 Zone 17, SEBOKENG, 1983 - *Mphehlo*
102. Almari Venter - 971208 0138 085 - 293 Albertus Street, La Montagne, PRETORIA, 0001 - *Pretorius*
103. Sinenhlanhla Princess Dlamini - 850521 0413 084 - A 6012 Adams Mission, PINETOWN, 3600 - *Mbesa*
104. Kgothatso Mafokwane - 950209 5672 081 - Stand No 1395, Phelindaba Section, SIYABUSWA, 0472 - *Baloyi*
105. Ntinah Raisibe Martinah Mkhumishe - 000409 0701 089 - Stand No 273, Masedi Section, MOLEMOLE, 0812 - *Ralefe*
106. Mxolisi Shoba - 940505 5941 084 - Emozobekweni, HIGHFLATS, 3306 - *Radebe*
107. Alice Phindile Nyilongo - 841012 0279 081 - Stand No 161, Sinqobile, BARBERTON, 1300 - *Mankabidi*
108. Thobile Mweli - 000417 0678 082 - Mngwenya Area, ESTCOURT, 3310 - *Manana*
109. Paulinah Nomsa Tshabalala - 930927 0458 082 - Plot B 54, Weltervaal Street, KRUGERSDORP, 1740 - *Changule*
110. Portia Lungile Tshabalala - 970109 0639 083 - Plot B 54, Weltervaal Street, KRUGERSDORP, 1740 - *Changule*
111. Lungisani Mxolisi Mjiyakho - 871116 5816 087 - 13 Takbok, Alra Park, NIGEL, 1490 - *Gwala*
112. Mpho Percival Moloi - 940926 5107 080 - A 41 Mazibuko Street, ALBERTON, 1421 - *Motaung*
113. Khanyisile Gladys Masheula - 901130 0388 087 - 35 Peter Raath Avenue, GERMISTON, 1400 - *Xulu*
114. Puseletso Violet Khahleli - 861228 0793 088 - 10003 Makeneng Crescent, Extension 5, TOKOZA, 1426 - *Molise*
115. Siphon Curtis Sibisi - 851009 5808 085 - 76 Siluma View, ALBERTON, 1450 - *Mbebe*
116. Lindokuhle Malaza - 970407 5278 083 - 774 Acacia Street, DOBSONVILLE, 1700 - *Mtshali*
117. Elvis Maphutha - 960717 5804 080 - P O Box 483, MARISHANE, 1064 - *Mokwala*
118. Zwidofhela Michael Muravheli - 750525 6221 087 - Stand No 753, Mashamba, VENDA, 0942 - *Mulaudzi*
119. Stefaans Jabulane Mabuza - 741112 5383 085 - 10973 Vosman, WITBANK, 1035 - *Mahlangu*
120. Paul Sello Mogola - 750812 5501 085 - 13253 Extension 13, Ivory Park, TEMBISA, 1632 - *Kgwete*
121. Kumarie Naiker - 751123 0129 081 - 33218 Connection Street, New Biginnings, CAPE TOWN, 8001 - *Kannemeyer*
122. Mpho Innocentia Kekesi - 860130 0549 083 - 2830 Zwelintuli Drive, Unit 9, MMABATHO, 2735 - *Kanono*
123. Naledzani Patrick Nedzamba - 760128 5810 089 - Maniini Block K, THOHOYANDOU, 0950 - *Mudzielwana*
124. Philisiwe Patricia Ngubane - 790303 0371 080 - 16863 Mango Drive, Luganda, MARIANNHILL, 3609 - *Mbokazi*
125. Matlhogonolo Phidiesih Moswela - 860422 0660 089 - 30782 Gamodisenyane, TLAKGAMENG, 8616 - *Dinoko*
126. Doctor William Mahlangu - 841116 5597 080 - 0022 Sunset Street, MAPHOTHA, 0400 - *Msiza*
127. Peter Make - 760804 5823 088 - Stand No 1691, Maganagobushwa, SIYABUSWA, 0472 - *Maaba*
128. Thabang James Skhosana - 990512 5484 080 - Stand No 43, Thabana, SIYABUSWA, 0472 - *Banda*
129. Tshoboko Phillip Nkadameng - 750731 5255 080 - Stand No 580, SOSHANGUVE, 0152 - *Matlakala*
130. Sethlodi Michael Tlou - 751124 5893 085 - Stand No 326, Tokologo, MIDDELBURG, 1050 - *Ngwako*
131. Dikeledi Paulinah Molopyane - 510209 0605 089 - E 82, Makgabetswane, HAMMANSKRAAL, 0404 - *Mauoane*
132. Dumisani Thembinkosi Nhleko - 601231 5459 080 - Mfekayi, MTUBATUBA, 3935 - *Manqele*

133. Monde Denis Makhushu - 790322 5472 081 - Stand No 5424, KANYAMAZANE, 1214 - *Mthethwa*
134. Leonard Zamokuhle Dibakwane - 860204 5495 087 - No 49, MAHUSHU, 1253 - *Shube*
135. Moses Butana Muyela - 850830 5375 085 - 889 Umcele Street, Hlalanikahle, Extension 3, KWAGUQA, 1039 - *Mashianoke*
136. Rebotile Andries Phalane - 970813 5463 080 - Ga-Mogotlane, ZEBEDIELA, 0628 - *Mogotlane*
137. Phelelani Freedom Xaba - 830424 5574 080 - Ncengumusa Area, EMONDLO, 3105 - *Ntshangase*
138. Philani Frank Thango - 810716 5409 082 - Nceleni Area, NQUTU, 3135 - *Mdlalose*
139. Ntobeko Marcia Luvuno - 810504 0903 089 - Ezidulini Area, EMONDLO, 3105 - *Buthelezi*
140. Mthokozisi Hector Luvuno - 860504 5700 083 - Ezidulini Area, VRYHEID, 3100 - *Buthelezi*
141. Cosmos Lindokuhle Luvuno - 840504 5791 087 - 3105 Ezidulini Area, EMONDLO, 3101 - *Buthelezi*
142. Lungisani Mayor Luvuno - 920624 5872 084 - Ezidulini Area, EMONDLO, 3105 - *Buthelezi*
143. Sizwe Nicolas Ntuli - 000118 5908 082 - Stand No 1577, WELTEVREDE, 0472 - *Maselela*
144. Johannes Mthandeni Nene - 600328 5633 085 - 82 Kwamathukuza Hostel, NEWCASTLE, 2940 - *Sibisi*
145. Nelson Christopher Johnson - 591202 5257 081 - Emawozini Area, GREYTOWN, 3250 - *Van Wyk*
146. Albert Naane - 590727 5930 080 - 887 Retswelapele Street, KAGISO, 1700 - *Mosimane*
147. Mankahwa Merriam Bopape - 761106 0697 080 - Stand No 195, MANKWENG, 0727 - *Rametse*
148. Fortunate Sebelemetsa - 991020 5139 083 - 37 Lester Crescent, PRETORIA, 0001 - *Galstone*
149. Nontobeko Thulebona Mabaso - 991225 0566 087 - 5738 Zonkizizwe, Zone 6, KATLEHONG, 1431 - *Mbatha*
150. Mosele Gift Moeketsi - 840213 0627 086 - 18737 Thabong, WELKOM, 9463 - *Sekgwane*
151. Khethiwe Princess Ngcobo - 001009 0242 081 - M 370 Vusimtshali Road, UMLAZI, 4031 - *Ngidi*
152. Rapelang Darwin Lefawane - 961106 5436 086 - P O Box 40050, ARCADIA, 0007 - *Moremi*
153. Tshepang Maleho - 980812 5858 081 - 2075 D, BOTSHABELO, 9781 - *Mokhele*
154. Noxolo Mbalu Sibisi - 820201 0961 088 - D 5359 Section 4, Ward 26, MADADENI, 2951 - *Mkhuluse*
155. Sthembiso Mfayela - 981213 5684 081 - L 184 Baphehlu Area, AMANZIMTOTI, 4126 - *Sibiya*
156. Mukelisiwe Shezi - 980513 0573 085 - Ezigeni Area, UMBUMBULU, 4105 - *Mbili*
157. Aphiwe Mfubesi - 990108 0668 080 - Decketshill, COFIMVABA, 5380 - *Galada*
158. Keneilwe Tumelo Matsoso - 000524 0354 083 - 1483 – K 4, Kutloanong, ODENDAALSRUS, 9483 - *Phakisi*
159. Maditaba Millicent Tikolose - 870215 0029 083 - 104 Hlekani Street, LOTUS GARDENS, 0008 - *Sithole*
160. Obed Radebe - 710510 6094 089 - 10017 Setumo Park, MAFIKENG, 2745 - *Moletsane*
161. Thabo Buthelezi - 920925 5065 086 - 12505 Phase 2, Braamfischerville, ROODEPOORT, 1725 - *Dikgale*
162. Bop Walter Ringane - 961216 5299 085 - 88 Mokoena Street, LOTUS GARDENS, 0008 - *Makena*
163. Obakeng Lawrence Selobilwe - 830729 5637 087 - Seven-Miles Village, KURUMAN, 8460 - *Mabili*
164. Thabang Eric Mlangeni - 850324 5692 087 - 7971 Tshivase Street, Marimba Gardens, VOSLOORUS, 1475 - *Tsotetsi*
165. Thato Mary Masiteng - 950824 0231 087 - 7659 Kgoele Street, Thokoza, ALBERTON, 1450 - *Morake*
166. Dumisani Minenhle Msane - 981107 5487 083 - Nxumalale Location, PIETERMARITZBURG, 3200 - *Zuma*

167. Bheka Nyathi - 980219 5892 088 - Boswell Farm, NEWCASTLE, 2940 - *Mhlungo*
168. Nonceba Mfiki - 710909 1130 080 - C C1501, Cato Crest, MAYVILLE, 4091 - *Mlunguza*
169. Phemelo Terrence Mathobela - 000905 5462 080 - 603 Maruthare Street, MADIKWE, 2840 - *Motshwaedi*
170. Nthabiseng Pertunia Maeko - 950316 0687 087 - P O Boxd 103, JUNO, 0748 - *Lepadima*
171. Sello Ernest Ntemane - 711112 5550 085 - 2117 Block F East, SOSHANGUVE, 0152 - *Molokomme*
172. Ofentse Shadrack Maseko - 990502 5183 089 - 45 Iq, Doornfontein, RANDFONTEIN, 1760 - *Teffo*
173. Bongani Danashe - 880318 5648 085 - 8448 Sentsho Street, Phefeni, ORLANDO WEST, 1804 - *Hadebe*
174. Sam Sbusiso Sikhosana - 880612 5539 082 - House No 5205, OSIZWENI, 2952 - *Shabalala*
175. Bongani Samuel Khambule - 901201 5310 085 - Mphola Area, MARRIANHILL, 4342 - *Mqadi*
176. Tania Ndaba - 990604 0323 080 - 7721 Lembede Street, ORLANDO WEST, 1804 - *Tshabalala*
177. Edward Goitseone Letshabo - 790810 5756 081 - Springbokpan Village, LICHTENBURG, 2740 - *Motaung*
178. Thabiso Herbert Motsele - 850104 5741 088 - 59 B – 11th Avenue, Kieserville, LICHTENBURG, 2740 - *Bogatsu*
179. Karabo Tebello Zwane - 940320 0272 083 - 11979 Phase 2, Braamfischerville, ROODEPOORT, 1725 - *Mohale*
180. Sifiso Queentone Dlamini - 890604 5443 082 - Mthebeni Area, NDWEDWE, 4450 - *Ngcamu*
181. Kenamile Piet Montisi - 360228 5296 083 - House No 5587, Tlhabologo Village, MAHIKENG, 2745 - *Mosela*
182. Ramaabele Christina Magoma - 560219 0677 086 - P O Box 269, GA NKWANA, 0240 - *Lesufi*
183. Dumisani Goodwill Khumalo - 720331 5285 083 - P O Box 2325, NONGOMA, 3950 - *Mdhlalose*
184. Nelisa Khumalo - 970929 5714 080 - G 1019, UMLAZI, 4031 - *Buthelezi*
185. Lindokuhle Bright Mveli - 960221 5487 087 - 21124 Mamaoti Area, INANDA, 4310 - *Myeza*
186. Solomon Nthodi - 740921 5757 085 - 273 Extension X, SOSHANGUVE, 0152 - *Sefiri*
187. Jape Lee Lo Pong - 000524 0125 087 - 1 Suncliff, 84 Sophia Street, FAIRLANDS, 1610 - *Lever*
188. Thabo Herman Ramothhale - 950109 5784 086 - 13085 Modevu Street, MAMELODI EAST, 0100 - *Tihapi*
189. Zuko Poswa - 750918 5657 080 - 89 Smallville Ridge, Jade Road, MORNINGSIDE, 6000 - *Zibi*
190. Jankie Zimu - 930403 5405 080 - 4 Letshalemaduke Village, WITSIESHOEK, 9870 - *Nhlapo*
191. Pretty Fikile Jele - 800526 0777 082 - 973 Mobutja Street, Extension 1, NYANYETHU, 1500 - *Nkosi*
192. Gomolemo Faith Nzama - 000106 0880 083 - 6499 Phakoese Street, Extension 2, SOWETO, 1868 - *Ramokoka*
193. Immaculate Maluleke - 950829 0555 088 - 7894 Section F, Holeni Street, MAMELODI WEST, 0122 - *Tshivhase*
194. Mpilonhle Margoka - 000908 5474 089 - 157 Avu, 14 Landa Road, ALEXANDRA, 0100 - *Mthembu*
195. Annah Joy Hlangoane - 781215 0642 081 - 10876 Ga-Molekane, MOKOPANE, 0500 - *Makhubela*
196. Geron Kenny - 960605 5508 084 - 05 Blue Waters, DURBAN, 4001 - *Shange*
197. Eugene Matumba - 880825 5625 087 - 7279 / 13 Block Vu, Extension 4, SOSHANGUVE, 0100 - *Makhaga*
198. Mamoshiane Tabudi Ramokgopa - 961214 0319 081 - 417 President Street, SILVERTON, 0127 - *Mackays*
199. Mthetheleli Mokhesi - 890627 6028 081 - Etsokolele, MATATIELE, 4730 - *Ngwane*
200. Katlego Masupa - 990912 0063 089 - 689 A Zone 4, Forbes Road, SOWETO, 1717 - *Ndamane*

201. Jankie Doctor Baloyi - 800112 5995 084 - 1042 Best Street, Extension 2 A, Block XX, SOSHANGUVE, 0152 - *Kutumela*
202. Letlhogonolo Romeo Segoaatlle - 930601 5419 080 - 4 – 2nd Avenue, ALEXANDRA, 2012 - *Mohlake*
203. Sanele Simphiwe Lucky Motalingoane - 920612 5448 088 - 2040 Mpumuza Location, Near Phayiphini Taxi Rank, PIETERMARITZBURG, 3200 - *Khumalo*
204. Koketso Clement Mokoena - 000211 5608 081 - 1331 Moshoeshoe, WINTERVELDT, 0198 - *Malatsi*
205. Ethel Nonduduzo Magagula - 901120 0729 083 - 258 B Vukuzenzele, MASIBEKELA, 1342 - *Mgwenya*
206. Nkateko Lennford Pitsi - 970913 5059 084 - 102 Park Crescent, Orange Blossom Boulevard, THE ORCHARDS, 0182 - *Kole*
207. September Fanfuthi Sello - 970910 5660 085 - P O Box 1561, KWALUGEDLANE, 1341 - *Silawule*
208. Kamogelo Lamola - 980804 5582 084 - House No 464, DWARSRIVER, 0812 - *Seema*
209. Madumetja Kennedy Malatji - 960710 5596 087 - Stand No A 13, Mashaa, RAMOKGOPA, 0811 - *Molosi*
210. Pheleletjo Finish Seshoene - 980121 5438 088 - Stand No 653, Sekhokho, BOTLOKWA, 0812 - *Mashao*
211. Tumudi Elmos Phaladi - 770816 5533 085 - P O Box 4643, MPHAHLELE, 0736 - *Mphahlele*
212. Siphwe Khumalo - 990118 5586 088 - 2657 Extension 3, Zakhariya Park, VLAKFONTEIN, 1821 - *Mazibuko*
213. Mngqobi Nkosinathi Mbele - 990114 5329 082 - 1243 B, Bitshego Street, NALEDI, 1868 - *Dladla*
214. Thabile Zwane - 970924 0762 085 - 10037 Mancho Street, Extension 3, DOBSONVILLE, 1865 - *Mokoena*
215. Thabang Lesibana Silabe - 000627 5948 088 - Stand No 62, INDERMARK, 0717 - *Mantshiu*
216. Joel Nteseng Mashego - 760726 5794 086 - Stand No 54, KABOKWENI, 1245 - *Sedibe*
217. Zanele Precious Sithole - 940510 0502 089 - Wembezi, ESTCOURT, 3310 - *Ndumo*
218. Dumile Ncambelo - 690101 8524 085 - Amangutyana Area, BIZANA, 4800 - *Mzize*
219. Muzamani David Hlungwani - 630519 5372 088 - P O Box 167, SASELEMANI, 0928 - *Baloyi*
220. Hlumeli Alec Peter Mohlala - 921029 5415 083 - 430 Section B, KWAMHLANGA, 1022 - *Matlala*
221. Mandla Siboniso Dube - 990530 5743 081 - Kwalolo Area, MTUBATUBA, 3935 - *Mkhwanazi*
222. Nkosinathi Siyabonga Ramokolo - 001111 5503 085 - 106 Tamarind Street, Lotus Gardens, PRETORIA, 0001 - *Mbonani*
223. Joseph Motlogelwa Sekodi - 751005 5976 089 - 219 Blougowrie Section, CHANENG, 0300 - *Ramong*
224. Lindy Magret Masilela - 760128 0282 086 - 3535 Hoopoe Street, Extension 6, Klarinet, WITBANK, 1035 - *Nkosi*
225. Mbali Bongekile Vundla - 010127 0471 085 - No 40363, Beroun Farm, UTRECHT, 2980 - *Dhlamini*
226. Mzolisi Nelson Mafungwa - 690313 5906 088 - B 55012 Mpunzi Street, Kuyasa, KHAYELITSHA, 7744 - *Mchenge*
227. Yvonne Jean Bobbert - 780317 0428 080 - 1732 Ngwenya Street, MALALANE, 1203 - *Sanderson*
228. Bafana Ndumo - 990413 5286 080 - 4676 Phomolong Section, EDENVALE, 1610 - *Manana*
229. Thuthukani Welcome Dlamini - 771007 5373 081 - 1135 Rings Wale, BENONI, 1501 - *Sibiya*
230. Lesiba Solomon Kekana - 770524 5505 083 - P O Box 2633, MAHWELERENG, 0626 - *Lekalakala*
231. Abueng Grace Lesejane - 771108 0499 085 - House No 13824, Sunrise View, RUSTENBURG, 0300 - *Nkwe*
232. Simon Teboho Khanye - 911023 5813 084 - 3162 Petsana Location, REITZ, 9810 - *Mofekeng*
233. Charles Matome Kabini - 900523 5289 089 - 1868 Block P, SOSHANGUVE, 0152 - *Ramokgopa*
234. Mamohale Selina Ndima - 710517 0306 088 - 286 Mofokeng Section, KATLEHONG, 1431 - *Buthelezi*



235. Ntokozo Trust Mbonambi - 741009 5487 082 - Dokodweni, GINGINDLOVU, 4400 - *Sikhakhane*
236. Lawrence Zwakala - 741018 5418 088 - 13148 Masela Street, DAVEYTON, 1528 - *Nkomotse*
237. James Bongani Nkosi - 750421 5410 089 - 3475 Marlva Street, GELUKSDAL, 1550 - *Mavuso*
238. Thuso Netshituni - 750808 6263 089 - 98 – 10th Avenue, ALEXANDRA, 2090 - *Sikhweni*
239. Bulelani Zibi - 750624 5221 089 - 7 Gando Crescent, BONAERO PARK, 1619 - *Sigcau*
240. Malema Edward Selahla - 761101 5359 083 - P O Box 236, PAULUSWEG, 0814 - *Makhura*
241. Moshukumadi Mabula Makgoka - 991122 5810 083 - Stand No 1518, SIYABUSWA, 0472 - *Mathiane*
242. Sibusiso Steven Ngoma - 000530 5835 083 - 409 Somaphepha Village, MIDDELBURG, 1050 - *Sefako*
243. Collins Koketso Kekana - 930318 5564 084 - S 36 Rathoke, SIYABUSWA, 0472 - *Tlamama*
244. Phecius Tsokane Moraba - 990710 5423 088 - P O Box 258, JANE FURSE, 1085 - *Matladi*
245. Siphosethu Masana - 990531 5460 080 - 4562 Extension 25, KINROSS, 9761 - *Sibotho*
246. Lukhanyo Bungu - 990502 5801 086 - Sityi Location, MIDDLEDRIFT, 5701 - *Dwashu*
247. Monthati Praise Segopisho - 980312 5615 086 - House No 1474, SEODING, 8470 - *Bok*
248. Noluthando Zikode - 881030 0221 086 - 7946 Paul Street, Extension 2, LANLEY, 1834 - *Dlamini*
249. Faileck Elson Mashiloane - 650905 5382 083 - 5187 Hubela Street, Extension 12, Windmill Park, BOKSBURG, 1459 - *Maunye*
250. Elias Mphaila Matjila - 670323 5707 083 - 96 Unit 5 D, TEMBA, 0407 - *Makgeru*
251. Johannes Aupa Mokowe - 670401 5921 084 - House No 246 X X, LEROME SOUTH, 0310 - *Makgorogo*
252. Reginald Senzo Shabane - 670926 5381 087 - 67 Kingsway Road, Extension 2, NIGEL, 1491 - *Dawe*
253. Johan Mfite Matsimana - 680115 5354 082 - 2684 Kwazamukuhle, HENDRINA, 1098 - *Magagula*
254. Anele Nyusela - 881204 5764 081 - Mahamane Area, MT FRERE, 5090 - *Ncwaiba*
255. Casious Chipu - 870717 5893 082 - P O Box 205, ALLDAYS, 0909 - *Mokokwana*
256. Katlego Joy Phukubye - 980903 5408 082 - Grootdraai, BOCHUM, 0970 - *Lebogo*
257. Siphumelelo Lorraine Mkhize - 970418 0260 083 - M 1338, Qubuqubu Road, KWA MASHU, 4359 - *Mofokeng*
258. Sfiso Siphosethu Success Zondo - 981011 5613 088 - Lot 82 / 16, Mdlalose Street, NQUTU, 3135 - *Mashazi*
259. Sfiso Sphesihle Sikhakhane - 970404 5925 086 - P O Box 296, MTUBATUBA, 3935 - *Mbatha*
260. Kgophutso Robiam Phaka - 830817 5355 089 - 82 San Sita, 630 Lois Avenue, ERASMUSKLOOF, 0181 - *Matlou*
261. Eldaine Etienne Damons - 990903 5299 083 - 50 Abeltree Street, LOTUS GARDENS, 0100 - *Pillay*
262. Nonhlakanipho Mazibuko - 880312 0809 081 - Kwandaba Area, ESTCOURT, 3310 - *Vilakazi*
263. Juniour Tiisetso Mashishi - 980319 5342 082 - 18 Mackata Street, SAULSVILLE, 0125 - *Mangwane*
264. Lerato Boitumelo Nemavhulani - 981002 0179 084 - 10320 A Mabasotho Street, ORLANDO WEST, 1804 - *Mokoena*
265. Eva Disebo Phologolo - 800527 0764 088 - 16733 Kings Park Street, Zone 4, DIEPKLOOF, 1864 - *Morwane*
266. Sello Paulos Ngobeni - 800628 5349 089 - 472 Block C, LETLHABILE, 0264 - *Mathonsi*
267. Oliver Kau - 891020 5890 082 - 0352 A, Thabeng Section, BRITS, 0250 - *Mamaile*
268. Phindulo Muthaphuli - 000323 6037 085 - Vyeboom, VUWANI, 0952 - *Mthombeni*

269. Bheki Emmanuel Shangase - 670902 5534 082 - Wosiyane Area, NDWEDWE, 4342 - *Mathobela*
270. Mfanelo Ndlela - 850109 5493 085 - 111 Jinnah Road, Northdale, PIETERMARITZBURG, 3201 - *Zuma*
271. Sphelele Innocent Njoko - 990623 5464 087 - 010497 Wushwini Road, Nglolasi Reserve, HILLCREST, 3650 - *Ziqubu*
272. Lukas Rapule Mochumi - 861228 5391 086 - 6973 Lerato Street, Swaneville, KRUGERSDORP, 1740 - *Pitsane*
273. Moagi Simon Mmutle - 770608 5401 086 - Luckau, NEBO, 1051 - *Ratau*
274. Pulane Felicinah Tshabalala - 981202 0494 083 - Plot B 54, Beckendan Waterval Street, TARLTON, 1739 - *Changule*
275. Lungisani Welcom Mhlongo - 000917 5532 085 - D 181 Geogedale Area, HAMMARSDALE, 3700 - *Hlongwane*
276. Luvuyo Xalisile - 001125 5696 087 - 1376 Sonwabile Village, STERKSTROOM, 5425 - *Kani*
277. Mlungisi Brian Mndaweni - 870217 5704 082 - K 91 Ekwandeni Area, HAMMERSDALE, 3700 - *Ndlovu*
278. Xolani Petros Majola - 910329 5677 085 - 60 Schweitzer Crescent, EMPANGENI, 3880 - *Ndebele*
279. Junior T Cumbi - 960503 5457 081 - 275 Ziqubu Road, NAZARETH, 2630 - *Ngcobo*
280. Raynold Miyambo - 000602 5756 088 - Khujwana, TZANEEN, 0850 - *Moroathsehla*
281. Humula Mitchell Makamu - 980702 5744 086 - P O Box 1249, MALAMULELE, 0982 - *Mackauckau*
282. Giasmin Walma Van Der Molen - 981013 0188 082 - 33 Arend Avenue, Extension 4, RANDPARK, 2195 - *Ferrari*
283. Tlangelani Inocent Shipapu - 990704 5786 081 - Phaweni Village, SASELAMANI, 0928 - *Munyai*
284. Christinah Nomsa Mongale - 890830 0569 080 - Shaleng, KHUNWANA, 2700 - *Dial*
285. Gabriel Mathabatha - 800911 6027 080 - Mahubitswane, MASEMOLA, 1060 - *Matsemela*
286. Thobeka Shibase - 000808 0867 081 - P O Box 131, MTUBATUBA, 3935 - *Mthiyane*
287. Jabula Hendrick Nkambule - 821107 5594 080 - 12134 Extension, MHLUZI, 1051 - *Buhali*
288. Siphamandla Collen Hlatshwayo - 850826 5774 087 - 6945 / 29 Van Koiler, Stanwest Area, STANDERTON, 2430 - *Mdluli*
289. Thabo Luvuyo Khoza - 890529 5608 089 - Stand No 1360, Mangweni Trust, MALALANE, 1341 - *Mbulawa*
290. Phillip Ramela - 841111 5798 085 - 813 / 3 Mosotho Street, TEMBA, 0407 - *Khampe*
291. Muziwenhlanhla Khoza - 940620 5368 087 - 17 Ayton Road, SEAVIEW, 4094 - *Ximba*
292. Velaphi Enoch Mbhele - 590827 5592 086 - Langsklomp Farm, Normandien, DANNHAUSER, 3080 - *Twala*
293. Logan Dominic Francke - 990909 5194 083 - 44 Wellington Road, DURBANVILLE, 7650 - *Bonthuys*
294. Sandile Sifiso Mpungose - 910826 5363 087 - 1069 Richardsbay, PIET RETIEF, 2380 - *Dladla*
295. Sandile Solomon Ndaba - 831101 5406 088 - 435 Thabana, MDUTJANA, 0472 - *Mashimzi*
296. Wilson Goitsemodimo Moshe - 980804 5513 089 - 489 Ramosadi Village, MAHIKENG, 2445 - *Abueng*
297. Siphesihle Mazwi - 000815 5886 081 - Saphokanduku Area, MT AYLIF, 4235 - *Poswa*
298. Nkumbulo Lawrence Bukwana - 980525 5750 088 - Sibi Area, BETHEL, 4730 - *Ntsoane*
299. Valley Reginald Tshabalala - 650731 5487 080 - Hlathidam Area, NQUTU, 3135 - *Sikhosana*
300. Vusumzi Patrick Ntantiso - 730301 5755 086 - 74 Zondi Street, New Brighton, PORT ELIZABETH, 6001 - *Ludinga*
301. Justice Zwelepinga Fundwana - 730203 5359 085 - 253 South Street, VRYHEID, 3100 - *Hanise*
302. Evonne Kelebogile Binang - 730112 0683 086 - 9690 Bugloss Crescent, THE ORCHARDS, 0182 - *Letshwiti*

303. Sipho Oxen Shongwe - 721014 5276 083 - P O Box 07, MAGOGENI, 1334 - *Nkosi*
304. Aria Nomyayi - 780505 1597 081 - 603 Jb Mafora, Block 5, BLOEMFONTEIN, 9323 - *Mdungela*
305. Enoch More - 780515 5951 085 - 1184 A Mbatha Drive, WHITE CITY, 1809 - *Mbatha*
306. Amos Themane - 781029 5619 089 - 411 Kgobokwale, SIYABUSWA, 0472 - *Maduwane*
307. Osborn-Brian Magala Menu - 781020 5106 086 - 1362 Sekutu Street, Rockville, SOWETO, 1881 - *Magalemele*
308. Lumka Mtubeni - 730908 1054 080 - Kwa-Pelepele Location, BIZANA, 4800 - *Qadi*
309. Shaka Kenneth Motshwene - 731015 5388 081 - 598 Section A, DARKCITY, 1021 - *Nene*
310. Trifina Thembakazi Mpongoma - 730622 0668 085 - Butsheni Area, MOUNT FRERE, 5090 - *Gxumisa*
311. Bhekumuzi Velaphi Lushozi - 600403 5668 082 - Malomini Area, MSINGA, 3010 - *Nene*
312. Molatela Paulus Kgosebo - 590109 5678 086 - 468 Diplomadi Crescent, PHILLIP NEL PARK, 0182 - *Magalefa*
313. Mabhelonke Wilson Mambule - 590404 6164 081 - 3651 Extension 7, KAALFONTEIN, 1688 - *Dase*
314. Nozipho Brilliant Mhlungu - 821019 0285 087 - H 2 – 1787 Idada Street, ESIKHAWINI, 3887 - *Ngidi*
315. Tefo Makobe - 881115 5832 084 - Mmotoaneng, GA-MASEMOLA, 1060 - *Mosoane*
316. Sithembile Mandisa Shabalala - 000719 0494 083 - 06 Home Road, Malvern East, GERMISTON, 1401 - *Ndaba*
317. Nkosikhona Velenkosini Tshindeneni - 911213 5516 080 - A 574 Makhosonke Road, Ngwelezane, EMPANGENI, 3880 - *Chili*
318. Anthony Mgaga - 680207 5349 087 - 5877 Extension 3, ORANGE FARM, 1841 - *Ngema*
319. Ayanda Brian Mkhize - 000209 5884 082 - B 175 Etafuleni, INANDA, 4310 - *Ngcobo*
320. Nkosingabele Nxumalo - 980310 5775 082 - House No 4342, P 714, TONGAAT, 4400 - *Mtshali*
321. Mnqobi Wiseman Mkize - 001021 5457 085 - No 371 Low Cost Houseing, HIMEVILLE, 3256 - *Zondi*
322. Nkani-Thabani Jali - 921106 5522 082 - 62 Swallow Street, SWANEVILLE, 1754 - *Mphuthi*
323. Taetso Lekola - 000426 0618 089 - D/O, JANE FURSE, 1085 - *Makubung*
324. Donald Thabang Mzimba - 000613 5676 085 - Stand No 1740, Keerom Section, SEHLAKWANE, 1047 - *Maabane*
325. Tshenolo Kopano Moshia - 000122 5038 080 - 206 Kiaat Troye Street, SUNNYSIDE, 0100 - *Khoza*
326. Raphael Vusi Mashaba - 860829 5299 087 - 21443 Radebe Street, KWA-THEMA, 1575 - *Ngobeni*
327. Andile Thabo Nduli - 000816 5574 081 - 2747 Ntinginono Road, Imbali, PIETERMARITZBURG, 3200 - *Letlaila*
328. Orphious Mzwamandla Makom - 900709 5463 085 - 4471 Woodlands, PIETERMARITZBURG, 3200 - *Ndyebo*
329. Onkgopotse Brian Moncho - 950707 5760 087 - E 50 Maphinide Village, KURUMAN, 8460 - *Mabale*
330. Aaron Zamokwakhe Ngcobo - 850514 5347 084 - 112 Country View Estate, MIDRAND, 1682 - *Danisa*
331. Blessing Mokgethwa Mashapa - 000711 0362 089 - 5239 Letsobe Street, Windmill Park, Extension 12, BOKSBURG, 1459 - *Raphiri*
332. Vusimuzi Siyabonga Ogle - 000227 5198 089 - Stand No 156, VLAKLAAGTE, 0400 - *Mahlangu*
333. Thabiso Mabule - 990526 5587 080 - Stand No 454, MACHIDING, 0458 - *Magane*
334. Johan Skhosana - 790205 5596 084 - 1630 Andeon, WESTVIEW, 0183 - *Mashiane*
335. Momena Alfred Lefifi - 630610 6326 080 - 657 Maubane, HONEYVIEW, 0407 - *Mahlangu*
336. Dineo Luther Mashiloane - 970304 5381 084 - 3454 Extension 4, Second Crescent, KWAZAMOKUHLE, 1095 - *Maila*

337. Tebogo Vinset Kgomogadio - 770226 5433 080 - 28 Estate, Esperanza, EQUESTRIA, 0184 - *Mahonono*
338. Ditshebo Bernard Modikwa - 790612 5584 087 - 2115 Block C, HAMMANSKRAAL, 0400 - *Moloantoa*
339. Thokozani Makhaza - 791115 5838 080 - 8 Lisbon Street, Cosmo City, RANDBURG, 2188 - *Kgati*
340. Fortune Letlotlo Baloyi - 801225 6393 080 - House No 475, Phiring Section, MFIDIKWE, 0292 - *Dibetsoe*
341. Bongani Patrick Tsoaedi - 761101 5992 081 - 12625 Tebele Street, DAVEYTON, 1501 - *Nhlapo*
342. Tobi Light Moipalai - 480102 5498 087 - House No 48 A, SHALENG, 8500 - *Chweneyagae*
343. George Petrus Themba - 770217 5932 080 - 5373 Extension 7, Jb Marks Street, DIEPSLOOT, 0152 - *Khoza*
344. Mpumelelo Thandokuhle Shazi - 990115 5713 084 - Emkhazini Area, AMANZIMTOTI, 4126 - *Mapumulo*
345. Veronica Mamakata - 970128 0671 086 - Ga-Kgapane, Home 2000, MODJADJISKLOOF, 08358 - *Seshai*
346. Sipiwe Siyabonga Mahlangu - 971019 5644 088 - 989 Extensio 11, LESLIE, 2265 - *Mzanywa*
347. Thembelihle Centimatima Maseko - 990615 0655 081 - 13067 Extension 7a, JOHANNSBURG, 2001 - *Zwane*
348. Sibusiso Clearence Nkambule - 830616 5852 081 - Chweni, KABOKWENI, 1245 - *Mndawe*
349. Wally Wilfred Sekhobane - 790301 5603 085 - 3418 Morajane Street, DUDUZA, 1496 - *Maboea*
350. Mxolisi Emmanuel Madonsela - 990118 5781 085 - Extension 4, BREYTEN, 2330 - *Sibuyi*
351. Lucas Steyn Sekopa - 750909 5568 088 - P O Box 229, STEELPOORT, 1133 - *Maeyane*
352. Mpho Moloi - 000901 5228 084 - Aa 152 Gcugcwa Lane, UMLAZI, 4066 - *Sithole*
353. Themba Samuel Ngongoma - 520307 5780 085 - Zondi Store, Elandskop, PIETERMARITZBURG, 3200 - *Ngcobo*
354. Noniki Samuel Bhayane - 450308 5380 086 - 4246 Section M, MAMELODI WEST, 0183 - *Phala*
355. Tamsanqa Hemington Tshabalala - 520524 5473 087 - Nikhwe Area, BIZANA, 4100 - *Nomazele*
356. Mfeleni Silas Mokgoari - 500312 5768 084 - Stand No 2682, Legonong Section, SEABE, 0417 - *Motlhwane*
357. Sekgaodi Jeven Ntose - 650202 7139 087 - 109 Mpho Section, TEMBISA, 1632 - *Sepadile*
358. Mzimasi Zimasile Mfingwana - 580706 6053 086 - F 38 Nu 15, MDANTSANE, 5219 - *Mboya*
359. Themba Simon Buthelezi - 580213 5554 081 - Emvunyana Area, EMONDLO, 3105 - *Sibiya*
360. Mmarakeng Frans Madutlela - 610811 5726 080 - Atok, SEKHUKHUNE, 1124 - *Tshehla*
361. Mosenogi Eric Mahlaule - 700728 5509 087 - 3532 Khuti Street, Ikageng, POTCHEFSTROOM, 2520 - *Kgabedi*
362. Mzukisi Benelwa - 720616 5729 084 - 10 Roxy Lane, Bella Avenue, GONUBIE, 5257 - *Gqubule*
363. Luzaros Mahlane Mabasa - 730105 5645 084 - 123 Block Jj, SOSHANGUVE, 0152 - *Mamabolo*
364. Collen Mudau - 870913 5685 087 - 425 Summerset Place, 6 Summerset Road, Extension 22, NOORDWYK, 1687 - *Baloyi*
365. Thobani Pensweer Shwayimba - 700108 5293 083 - 10 Hintsas Street, LADY FRERE, 5410 - *Mtshizana*
366. Avhathakhei Jeremiah Tshipandu - 700426 5871 082 - Ngwenani Themeli, THOHOYANDOU, 0950 - *Nemathaga*
367. Olebogeng Humphrey Skalk - 700501 5996 087 - House No 1178, Mountain View, PAMPIERSTAD, 8566 - *Kosana*
368. Mbuyiselwa Mandla Zuma - 610303 5854 088 - Sweetwaters, PIETERMARITZBURG, 3200 - *Bhengu*
369. Vuyisile Stanley Jacisa - 700426 5357 082 - 89 Bhongweni Township, Kwanobuhle, KOKSTAD, 4700 - *Langabi*
370. Sergius Paulus Ndala - 690330 5486 085 - 1503 Block F, SOSHANGUVE, 0152 - *Silika*

371. Mdumiseni Fisokuhle Ngcamu - 850729 5410 084 - Kwanibeni, PIETERMARITZBURG, 3200 - *Magwenyana*
372. Madume Albert Pitsi - 450201 5455 083 - Ziest, BOCHUM, 0970 - *Sebola*
373. Milard Abram Mokgosinyana - 450106 5220 082 - 5 Van Noorden Street, DAN PIENAARVILLE, 1739 - *Madalane*
374. Makhosonke Elias Masikane - 690206 5792 088 - Cc 345, UMLAZI, 4066 - *Ngubane*
375. Cyril Lucky Ndlovu - 681116 5632 088 - B 539 Ekuvukeni Area, LADYSMITH, 3370 - *Dlamini*
376. Madibe Owen Tjie - 770919 5884 084 - 1597 Unit 5, Phase 3, LEBOWAKGOMO, 0237 - *Mahlatji*
377. Xolile Roloma - 770717 5961 088 - Mandela Park, MTHATHA, 5010 - *Fadane*
378. Thanduxolo Pholo - 770705 6120 085 - 3 Mayila Street, New Bright, SOMERSET EAST, 5850 - *Bandla*
379. Mpho John Tshwane - 761024 5606 081 - Magatle Village, GOMPIES, 0631 - *Lekgwathi*
380. Diphapang Richard Mosoeu - 760427 6094 085 - 7112 Thubelicha, Thabong, WELKOM, 9463 - *Mbale*
381. Margaret Peggy Mnisi - 650603 0412 084 - 2396 Masinga Street, Extension 4, Kwaguqa, EMALAHLENI, 1039 - *Mgqarwani*
382. Nomathemba Zena - 650825 0432 081 - 1754 Maswili Location, ADELAIDE, 5760 - *Seti*
383. Thatego Maredi - 980424 5764 085 - Stand No 95, Mmotoaneng Village, RAKGOADI, 1068 - *Matemotja*
384. Sifiso Nicholas Duma - 730512 5372 082 - 31 Umkomaas Avenue, NEWCASTLE, 2940 - *Malinga*
385. Mokone Shylock Sithebe - 730413 5869 088 - 2485 Zone 13, SEBOKENG, 1983 - *Motaung*
386. Lufuno Eric Simba - 700605 6815 087 - Vuvha, MUTALE, 0956 - *Ndou*
387. Makhorumetso Elias Mokomane - 701209 5372 080 - Stand No 65, NEBO, 1051 - *Matlala*
388. Daniel Tsandi Masina - 680112 5854 088 - Stand No 1508, Sithaewana, GROBLERSDAL, 0400 - *Masilela*
389. Lindani Eric Kala - 810321 5577 085 - Private Bag X2, KHAYELITSHA, 7784 - *Sokoyi*
390. Zwelinzima Joseph Joe - 801117 5375 087 - 450 A Nekkies, KNYSNA, 6570 - *Gedezane*
391. Thembeni Joseph Moloufi - 800928 6207 082 - 2980 Mountain View, BRANDFORT, 9400 - *Mazinyo*
392. Thuto Hugh Pheko - 810526 5919 083 - 1553 Moshiaepo, VRYBURG, 8601 - *Moloi*
393. Mshengu Joefoster Mashego - 801229 6134 080 - Stand No 253, Phola Trust, KABOKWENI, 1245 - *Tshabalala*
394. William Lehlae - 820128 5728 081 - 13825 Kgotso Street, Zone 11, SEBOKENG, 1983 - *Raliapeng*
395. Tebogo William Matokonyane - 820304 5790 088 - 19 Magriet Street, BLOEMHOF, 2660 - *Stone*
396. Phillip Sizwe Qaba - 750315 6483 089 - 268 Ga Malekane, NGWAABE, 1058 - *Phetla*
397. Senamile Landiwe Zwane - 960819 0189 085 - 42 Brummer Street, De Bruyn Park, ERMELO, 2350 - *Shongwe*
398. Cathrine Mzamba - 840309 0502 087 - 535 Andries Street, 702 Idlemuld North, PRETORIA, 0002 - *Ndlovu*
399. Dikarata Nonna Molala - 531111 0149 081 - Rakgoane, ZEBEDIELA, 0628 - *Mahlobogoane*
400. Teboho Albert Mokoena - 671106 5640 084 - 7180 Kololo Street, TSAKANE, 1550 - *Ndlovu*
401. Moses Lekgothoane - 671128 5298 085 - 6417 Mamphele Street, Mahube Valley, Extension 24, MAMELODI EAST, 0122 - *Mojapelo*
402. Edward Dlebe - 681026 5447 082 - 18510 Zone 14, SEBOKENG, 1702 - *Ndaba*
403. Martha Andile Makaka - 681228 1526 089 - 8444 Ruth Block, STINKWATER, 0400 - *Mahlangu*
404. Boitshepo Puane - 980407 0852 088 - 5138 Extension 4, Zithobeni, BRONKHORSTSPRUIT, 1024 - *Masemola*

405. Mmaphuti Martin Boshomane - 790702 5383 083 - P O Box 1258, POLOKWANE, 0700 - *Mosima*
406. Lawrence Ndlovu - 991207 5746 088 - 96 Block T, SOSHANGUVE, 0152 - *Mahlangu*
407. Siphamandla Mvunzo Mchunu - 001110 5722 083 - P O Box 20, HLUHLUWE, 3960 - *Dube*
408. Simiso Mkhize - 001213 5345 085 - Kwamsholoji Area, UMBUMBULU, 4105 - *Dlamini*
409. Nandipha Mfobo - 990222 0630 089 - 9 Rooibok Street, Madeira Park, QUEENSTOWN, 5301 - *Nobongoza*
410. Kgalabje Albert Makgopa - 640912 5478 088 - 3808 Martin Mabitsele, FAR EAST BANK, 2090 - *Masenya*
411. William Lucky Pakkies - 650101 6362 080 - D 396 Mbombo Road, KWA MASHU, 4359 - *Mofokeng*
412. David Rantshi Modise - 980213 5770 089 - P O Box 420, LEPHALALE, 0555 - *Mogwasa*
413. Gayle Carrol King Stanley - 541027 0079 086 - 25 Hilary Street, Randpark Ridge, RANDBURG, 2125 - *Lyons*
414. Joseph Thabo Modise - 721110 5841 080 - 13635 Letsatsi Street, SEBOKENG, 1983 - *Matshaneng*
415. Chuene Octavius Malebana - 861001 5569 088 - 118 Zone 5, Section A, SESHEGO, 0742 - *Maphosa*
416. Sam Khomotso Tshwane - 781125 5968 086 - Magatle Village, GOMPIES, 0631 - *Lekgoathi*
417. Bafana Gina - 000803 5831 083 - Mazala Area, MTUBATUBA, 3935 - *Ngwane*
418. Lucky Mandla Simbini - 700610 6371 081 - 29691/00 Phase 2, MAMELODI EAST, 0122 - *Malisa*
419. Jabulani Isaac Mavuso - 770904 5709 085 - 610 Kwazanele, BREYTEN, 2330 - *Hlapo*
420. Kamogelo Mashao Maremane - 970803 5416 089 - 6387 Mossie Street, KRUGERSDORP, 1754 - *Pega*
421. Charity Buang Mokone - 001002 0665 088 - Thekwane Area, RUSTENBURG, 1064 - *Phateng*
422. Oratile David Boikanyo - 000730 5648 086 - 10833 Extension 10, Sunrise Park, RUSTENBURG, 1064 - *Molusi*
423. Fanozana Philemon Gwala - 911101 5230 085 - E197 Makabe Street, PHOTSANENG, 0293 - *Huma*
424. Lebang Nobadula - 960530 5253 087 - Tamarix Street, Unit 15, MMABATHO, 7196 - *Seepamere*
425. Lindokuhle Jam-Jam - 000114 5687 081 - 2187 Katlehong South, GERMISTON, 1431 - *Dlamini*
426. Dimakatso Ernest Nkabane - 930110 5533 080 - 7-6th Avenue, ALEXANDRA, 2090 - *Mashego*
427. Manqoba Sbonelo Shange - 990920 5580 080 - 2602 White City, INANDA, 4310 - *Mkhize*
428. Nokulunga Nomcebo Ngcwensa - 850619 0438 083 - Lb431 Kwamashu Area, KWAMASHU, 4359 - *Zulu*
429. Lungani Zamani Gwamanda - 920515 5827 088 - 3 Pillargate Place, Southgate, PHOENIX, 4068 - *Sikhakhane*
430. Tiro Given Mashishi - 870908 5311 080 - 3531 Zone 3, GA-RANKUWA, 0208 - *Temo*
431. Dennis Tlhompho Molefe - 860928 5306 080 - Block 2, Flat 12, Jabulani Flats, KWA-XUMA, 1868 - *Khanye*
432. Klaas Kenny Ndlovu - 950517 5902 088 - 96 Block T, SOSHANGUVE, 0152 - *Mahlangu*
433. Sibusiso Lawrence Simelane - 880809 5425 086 - 319 Kwenele Proper, KATLEHONG, 1431 - *Zulu*
434. Kedirile Letlhogile Trinity Mkhuma - 960415 5371 081 - 540 Unit 1, Lerato, LEHURUTSHE, 2880 - *Mokgothu*
435. Andile Mvelase - 970319 5857 081 - 2079 Ennie Matroos Street, Extension 2, MUNSIEVILLE, 1739 - *Tafu*
436. Frank Nkuna - 740323 6159 082 - 416 Jiyane, Skhosane Section, Katlehong, GERMISTON, 1451 - *Moloto*
437. Thabiso Gladsten Saba - 810923 5428 084 - Flat 16, Trichardt Oord, Westegloor, RANDFONTEIN, 1759 - *Sebiloane*
438. Ntobeko Melani - 890801 5705 086 - 9 Correctional Services, KNYSNA, 6570 - *Ntentile*

439. Thabiso Daniel Abram Seanyisa - 960406 5503 088 - 13 Dr Monare Street, SAULSVILLE, 0125 - *Mahlangu*
440. Monni Mosima Walter Matlou - 810608 5863 089 - 2036/2 Asparagus Street, Platinum Manor, CHANTELLE, 0200 - *Seoke*
441. Thato Bakang Bontle Mmaphala Mamabolo - 931218 0010 084 - 1618 Morolong Section, KGABALATSANE, 0192 - *Komane*
442. Busane Cyprian Mbhele - 950211 5966 083 - Smozomeni Area, RICHMOND, 3750 - *Zondi*
443. Simphiwe Karabo Nyandeni - 950711 5507 084 - 63 Wordsworth Street, Extension 11, Dalpark, BRAKPAN, 1541 - *Moepye*
444. Sifiso Nkosi - 840201 5698 087 - 5287 Mofutsanyang Street, Orlando East, SOWETO, 1818 - *Malinga*
445. Onneile Viola Mfetane - 960110 0442 082 - House No 20027, Kgopa Section, MMANTSERRE, 0370 - *Segone*
446. Masilo Calvin Mlaudzi - 760916 6113 085 - Block F11, Thokoza Mews, THOKOZA, 1426 - *Malatji*
447. Jabu Obed Soko - 841212 5739 085 - 11428 Berillium Street, LENASIA, 1827 - *Ntuli*
448. Lunathi Zeviarh Dyani - 850421 5315 089 - 1787 Bomba Street, DAVEYTON, 1520 - *Mathebula*
449. Mthokozisi Madela - 990426 5912 083 - No R78 Section 7, MADADENI, 2951 - *Mhlongo*
450. Sibusiso Manzini - 620220 5572 080 - P1408 Mthethweni Road, UMLAZI, 4066 - *Zwane*
451. Sabetha Mashigo - 820125 0533 086 - 842e Tshipa Street, Zone 1, MEADOWLANDS, 1864 - *Madibane*
452. Naume Gandamipfa - 940606 1063 087 - Ngwenani Ya Themeli, THOHOYANDOU, 0950 - *Manenzhe*
453. Sally Hurt - 840221 0014 080 - Unit 12, Geriva 27, St James, CAPE TOWN, 8001 - *Gandar*
454. Lehlohonolo Petrus Mokoena - 830902 5928 083 - 2544 Blesbok Street, Ratanda, HEIDELBERG, 1441 - *Motloung*
455. Mandlakhe Khonono - 970131 5858 088 - Ntsiwa Area, MOUNT AYLIFF, 4735 - *Mathe*
456. Jim Marothi Madimabe - 640310 5879 084 - 50772 Zone 4, GARANKUWA, 0208 - *Lekalakala*
457. Zibuse Albert Ndlovu - 640322 5511 088 - 256 Emalangen Area, HAMMARSDALE, 3700 - *Xaba*
458. Bernard Dipuo Semenya - 680506 5442 085 - 5729 Extension 4, NELLMAPIUS, 0122 - *Mabaso*
459. Joconia Jackie Menyuka - 690108 5436 080 - P O Box 1208, JOZINI, 3969 - *Qwabe*
460. Sonwabo Eric Mankayi - 690327 5854 080 - Wp1096 Mowabisi Park, DAVEYTON, 7784 - *Koti*
461. Sizakele Agnes Masinga - 690724 0597 088 - P O Box 1274, KANYAMAZANE, 1214 - *Mnisi*
462. Mandla Michael Ngcobo - 650216 5361 089 - Sonkombo Area, NDWEDWE, 4342 - *Shandu*
463. Lethogonolo Theophilus Aaron Gaborone - 730508 5768 089 - 1304 Lorwana Village, MAHIKENG, 2745 - *Gaborone-Lobelo*
464. Oriel Shilenge - 840313 5333 084 - 08 Namune Street, ATTERIDGEVILLE, 0008 - *Makhoshi*
465. Phenyo Victor Hantise - 870507 5728 085 - 476 Jump Street, GAMOPEDI, 8480 - *Lekgetho*
466. Maqoba Nelson Mtheghwa - 940126 5579 087 - P O Box 8, MALELANE, 1320 - *Masiphula*
467. Sizwe Nqubeko Mcinika - 991102 5249 086 - Koppie-Kopie Farm, CHARLESTOWN, 2473 - *Msimango*
468. Nditsheni Rofhiwa Ndou - 930615 5342 084 - Shayandima Village, SHAYANDIMA, 0945 - *Budeli*
469. Angela Carbone - 980608 0024 087 - 18 Eland Street, WHITE RIVER, 1240 - *De Gasperi*
470. Nesias Dennis Mphoreng - 830628 5513 084 - 2186 Kunene Street, Ackerville, WITBANK, 1035 - *Tahula*
471. Ivan Mfundo Bhembe - 890519 5452 083 - 25 Castanet Street, Tasbet Park, EMALAHLENI, 1034 - *Khoza*
472. Thabiso Professor Molobela - 970122 5311 087 - 1045 Section C, Empumelelweni, KWAMHLANGA, 1055 - *Mahlangu*

473. Charles Mathibela Sebothoma - 811123 5384 085 - 9054 Extension 10, Phomolong, MODIMOLLE, 0510 - *Laka*
474. Sherizaan Raeelah Fakier - 990818 0675 089 - 36 Vygekraal Road, MANENBERG, 7764 - *Donn*
475. Ashley Lekabane Kola - 980129 5382 081 - Masanteng Area, MARBELHALL, 0484 - *Kgaditsi*
476. Batobele Mancoba - 000116 5758 085 - 4 Standgate Place, Southgate, PHOENIX, 4068 - *Hlongwane*
477. Matlaleng Olga Rababalela - 991220 0307 087 - 1494 Miningburg, GA-KGAPANE, 0838 - *Magooa*
478. Anthony Meloa - 900514 5844 080 - 1697 Calusa Street, Mofolo North, SOWETO, 1801 - *Bapela*
479. Letuba Molefi Phasha - 860723 5606 088 - Ga-Mmela Village, SEKHUKHUNE, 1129 - *Malerotho*
480. Philiswa Queen Hadebe - 000415 0468 082 - 465 New Dunba Road, MAYVILLE, 4091 - *Caluza*
481. Siyabonga Ntombela - 981214 5748 082 - 8 Westdene Terrace, Reswvoirhills, DURBAN, 4091 - *Dukisa*
482. Siyanda Handsome Mkhize - 981118 5715 084 - Mpumuza Location, PIETERMARITZBURG, 3200 - *Diadla*
483. Lindokuhle Trevor Radebe - 910503 5675 089 - 102168 Meerense, MEERENSE, 3901 - *Mthiyane*
484. Noluvo Confidence Ndhlangamandhla - 000508 0988 081 - Mabola Trust, PIET RETIEF, 2380 - *Magagula*
485. Ben Peta - 940913 5319 089 - 5804 Boots Street, Extension 7, ALEXANDRA, 2090 - *Motheogane*
486. Penny Neo Selepe - 871015 0598 080 - 101 Block 101, 6th Avenue, ALEXANDRA, 2090 - *Magongwa*
487. Thobisile Nontobeko Mwale - 001109 0678 084 - Stand No 1084, KWAGGAFONTEIN D, 0458 - *Mabona*
488. Maripa Herman Mokgokong - 950704 5844 086 - 9098 Fingerroot Street, Extension 85, THE ORCHARDS, 0200 - *Tsebe*
489. Tshepo Gift Kgakgo - 930707 5551 085 - House No 60, Sekakene Village, DWARSRIVER, 0812 - *Mphaka*
490. Mailula Reginald Kgakgo - 810616 5652 089 - 278 Soutter Street, PRETORIA WEST, 0183 - *Mphaka*
491. Bhekie Mthembu - 880209 5720 083 - Emzingazi Reserve, EMPANGENI, 3880 - *Mdletshe*
492. Maria Mamoroesi Selikane - 721226 0910 082 - 11901 Extension 1, EVATON WEST, 1984 - *Ramotsidisi*
493. Themba Nkuta - 890908 5352 080 - 1042 Ntokoza Street, Zone 1, DIEPKLOOF, 1804 - *Mofokeng*
494. Dihlare Siphon Radingwane - 780602 5488 084 - Ga-Radingwane Village, SEKHUKHUNE, 1124 - *Mashedi*
495. Noluvo Nyalela - 990704 0660 083 - Manzimahle Area, Ward 8, CALA, 5455 - *Tofile*
496. Molebatsi Constantinus Sekgomane - 990604 5059 085 - 312 Kgaka Street, Moteong Section, TEMBISA, 1632 - *Mogotsi*
497. Themba Michael Mokoena - 810605 5679 085 - 32-9th Avenue, Alexandra Township, JOHANNESBURG, 2090 - *Sikakane*
498. Lindokuhle Ndaba - 990128 5601 084 - Bhadeni Area, EDUMBE, 3180 - *Maseko*
499. Elias Butane Korobela - 830425 5730 085 - 133-22 Avenue, ALEXANDRA, 2090 - *Makena*
500. Thokozani Shabangu - 970906 5779 081 - Stand No 314, SIYABUSWA A, 0472 - *Makalla*
501. Thando Duduzile Portia Motsoeneng - 000902 0150 083 - 7228 Extension 4, EVATON WEST, 1984 - *Mnguni*
502. Andile Mdlokovana - 820227 5806 085 - 1 Trio Road, BARBERTON, 7300 - *Madliwa*
503. Matimba Phillip Mabunda - 910331 5580 087 - 1886 Section F, GIYANI, 0826 - *Shikhibana*
504. Nosipho Qose - 001013 0072 084 - 2244 Nen Area, Bezuidenhouthville, ADELAIDE, 5760 - *Williams*
505. Sisipho Lwazi Miso - 001014 5076 088 - Northcrest Area, MTHATHA, 5099 - *Mapekula*
506. Kayleigh Colleen Windvoël - 000118 0852 087 - 3 Winter Street, MAHIKENG, 2735 - *Wright*



507. Vusimuzi Sibeko - 010116 5847 084 - Mohlaletse Village, SEKHUKHUNE, 1124 - *Phasha*
508. Kenneth Lepitsi Mokgobu - 870925 5825 083 - Malekane Village, SEKHUKHUME, 1124 - *Leshaba*
509. Thokozani Radebe - 010112 5663 084 - 2499 Thusong Section, KATLEHONG, 1431 - *Madonsela*
510. Thabang Rian Mohale - 960826 5538 083 - Stand No 03, Lasvegas, GA-KGAPANE, 0835 - *Selotole*
511. Ororiseng Chantell Mohube - 000110 0556 081 - 10484 Sunrise Park, RUSTENBURG, 0300 - *Molefe*
512. Sibusiso Innocent Nkosi - 980717 5317 089 - Stand No 1746, SUNCITY, 0458 - *Mtsweni*
513. Lucky Kanana - 960618 5864 084 - Itsani Village, THOHOYANDOU, 0950 - *Ramabulana*
514. Tshilidzi Mashau - 990102 0357 083 - Stand No 2268, HA-RAVELE, 0921 - *Dobi*
515. Joseph Mohlolo Mofokeng - 910331 5847 080 - 2746 Ak, VILJOENSKROON, 9520 - *Makhata*
516. Sweetness Matshidiso Makhabane - 990319 0525 085 - 701 Block 7, Kutloanong, ODENDAALRUS, 9483 - *Ndwardwa*
517. Vusimuzi Arthur Mokoena - 760705 5974 088 - 1417 Micardo Road, EVATON, 1984 - *Zondo*
518. Livia Raesibe Msiza - 820213 0295 086 - 311 Maganasobuswa, SIYABUSWA, 0472 - *Mahlangu*
519. Dineo Takalo - 921213 5498 089 - 10068 Seleteng, GA-MALEKA, 0736 - *Latakomo*
520. Motheo Ernest Moremi - 010117 5859 087 - 4696 Magogoe Tar, MAHIKENG, 2745 - *Bakgethi*
521. Zoliswa Soyeza - 831111 0691 089 - Ngxakaya Area, DUTYWA, 5000 - *Zomba*
522. Thomas Thulane Radebe - 880605 5508 081 - House No 2709, Kagiso 2 Section, LEDIG, 0338 - *Mtshali*
523. Siphon Eugen Khumalo - 910725 5358 081 - Stand No 013255, KAMSOGWABA, 1500 - *Mlotshwa*
524. Tsholofelo Mosothoana - 971106 5377 080 - Erf 9014/127, Mans Hostel, IKAGENG, 2531 - *Lethoo*
525. Vaughne Wiggill - 970410 5103 087 - 4 Tromoson Street, UITENHAGE, 6229 - *Foster*
526. Samora Mhleli Xorile - 880107 5862 089 - 32 Princesses Avenue, 36 Robin Glen Village, Windsor East, RANDBURG, 2194 - *Tom*
527. Sibusiso David Nkosi - 870906 5568 089 - Thokozani Village, AMSTERDAM, 2375 - *Johnson*
528. Anelisa Nolubabalo Stwayi - 930628 0543 085 - Bm 735, Site B, KHAYELITSHA, 7784 - *Mdwalaza*
529. Surprise Shakwane - 980610 5935 085 - Stand No 5815, Phola Trust, KABOKWENI, 1242 - *Phiri*
530. Sibongile Pricilla Hlajoane - 931111 0652 080 - 21253 Thabong, WELKOM, 9463 - *Hlatshwayo*
531. Siyabonga Godfrey Mdluli - 890706 5944 082 - 19457 Moloi Street, DAVEYTON, 1520 - *Mbatha*
532. Fannie Masetshebe Madiba - 740513 5919 086 - Ga- Maroga Village, PRAKTISEER, 1129 - *Makoana*
533. Yamkela Bhabhu - 960823 5749 083 - Redoubt Area, BIZANA, 4800 - *Bentswana*
534. Sammy Titus Gumungwe - 860501 5481 086 - Suite 201, Central House, MABOPANE, 0200 - *Tsebe*
535. Petros Masango - 730625 5475 083 - 52 Onverwacht, CULLINAN, 1003 - *Ngobeni*
536. Siyabonga Emmanuel Zulu - 970611 5576 087 - 16735 Extension 9, Palmrise, KATLEHONG, 1431 - *Sibeko*
537. Celimpilo Dlamini - 910711 5725 081 - 1051 Emaplazini, INANDA, 4309 - *Mthembu*
538. S'phiwe Khayelihle Mgube - 981106 5528 086 - Qhudeneni Area, NKANDLA, 3855 - *Dhlomo*
539. Jonathan Jan Edwards - 000422 5156 084 - 26a Fifth Street, Menlo Park, PRETORIA, 0081 - *Jooste*
540. Jeandré Heyneke - 921105 5816 080 - 720 Reue Street, Winternest, AKASIA, 0182 - *Bekker*

541. Lefu Lucas Kau - 790607 5535 089 - 78 Block X, MABOPANE, 0190 - *Lekalakala*
542. Olwethu Sinalo Mbolekwa - 980921 6005 087 - No3 Jochman Street, ZASTRON, 9950 - *Gaga*
543. Nkanyiso Mvelase - 940922 5706 088 - P434 Mpangele Road, KWAMASHU, 4560 - *Shandu*
544. Edith Lefenje Tshwane - 801128 0930 081 - Magatle Village, GOMPIES, 0631 - *Lekgoathi*
545. Lesiba Claude Johannes Langa - 930122 5453 086 - 737 Zone 1, Mahwelereng, MOKOPANE, 0626 - *Lekalakala*
546. Shadrack Mphaka Mmola - 810111 5637 082 - Stand No 25, Zone 1, TURKEY, 0890 - *Selomane*
547. Ntshale Justice Moela - 820217 5966 088 - 160 Nawanamatlang, JANE FURSE, 1085 - *Thokoane*
548. Anya Etasia Lourens - 001215 0043 086 - 8 Brits Avenue, Wierdapark, CENTURION, 0140 - *Groenewald*
549. Joshua Abraham Van Der Linde - 000725 5324 084 - 8 Chamonix Close, KUILSRIVER, 7580 - *Sadie*
550. Sebatlamotsana Khutso Sekhukhune - 811103 5340 089 - 750 Memory Hof Frederika Street, RIETFONTEIN, 0001 - *Bapela*
551. Walter Evins Mthombeni - 830507 5273 081 - 12596 Nna Street, MAMELODI EAST, 0122 - *Lukhele*
552. Solly Lethabo Nkosi - 880110 5292 083 - 1154 Inkonjane Street, MAMELODI GARDENS, 0122 - *Kekana*
553. Thandi Annah Vilakazi - 690128 0073 084 - 224 Msagweni, Vosman, EMALAHLENI, 1039 - *Magagula*
554. Evens Thabo Matlotleng - 850514 5414 082 - 1792 Kanana, RUSTENBURG, 0300 - *Kaledi*
555. Brain Letlhogonolo Tlhoilwe - 921013 5655 088 - Miluwani Village, SIBASA, 0970 - *Mfuni*
556. Nkululeko Gift Mdletshe - 930203 5713 081 - 502 Hadlow Place, 100 Ronald Road, Montclair, DURBAN, 4004 - *Innes*
557. Lesole David Mathebe - 911111 5873 081 - 1402 Thabong Village, WELKOM, 9870 - *Motaung*
558. Ashley Themba Ngwenzi - 910715 5298 080 - 7-9 New Main Road, KIMBERLEY, 8701 - *Bingwa*
559. Lehlohonolo Itumeleng Tlhabatau - 861106 5243 087 - 519 Laguza Street, Rocklands Location, BLOEMFONTEIN, 9323 - *Themba*
560. Mandla Elvis Mbushe - 750414 5811 083 - 13788 Phase Six, BLOEMFONTEIN, 9323 - *Nyesemane*
561. Keorapetse Walter Ditaunyane - 730912 5867 083 - 2932 Kala Street, Bochabela Location, BLOEMFONTEIN, 9323 - *Lenono*
562. David Zenzi Mathe - 870609 5806 083 - E1369 Masosobane Section, PHOKENG, 0335 - *Setsome*
563. Xolisile Buthelezi - 990531 0933 081 - 0964 Stimeleni Street, EZAKHENI, 3381 - *Cele*
564. Sibongile Melca Martha Sibisi - 750123 0676 082 - 5122 Itlotleng Section, BETHANIE, 0270 - *Mahlinsa*
565. Sello Makgopela - 880906 5767 085 - 873 Jericho, LEHWILIRING, 0189 - *Manne*
566. Selina Meisie Motholo - 631202 0840 081 - House No 521, Oukasie, BRITS, 0250 - *Mofokeng*
567. Keneiloe Olive Seselinyane - 910919 0332 080 - 2577 Melk Street, Bochabela, BLOEMFONTEIN, 9323 - *Morobe*
568. Kifiwe George Khalatha - 951012 5510 080 - 1530 Revonia, Morojaneng, DEWETSDORP, 9940 - *Khalata*
569. Thabiso Jacob Mashinini - 831107 5639 081 - 9705 Zulu Street, Phelindaba, BLOEMFONTEIN, 9322 - *Kobile*
570. Sellwane Sylvia Tsoeli - 920214 0374 086 - 37261 Freedom Square, BLOEMFONTEIN, 9323 - *Motja*
571. Lerato William Motlhabane - 880606 5520 084 - X1667 Wessie Street, JOUBERTON, 2574 - *Mohutsiwa*
572. Vincenzo Itumeleng Enkeld Enkeld - 921105 5182 087 - 4779 Logabane Street, Rocklands, BLOEMFONTEIN, 9323 - *Mogwera*
573. Nonhlanhla Doreen Nxumalo - 790702 0857 081 - P O Box 319, NKANDLA, 3855 - *Biyela*
574. Doris Niniza Hlongwane - 460412 0570 085 - 221 Sphithiphithi Road, AMATIKWE, 4309 - *Hlongwa*

575. Albert Viljoen - 980625 5076 086 - 372 Hay Street, Brooklyn, PRETORIA, 0001 - *Pienaar*
576. Thato Moshodi Benedict Moduka - 940704 5389 085 - 131 Hlahatsi Section, KATLEHONG, 1432 - *Mofokeng*
577. Lutho Mantewu - 990224 5883 085 - 53 Khalana Crescent, Greenfield, Langa, UITENHAGE, 6229 - *Blaauw*
578. Piet Moima - 870707 5874 083 - 6768 Chad Crescent, Extension 6, Cosmo City, RANDBURG, 2188 - *Moshasha*
579. Kwanele Rasmeni - 990605 5349 087 - Maqhashu Area, LADY FRERE, 5410 - *Matwa*
580. Delwin Thabo Makhanya - 851102 5343 086 - B438 Illovo Township, AMANZIMTOTI, 4126 - *Gasa*
581. Vhonani Philemon Mashaba - 870822 5629 088 - 312 Clara, Berea Flat, 18 Clare Street, PRETORIA, 0002 - *Chauke*
582. Dumisani Thomas Ngubeni - 740828 5824 080 - 1684 B Zola North, KWAXUMA, 1868 - *Zondo*
583. Sibongumusa Uriel Nkosi - 950505 0528 081 - 3b Ingungulu Street, Zone 7, MEADOWLANDS, 1852 - *Ntanzi*
584. Desmond Manganye - 770226 5551 089 - 8427 Syringa Street, Extension 2, ORLANDO WEST, 1804 - *Mashele*
585. Mbalango Oscar Motha - 831220 5694 087 - 17 Leander Ridge Estate, Olympus, PRETORIA EAST, 0081 - *Khoza*
586. Thebole Lehutjo Segokodi - 970202 5816 085 - 18 Shannon Road, Extension 11, THE ORCHARDS, 0118 - *Mello*
587. Dimpho Peter Bahula - 960708 5557 083 - 1318 Suncity B, KWAMHLANGA, 1022 - *Sitole*
588. Musi Phakula - 830423 5761 085 - 2391 Nyanga Street, SOWETO, 1864 - *Masibi*
589. Sydwelli Nkosi - 930119 5829 083 - Stand No 104, Marite Trust, HAZYVIEW, 1242 - *Nyundu*
590. Tshupo Starlife Manzini - 901008 5702 082 - Stand No 90, Dingledale Trust, BUSHBUCKRIDGE, 1280 - *Mashego*
591. Mduduzi Innocent Maseko - 931209 5579 082 - Stand No 925, GEMBOKSPRUIT, 0458 - *Skhosana*
592. Mogale Job Mothapo - 900920 6020 085 - 2 Majoram Street, Calendula Acres, Extension 117, ANNLIN, 0790 - *Chuene*
593. Gift Zakewu Mathabela - 941114 5748 083 - 87 Ngema Street, Phola, OGIES, 1039 - *Mahlobo*
594. Mpho Levinia Lonia Rasengoatsi - 900820 0291 080 - 4259 Rampa Street, Rocklands, BLOEMFONTEIN, 9323 - *Ramabolu*
595. Matshediso Jacob Ramochela - 000605 5993 080 - 33491 Turflaagte, BLOEMFONTEIN, 9323 - *Serati*
596. Seitshiro Bob-Arnold Kushumane - 810909 5632 080 - House No 728a, Dithakong East, MAHIKENG, 0370 - *Tyamzashe*
597. Xolani Dube - 970301 5631 088 - 129 Wentham Drive, Phoenix, DURBAN, 4068 - *Malinga*
598. Sabelo Mdhlane - 870905 5313 082 - 12646 Tlase Street, DAVEYTON, 1520 - *Msimango*
599. Siyathemba Boysana Toni - 810505 6222 085 - P O Box 7, CALA, 5455 - *Melitafa*
600. Noah Tshabedi Mokweng - 800425 5728 085 - 28484 Palesa Street, Extension 5, MAMELODI EAST, 0122 - *Sono*
601. France Mathebe - 920705 5487 088 - X11r1566 Extension 11, MAMELODI EAST, 0122 - *Phora*
602. Darren Ephraim - 921120 5317 088 - 28 Dreyden Street, WELLIPTON, 7655 - *Ebrahim*
603. Penelope Nqobile Sibanyoni - 960925 0331 088 - Stand No 1181, Unit A, Monsterlus, MPUDULLE, 1057 - *Rampedi*
604. Butiki Boy Nhlapo - 970528 5524 083 - 20967amelia, SASOLBURG, 1549 - *De Bruyn*
605. Thuthukani Mkhulise - 970530 5881 083 - 186 King Edward Road, PIETERMARITZBURG, 3200 - *Mthembu*
606. Gabriella Francis Labuschagne - 940910 0078 082 - 9 Duggie Morkel Street, DUNCANVILLE, 1930 - *Marques*
607. Smanga Nala - 910604 6511 081 - Hlophe Area, NDWEDWE, 4342 - *Hlophe*
608. Linda Dhlamini - 010209 5443 085 - 5503 Eislen Street, DAVEYTON, 1520 - *Thekiso*

609. Khulekane Tyres Mzindle - 000201 6330 082 - 490 Sidney Road, UMBILO, 4000 - *Mkhize*
610. Siboniso Mboniseni Dlamini - 980526 6185 084 - Empakama Area, PONGOLA, 3170 - *Siphethu*
611. Amos Madlozi Mahlangu - 810202 6504 080 - Stand No 3351, KWAGGAFONTEIN A, 0458 - *Mtsweni*
612. Simphiwe Celinhlanhla Knowledge Gasa - 000307 5322 085 - 67094 Phase 2, Amatikwe, INANDA, 4309 - *Mdletshe*
613. Karabo Robert Moremi - 970811 5372 087 - 98 Onder Street, Cbd, POLOKWANE, 0700 - *Taueatsoala*
614. Boy Simon Molea - 580506 5812 080 - 13282 Shukumani Street, IVORY PARK, 1693 - *Mashilo*
615. Mandlakayise Simon Khumalo - 580803 5358 085 - 1212 B Kumahule Street, WHITE CITY JABAVU, 1808 - *Hlongwane*
616. George Rakuku Mokgabela - 670514 5265 086 - 571 Extension D, Almansdrift, MBIBANI, 0449 - *Pole*
617. Matome Thomas Rasalanabo - 670507 5243 087 - Muila Village, SOEKMEKAAR, 0946 - *Moropeni*
618. Malesela Caiphus Matlala - 670410 5822 085 - 4 Nick Oosthuizen Street, Extension 10, THE ORCHARDS, 0182 - *Mothoa*
619. Mmabjale Rosina Dikgake - 670803 0573 085 - 40523 Wyk 2, SELEKA, 0609 - *Seleka*
620. Richard Malope - 760303 6110 082 - 4222 Mabona Street, ZITHOBENI, 1024 - *Kgabo*
621. Mmololo Isaiah Ledwaba - 850228 5131 089 - Phi-1483 Phase One, MAMELODI, - *Moketlane*
622. Nana Victoria Cele - 740328 0848 085 - Ward 32, Manzamhlophe, IZINGOLWENI, 4260 - *Gansa*
623. Zolisa Lloyd Mahamba - 550727 5686 086 - 23 Bungane Street, Kwamagxaki, PORT ELIZABETH, 6201 - *Burhali*
624. Nkgapeng Robert Moshwaneng - 561005 5523 089 - 20214 Mokgapaneng Village, NEBO, 1059 - *Malaka*
625. Morris Buyisile Motlakase - 570620 5915 082 - House No 70131, Letlhabile Section, LEDIG, 0300 - *Msebenzi*
626. Mluleki Lewes Breakfast - 580202 5754 080 - 39 Dubula Street, New Brighton, PORT ELIZABETH, 6200 - *Mdingi*
627. Philani Mc Davis Thusini - 810505 6565 087 - 77 Devonshire Road, PIETERMARITZBURG, 3200 - *Maphanga*
628. Raesetsa Sandra Khalo - 700528 0603 087 - 1026 Nkittle Street, Section C, MAMELODI WEST, 0122 - *Masemola*
629. Mosimanekgape Hendrick Sebogodi - 691116 5967 086 - 18 Alaria Street, Paballo, UPINGTON, 8801 - *Mapheelle*
630. Alfred Ngwanamogoto Matlala - 720130 5708 080 - 498 Ruth Malewa Street, Block K, SOSHANGUVE, 0152 - *Molefe*
631. Madumetja Isaac Matlala - 740306 5448 085 - 498 Ruth Malewa Street, Block K, SOSHANGUVE, 0152 - *Molefe*
632. Ntshadi Amanda Matlala - 790211 0371 085 - 498 Ruth Malewa Street, Block K, SOSHANGUVE, 0152 - *Molefe*
633. Confidence Thabang Manoko - 970707 5603 085 - P O Box 1805, BOCHUM, 0790 - *Makhwiting*
634. Qaphela Ngxishe - 990526 5651 084 - 5 Strelitzia Place, QUEENSTOWN, 5320 - *Songo*
635. Malose Jack Boya - 810205 5595 082 - Skeeming Village, MAPELA, 0610 - *Seabi*
636. Tebatso Glen Ledwaba - 000611 5311 083 - 321 Christina, MARABA, 0743 - *Pitjeng*
637. Aaron Motlalentoa Phukuntsi - 840526 5237 084 - 4223 Phase 3, OUKASIE, 0250 - *Mavuso*
638. Tshwarelo Ledwaba - 951218 5788 085 - 2820 Phase 3, Tshepiso, SHARPEVILLE, 0632 - *Tema*
639. Mandla Horeshias Vilakazi - 680304 5351 088 - 1584b/02 Vilakazi Street, Zola North, KWAXUMA, 1868 - *Langa*
640. Mzuvele Sphelele Miya - 980206 5535 080 - Mabhelani Location, PORT SHEPSTONE, 4240 - *Mthembu*
641. Xolani Collin Ndhlela - 780823 5185 088 - 47 Leroe Street, SAULSVILLE, 0125 - *Sibeko*
642. Lesego Deborah Medupe - 930518 0523 080 - 405 Hilaris, 1249 Heuwel Street, LYTTTELTON, 0157 - *Ngwenya*

643. Sekgothe Simon Tladi - 841029 5511 086 - 44-3rd Avenue, ALEXANDRA, 2090 - *Matlala*
644. Tshepho Frans Makhafola - 961211 5558 085 - 1784 Mashahlang Village, MAPELA, 0610 - *Chauke*
645. Agapé Lerato Tshatsinde - 960130 0091 085 - 522 Sakoane Street, Spruitview, GERMISTON, 1431 - *Moabelo*
646. Nathan Jr Mpho Macaulay Tshatsinde - 971224 5048 088 - 522 Sakoane Street, Spruitview, GERMISTON, 1431 - *Moabelo*
647. Sebastian Daniel Hilder - 980504 5197 087 - 14 Trill Road, The Eden, Observatory, CAPE TOWN, 7925 - *Brunido*
648. Endinaloithemba Luthuli - 990124 5736 087 - House No 244, UMLAZI, 4031 - *Jali*
649. Ntombikayise Nonkululeko Sibiya - 980815 0535 083 - 5190 Section B, Ekangala, BRONKHORSPRUIT, 1021 - *Nkosi*
650. Thabang Ramalivhana - 791016 5398 085 - 3157 Chiawelo, CHIAWELO, 1818 - *Seboya*
651. Matshidiso Mkhonza - 890325 0284 087 - 498 Lake-Side Proper, Evaton, MAFATSANE, 1984 - *Ramailane*
652. Thembakazi Lizy Mkulisi - 001222 0474 089 - 17 Melford Avenue, Dower Glend, EDENVALE, 1610 - *Mzikhulu*
653. Sanda Mkontwana - 770709 5547 082 - Mthathi Location, PEDDIE, 5690 - *Simani*
654. Maxwell Mzuvukile Quza - 820303 6021 089 - 66 Cotani Street, Bongweni Location, COOKHOUSE, 5824 - *Mbunge*
655. Koketso Mulatedzi - 920321 5590 085 - 68 Lydia Street, KEMPTON PARK, 1618 - *Ralefatane*
656. Prince Kagiso Mashabela - 000629 5836 081 - 299 Xubeni Section, TEMBISA, 1632 - *Makitla*
657. Thabo Nteke - 860729 5607 083 - 81 Thiteng Section, TEMBISA, 1632 - *Morare*
658. Siyabonga Jeffrey Mkhize - 811224 5810 085 - 120140 Molweni, Park City, HILLCREST, 3650 - *Mchunu*
659. Tshegofatso Legalatladi - 940713 0401 084 - 16396 Ntshwe Street, Naledi, SOWETO, 1818 - *Mogwera*
660. Ntuthuko Shangase - 990406 5508 081 - 207 Jackal Road, Waterloo, VERULAM, 4319 - *Cele*
661. Zandile Brukwe - 890228 1119 080 - Lower Shiloh, WHITTLESEA, 5360 - *Kahlane*
662. Kagiso Matloa - 830515 5709 087 - 535 Leebarope Street, Zone 8, MEADOWLANDS, 1868 - *Mkhwanazi*
663. Phumlane Patrick Tshabalala - 950527 5884 087 - P O Box 6087, NONGOMA, 3950 - *Mtshali*
664. Percevierance Ngubane - 980728 0699 082 - 12 Trainquin Street, CHATSWORTH, 4092 - *Simelane*
665. Sphiwe Joseph Mgaga - 740901 5071 083 - Eskom No 002010, Skoparin, DANNHAUSER, 3080 - *Mthanti*
666. Velephi Zodwa Linah Manana - 880304 0653 080 - Comondale Location, PIET RETIEF, 2380 - *Nsibandé*
667. Itireleng Christopher Kgwane - 850227 5445 085 - 18594 Extension 8, BOITEKONG, 0300 - *Motale*
668. Thandi Mmakgamele Mawela - 760101 2945 083 - Kutullo Village, STEELPOORT, 1124 - *Malata*
669. Perseverance Matshi - 960814 0444 085 - Stand No 427, Tshikota Location, MAKHADO, 0920 - *Ramabulana*
670. Carol Mashego - 000324 0791 081 - Stand No 136, Casteel Trust, MAPULANENG, 1370 - *Malatjje*
671. Willie Lethamaga Mawela - 800103 5694 082 - Kutullo Village, STEELPOORT, 1133 - *Malata*
672. Sakhiwo Mditshwa - 860814 6010 089 - Skaapkraal Road, PHILIPPI, 7808 - *Makaba*
673. Vincent Tshepo Mokolo - 781202 5886 087 - 5408 Gaugela Street, NELLMAPIUS, 0162 - *Sedibe*
674. Ntuthuko Siyabonga Kunene - 000522 5260 081 - Nokwesa Location, IXOPO, 3276 - *Dlamini*
675. Sinalo Konele - 001016 5432 088 - Qawukeni Location, KING WILLIAMS TOWN, 1600 - *Bozo*
676. Sinalo Ngqwemla - 000806 0746 081 - 4732 Tytyu Central, BISHO, 5608 - *Gcobo*

677. George Sonnyboy Molokele - 981203 5064 087 - 1085 Diale Street, Kokosi, FOCHVILLE, 2515 - *Letwaba*
678. Antonio Mokiti - 940218 5682 084 - 540 Unit D, Temba, HAMMANSKRAAL, 0407 - *Mahlangu*
679. Victor Mashiloane - 680113 5579 089 - 1636 Kgomo Stand, WINTERVELDT, 0190 - *Mokoena*
680. Wandile Alfred Letaba - 000511 6070 086 - Bluegumbosch Area, WITSIESHOEK, 9810 - *Molefe*
681. Thembokwakhe Nduduzo Mkhize - 730606 7313 084 - C1179 Lindelani, Intuzuma Township, DURBAN, 4001 - *Buthelezi*
682. Frederick Motlatsi Lebethe - 720202 6819 081 - 5021 Bataung Section, MABOLOKA, 0197 - *Tsepene*
683. Martin Kabelo Qhuva - 790427 6111 081 - 13790 Sunrise View, RUSTENBURG, 3780 - *Peete*
684. Jabulani Shelembe - 780304 5280 088 - Sglakini Area, RICHMOND, 3780 - *Mkhize*
685. Ntuthuko Dlamini - 000420 5621 081 - Dulini Area, NDWEDWE, 4342 - *Bhengu*

## DEPARTMENT OF HOME AFFAIRS

NO. 477

29 MARCH 2019

## ALTERATION OF FORENAMES IN TERMS OF SECTION 24 OF THE BIRTHS AND DEATHS REGISTRATION ACT, 1992 (ACT NO. 51 OF 1992)

The Director-General has authorized the following persons to assume the forename printed in *italics*:

1. Marumo Zacharia Monchusi - 980629 5336 086 - 16 Sediba Trust, THABA NCHU, 9780 - *Marumo*
2. Nolwando Molthabane - 980922 0670 082 - Ikwezi Township, UMTATA, 5100 - *Nolwando Monica*
3. Ntibaley Mathebula - 870120 0321 086 - 10450 Extension 3, WINTERVELDT, 0001 - *Ntibaley Pinky*
4. Feziwe Nombula - 861121 0614 083 - Makhetheng, STERKSPRUIT, 9762 - *Mary*
5. Emmanuel Mokgethi - 000124 5279 086 - 458 Unit 1, LERATO, 2880 - *Kagiso Emmanuel*
6. Thobane Noah Tsetsewa - 630320 5666 086 - Maroge Village, MASEMOLA, 1060 - *Mamatjile Paul*
7. Boitshoko Sanah Mongwato - 780820 0664 083 - 2882 H Galeng Drive, VRYBURG, 8601 - *Boitshoko Sandra*
8. Jermina Mmako - 941229 0629 086 - 17 Tseebelaan Street, Fauna Park, POLOKWANE, 0699 - *Matjie Khutsiso Jermina*
9. Ntabake Malejane - 940424 5737 080 - P O Box 2, MANGKWENG, 0701 - *Ntabake*
10. Thelma Rose Sue-Ellen Oppelt - 791022 0197 084 - 17 Stuart Road, RONDEBOSCH, 7700 - *Thelma Rose*
11. Lucky Mhlabuphendukile Dlapu - 610210 5802 084 - Zone 3, FLAGSTAFF, 4800 - *Lucky*
12. Nomzamo Gladys Maleza - 601212 1287 089 - Debenek Location, ALICE, 5700 - *Nontombana Nomzamo Gladys*
13. Simon Jabu Skosana - 760212 5974 085 - 3799 Uhele Street, OLIVENHOUTBOSCH, 0157 - *Simon Fongo*
14. Phumzile Xhego - 661020 5741 085 - 1432 Golden Gardens, SEBOKENG, 1983 - *Phumzile Desmond*
15. Tevin Levi Naidoo - 980912 5231 089 - C/O Holmbush Sugar Estate, NONOTI, 4480 - *Shezaad*
16. Ashvitha Dawood - 950427 0093 083 - 89 Ebrahim Drive, STANGER, 4450 - *Ayesha*
17. Siphelelo Mqadi - 820819 5829 081 - Nzimakwe Location, MARGATE, 4200 - *Sphephelo Gijmani*
18. Rosina Eunice Monama - 790619 0350 083 - 3319 Extension 5, MOOKGOPHONG, 0560 - *Eunice*
19. Jamela Mkansi - 901106 0422 084 - 3264 Aqua Park, TZANEEN, 0850 - *Jamila*
20. Monwesi Patricia Ramalope - 790501 0400 086 - 0010 Lethabong, KLIPGAT, 0202 - *Rachel*
21. Mokgadi Elisa Mabelebele - 840816 0585 086 - P O Box 355, RADITSHABA, 0718 - *Elisabeth Mpere*
22. Zahra Hussain Hussain - 960513 0045 088 - 114 Ridge Crescent, 15 Berriedale Road, MUSGRAVE, 4010 - *Zahra*
23. Kgothatso Mohlala - 000118 5883 087 - Ga-Mampuru, STEELPOORT, 1133 - *Hlakudi Kgothatso*
24. Johannes Sihlamaliso Cossa - 971125 5510 086 - 206 Emsaaweni, EMALAHLENI, 1035 - *Smangaliso Johannes*
25. Zimbini Buzwayo - 790806 0772 081 - 80 Albert Street, MARSHALLTOWN, 2001 - *Ayanda Zimbini*
26. Moeti Jonathan Luckie Molekoa - 000717 5668 081 - 404 Hanskekana, TEMBA, 0407 - *Lucky*
27. Natalien Jehoma - 981016 0236 082 - 49 Kolosie Crescent, Roosendal, DELFT, 7100 - *Mishka*
28. Kiran Debram - 941025 5198 089 - 16 Dorper Way, Westridge, MITCHELLS PLAIN, 7789 - *Amir*
29. Adam Dube - 910905 6036 080 - 3626 Lizo Nkonki Crescent, SAMORA MACHEL, 7780 - *Adam Thapelo*
30. Jody Anastatia Barron - 960717 0145 083 - 25 Riley Crescent, BEACON VALLEY, 7000 - *Aqeedah*

31. Sibongangani Nhleko - 850502 0553 087 - 111 Mabilisa Street, Wesselton, ERMELO, 2350 - *Marcia Sibongangani*
32. Bethuel Maleka - 801123 5737 086 - 746 Suuman, HAMMANSKRAAL, 0100 - *Jones Bethuel*
33. Ailey Sibongile Langa - 970715 0033 083 - 12 Parkwood Crescent, AMANDASIG, 0183 - *Philip*
34. Malegapuru Poki Makgoba - 891207 5813 087 - 32 Vink Avenue, Safari Gardens, RUSTENBURG, 0300 - *Malegapuru Mampokoro*
35. Rebecca Letlhogonolo Legoale - 950929 0464 081 - House No 1944, Selosecha Section, LEDIG, 0338 - *Tierra Letlhogonolo*
36. Sebuilwe Phele - 001223 0496 080 - 74 Lombaardslaagte Village, MAHIKENG, 2700 - *Sebuilwe Refilwe*
37. Gontse Gilty Tshabalala - 950808 6099 085 - 946 Block B, MADIDI, 0193 - *Gontse*
38. Maphut Jan Mphela - 290528 5139 083 - Brumer, BOCHUM, 0970 - *Maphuti Jan*
39. Katlego Molefe - 951202 5527 081 - 259 Moseja Section, HEBRON, 0193 - *Vusi Saul*
40. Bongwiwe Mpanza - 900318 0826 088 - Shiyane Area, DUNDEE, 3000 - *Bongwiwe Philile*
41. Patrick Mzilikazi - 750215 5740 085 - 4049 Shayamoya, KOKSTAD, 4100 - *Patrick Simphiwe*
42. Ramelato Moses Ramokoka - 741201 5610 082 - House No 60007, Villa Park, RAMOKOKASTAD, 0195 - *Thola Koos*
43. Zanekhya Makosi - 930419 5547 085 - 25239 Mabophe Street, KWA THEMA, 1575 - *Zanekhaya*
44. Musengeli Shanice Medupe - 970429 0057 080 - 153 Vergeet-My-Nie Street, ELANDSPOORT, 0183 - *Shanice*
45. Mignon Mayhew - 920811 0151 081 - 1212 Eikeboom Street, MOREGLOED, 0100 - *Bridget Modema*
46. Tiisetso Gift Ntoyi - 970508 5310 089 - 1252 Zone 10, Winnie Mandela, TEMBISA, 1632 - *Sithole Gift*
47. Dumageze Mbanjwa - 870619 5319 086 - Kuluone Location, UNDERBURG, 3257 - *Sipho*
48. Sarah Katriena Van Wyk - 930320 0158 086 - 18 – 5th Avenue, POSTMANSBURG, 8420 - *Sarah Essie Katherine*
49. Moahluli Nteso - 961203 5685 083 - 973 Flamink Street, SILVERTON, 0184 - *Midas*
50. Jwalane Contancia Mofokeng - 930427 0375 089 - 8797 Phase 7, BETHLEHEM, 9700 - *Salvation*
51. Asiphe Nobomvu - 930111 0878 082 - 24715 Umbhoxo Street, MFULENI, 7100 - *Noliso Asiphe*
52. Hitekani Freeman Shivambu - 901205 5968 081 - 593 Fred Messenger, 34 Westwood Manor, ANDEON, 0001 - *Hitekani*
53. Velaphi Mnisi - 840107 0254 083 - House No 1173, Lynnville, WITBANK, 1035 - *Velaphi Vivian Rose*
54. Malepepena Adelina Mafoko - 340824 0309 080 - Borakalalo Village, LEHURUTSHE, 2870 - *Kedidimetse Adelina*
55. Lettie Armin Tebele - 590102 0645 085 - 816 Block A, MABOPANE, 0200 - *Lettie Legasa Armin*
56. Goitsehang Thambe - 990814 5425 083 - Swartkopfontein Village, Kolobatsane Section, LEHURUTSHE, 2888 - *Luyanda*
57. Koos Koroloso Sekoati - 941011 5383 087 - Extension 11, Ikageng, POTCHEFSTROOM, 2520 - *Lehlohonolo*
58. Sicelo Njabulo Xulu - 990627 5697 083 - P O Box 705, MELMOTH, 3535 - *Wandile Sicelo Njabulo*
59. Andries Abraham Heynes - 991013 5203 082 - 22048 Witdam, GALESHEWE, 8300 - *Andries Andrew*
60. Devamoney Ramdas - 830401 0026 084 - 4 Logbro Crescent, 710 Stella Road, ESCOMBE, 4094 - *Hannah*
61. Moloke Tshogofatso Clement Molaba - 860202 5939 088 - P O Box 1624, MPAAHLELE, 2031 - *Tshogofatso Clement*
62. Vuyokazi Mesatywa - 700605 1555 084 - 68 Dyakalash Street, WEILER'S FARM, 2010 - *Vuyo*
63. Sekhukhu Mothapo - 000602 5213 080 - Flora Park, LEBOWAKGOMO, 0737 - *Tumudi*
64. Madifela Thomas Mthembu - 990416 5909 080 - 1165 Golden Gardens, SEBOKENG, 1901 - *Sebenele Jeanele*



65. Girly Elsie Radebe - 790716 0574 082 - 8951 Extension 15, BOPHELONG, 1911 - *Abigail*
66. Boitumelo Kgatliso Ntlane - 921017 0193 086 - 893 Alverstoke Avenue, Strubens Valley, RANDBURG, 2125 - *Zoë Rae*
67. Poulos Mkhuzelwa Masango - 820806 5766 082 - 859 Block M, SOSHANGUVE, 0152 - *Paul Mkhuzelwa*
68. Delisile Paneng - 880814 0413 087 - M 218, UMLAZI, 4110 - *Delly*
69. Bongumenzi Cele - 961214 5667 088 - D 1010, Ngonyameni, UMLAZI, 4001 - *Bongumenzi Skhanyiso*
70. Kaylar Linda Voterson - 950916 0223 088 - 41 Daphne Court, HEIDEVELDT, 7764 - *Nurah*
71. Methode Khiphizwi Mdletshe - 790727 5565 082 - H 1720 Qhakaza Street, ESIKHAWINI, 3887 - *Method Khiphizwi*
72. Ngabane Bishop Mkgabudi - 790503 5438 087 - 1788 Ramaphosa, Reiger Park, BOKSBURG, 1466 - *Ralekwe Bishop*
73. Danell Du Toit - 791113 0061 089 - 4 Sharon Road, Berton Park, BOKSBURG, 1459 - *Danté*
74. Papaki Samuel Hlabela - 650108 5289 081 - Stand No 18, Ludorf Street, BELA-BELA, 0450 - *Phindile Samuel*
75. Joshua Mpho Rabotso - 640410 5958 084 - 748 Phase 2, Lebanon, MABOPANE, 0190 - *Mpho*
76. Mfangundlele Jacob Hleza - 650323 5563 084 - 1123 Gojela Street, Zone A, MAHWELERENG, 0626 - *Mfanawendlele*
77. Nowethu Ntenti - 641111 1130 087 - 218 Nhlapo Section, KATLEHONG, 1431 - *Lungiswa Victoria*
78. Kelotihokile Magau - 610412 0713 080 - Borakalalo Village, Lesetlha Section, LEHURUTSHE, 2870 - *Kelethokile Mpho*
79. Lungile Emily Dube - 570221 0761 082 - 10 Olifantsfontein, Clayville East, MIDRAND, 1601 - *Emma*
80. Bathini Gladys Nkwanyana - 570425 0275 080 - E 1017 Inqe Road, NTUZUMA, 4359 - *Gladys*
81. Comfort Nawgamso George - 571020 0175 080 - 9 Ulana Close, Amatola Drive, BISHO, 5605 - *Comfort Nangamso*
82. Afhel Johannes Mathelemusa - 580706 5273 081 - 1996 Isundu Street, GREENFIELD, 1458 - *Afhel Samson*
83. Nyangeni Magoso - 620116 5483 080 - Centocow Location, IXOPO, 3276 - *Nyangeni France*
84. Sabata Edward Mokheleli - 580830 0897 080 - 7291 Zone 2, THABA NCHU, 9780 - *Galekgobe Sophia*
85. Thamsanga Louis Jali - 510712 5280 089 - Bb 1467, Umlazi Township, UMLAZI, 4031 - *Thamsanqa Louis*
86. Bukelwa Sicwetsha - 490101 2614 082 - 22 Maxesha Bizana Street, Mbuqe Extension, MTHATHA, 5099 - *Bukelwa Thelma*
87. Saraphina Monica Magogo Nchapi - 691215 0533 081 - 256 Makau Street, Wattville, BENONI, 1501 - *Saraphina Monica Masoso*
88. Sekgothe Cedric Mokgoatsane - 610112 5982 082 - 220 Suid Street, POLOKWANE, 0699 - *Sekgothe Ngwato*
89. Bongane Joga Mdhuli - 581005 0409 082 - 1647 Sibanyoni, WINTERVELDT, 0198 - *Poppy Jacobeth*
90. Patience Mmadikgomo Ramokala - 700523 0441 083 - 1255 Maloisane Street, Montshioa, MAHIKENG, 2745 - *Tsholofelo*
91. Masemola Elmon Phala - 700408 5399 082 - Alverton, PRAKTISEER, 1100 - *Boroko Elmon*
92. Tsomba Emmah Matsane - 700210 0643 088 - Stand No 438, Sambimdza Trust, KABOKWENI, 1245 - *Emmah*
93. Petunia Kedibone Mashigo - 770121 0377 087 - 32 – 18th Avenue, ALEXANDRA, 2012 - *Petunia Phumello*
94. Cleopatra Mahloko Makgonye - 730307 5369 083 - 4 Tugela Street, WESTERNBURG, 0699 - *George Mahlako*
95. Profesok Gaelesile Gaseemelwe - 720214 5994 088 - 1287 Ogorogile Street, MARUPING, 8460 - *Professor Gaedisiwe*
96. Sana Christina Ledwaba - 711016 0291 084 - 2052 Zone 2, SESHEGO, 0742 - *Boikhutjo*
97. Solomuzi Njengenkosi Conrald Nsimbi - 710919 5350 089 - F 1194 Isiklabhu Grove, NTUZUMA, 4359 - *Solomuzi*

98. Bongzi Prince Mbuyisa - 710703 0554 089 - A 2639 Inanda, NEWTOWN, 4310 - *Nomabongwa Pretty*
99. Zahraa' Latib - 960509 0154 086 - 24 Taronga Road, RONDEBOSCH, 7980 - *Zahra*
100. Tahleho Samuel Letseng - 660321 5506 085 - 52 Versveld Street, VANDERBIJLPARK, 1911 - *Tsolo Samuel*
101. Tlou Abrina Thindisa - 660316 0362 088 - 8 Tarsier Street, WESTERNBURG, 0699 - *Adelleide*
102. Ntombi Cate Boshielo - 770406 1046 082 - Phokoane, NEBO, 1051 - *Ntobi Cate*
103. Renny Sakhile Mfati - 770303 7529 080 - 53 Zone 23, LANGA, 7455 - *Sakhile*
104. Fina Mpho Lamola - 760907 0969 085 - 17749 Extension 8 B, SOSHANGUVE, 0152 - *Phoeby*
105. Khothatso Victor Mokoena - 630711 5808 084 - 32 Gobabis Complex, Cnr Capensis & Kraalnaboom, ROOIHUISKRAAL, 0100 - *Khothatso Victor Matala*
106. Masellane Frank Mahloko - 640106 5564 084 - Jane Furse Village, JANE FURSE, 1085 - *Nkotwane Frank*
107. Thabane Lazarus Mokoma - 670907 5561 084 - 522 Zone 2, FICKSBURG, 9730 - *Thabang Lazarus*
108. Thesele Obed Mampane - 690303 6480 084 - Block W 3, Room 523, SAULSVILLE, 0125 - *Seroto Obed*
109. Evelyn Makondo - 671128 0621 083 - 784 Block W, SOSHANGUVE, 0152 - *Evelyn Larvinia*
110. Golaotsemang Nation Kapa - 680404 6329 081 - 6 Eeufees Street, ALBERTON, 1450 - *Phakamile Nation*
111. Beatrice Kukwana Mnganelwa - 681213 0789 086 - 2655 Mayibuye Section, TEMBISA, 1632 - *Beatrice Nompofana*
112. Tshikalange Mavhunga - 730106 0940 082 - 1714 A Nethombeni Street, Extension 1, TSHIAWELO, 1818 - *Tshikalange Kedibone*
113. Cathrine Phumlile Mkhungo - 780608 0454 088 - 8471 Moldavia Street, Extension 7, COSMO CITY, 2188 - *Phumlile Gabi*
114. Onica Handa - 790211 0605 086 - 2154 Extension 3, ALABAMMA, 2500 - *Thandiwe*
115. Aupa Ishmael Radebe - 780118 5331 083 - 11411 Mbeki Section, Tumahole, PARYS, 9585 - *Victor*
116. Maphoka Johanna Mokoaleli - 780303 1997 083 - 12508 Serwalo, THABA NCHU, 9700 - *Maphoka Jully*
117. Danisile Innocent Mnyakeni - 790414 0634 086 - 13 Annette Street, DAWN PARK, 1400 - *Innocent*
118. Tebatso Elsie Mogale - 790828 1052 081 - 524 Block X, MABOPANE, 0190 - *Elijah Moses*
119. Sidudla Zimiselengani Mayise - 920110 0966 089 - 7581 Section 5, MADADENI, 2951 - *Nozipho Sidudla*
120. Phatudi Maponya - 791028 5745 082 - Cnr Fox & Alexander Street, JOHANNESBURG, 2001 - *Phatudi Maponya*
121. Lazalle Howdy Willemse - 970519 5127 084 - 116 Caraway Street, Pineview North, GRABOUW, 7160 - *Daniel Jayden Lazalle*
122. Yue Chen - 950209 5185 084 - 9 Ratanga Road, Villa Italia, CENTURY CITY, 7800 - *Dean Chen*
123. Mashaeyane Mahloele - 540515 0375 083 - Phokwane, NEBO, 1059 - *Mashaeyane Francina*
124. Hluphegile Gladys Moloi - 770819 0712 084 - 1928 J, BOTSHABELO, 9781 - *Lindiwe Gladys*
125. Kebatlamang Lindiwe Loabile - 731125 1044 081 - House No 1482, Blekkies Section, MOROKWENG, 8614 - *Kebatlammang Lenkie*
126. Amogelang Precious Matlou - 000911 5641 087 - 462 D Micha's View, KGABALATSANE, 0193 - *Amogelang*
127. Siphosethu Isaiah - 900217 0356 080 - 520 Thabong, WELKOM, 9463 - *Siphosethu Wendy*
128. Abel Sando - 851023 5511 086 - House No 11833, Lomanyaweng, MAHIKENG, 2745 - *Obakeng Bruce*
129. Nontsizi Evelyn Galawe - 850727 0782 085 - 799 H Section, BOTSHABELO, 9781 - *Nomakhosi Evelyn*
130. Patricia Ntsoaki Peya - 911124 0674 081 - 1706 W, BOTSHABELO, 9781 - *Khanya Dulaney*

131. Nombulelo Nowata - 860521 0246 086 - 61 Nkholha Street, Extension 3, MFULENI, 5200 - *Ntombozuko*
132. Nkosingiphile Mpanza - 970523 5647 083 - Stand No 10, MAGUDU, 1300 - *Nkosingiphile Future*
133. Dumisani James Julias Mthembu - 790207 5755 082 - Ward 6, Enseleni Reserve, MAZIMAZANE, 3900 - *Juliao Dumisani Carlos*
134. Bernadette Barden - 690311 0911 087 - 13 Figtree Slot, Eastridge, MITCHELLS PLAIN, 7789 - *Badroeniesa*
135. Nyameko Justice K Nodwezana - 630403 6170 082 - 1241 Swaneville, KRUGERSDORP, 2001 - *Nyameko Justice*
136. Busiswa Ndaleni - 960710 0287 088 - 60 Avenue A, New Brighton, PORT ELIZABETH, 6000 - *Busisiwe*
137. Mandlenkosi Hlophe - 780411 5334 086 - 10308a Mabasotho Street, ORLANDO WEST, 1804 - *Dawn Mandlenkosi*
138. Mareme Lorantina Foforane - 981007 0431 088 - P O Box 01, ATOK, 0749 - *Mareme Lebogang*
139. Johannes Nkomo Raphadu - 720704 5867 086 - 8429 Motswelopele Street, SOWETO, 1809 - *Johannes Sunnyboy*
140. Kidibone Mofokeng - 801024 0260 084 - 203 Paarl, 726 Francis Bard, PRETORIA, 0002 - *Keeya*
141. Nomtshato Athalia Qhampa - 830323 1352 089 - Qhampa, 68 Matsaobane Street, Boichoko, POSTMASBURG, 8420 - *Sixolisiwe Athalia*
142. Tshegofatso Phasha Deka - 990925 5557 087 - P O Box 800, GA MATHABATHA, 0733 - *Tshegofatso Mogwashi*
143. Devonne Alwynne Jean Pharaoh - 920514 5075 087 - 45 Main Road, Northcliff, HERMANUS, 7300 - *Devonne Rashaad*
144. John Mbele - 940207 5891 084 - 7744 Zone 2, Fumudzi, DIEPKLOOF, 1864 - *Xolani John*
145. Umphulisa Given Musiwalo - 971012 5224 084 - Mangondi Jim Kone, THOHOYANDOU, 0950 - *Given*
146. Mabocho Mekgoe Mekgoe - 990818 0067 089 - 3322 Tswelopele, TEMBISA, 1632 - *Mabocho*
147. Khobatha Piet Tsele - 690407 5568 086 - 15 Magnesiet Avenue, WALDRIFT, 1939 - *Khobatha Peter*
148. Maphakane Packboy Tjana - 690101 7407 084 - 84 Doornlaagte, MUTSE, 1022 - *Parks Kope*
149. Thimika Sivalingam - 950805 0093 080 - 66 Kyalami Hills Estate, 40 Rovin Road, MIDRAND, 1684 - *Thimika Rughubir*
150. Silindokuhle Thina Phakathi - 910131 0658 080 - P O Box 929, ULUNDI, 3838 - *Slindokuhle*
151. Ratshuwe Esther Maswikaneng - 830423 0527 085 - 43 Mboneng, KGARUTHUTHU, 1064 - *Meladi Esther*
152. Phumulani Khumalo - 931207 5110 080 - 730 Kamanga Street, Spruitview, KATLEHONG, 1431 - *Melusi Phumulani*
153. Kelebogile Josephine Khumatake - 800223 0427 088 - 4135 Unit 1 Extension, Selosecha, THABA NCHU, 9780 - *Kelebogile*
154. Abel Abram Masango - 641210 5365 085 - Stand No 5564, SETLAKWANA, 1047 - *Abel Girly*
155. Nonhlanhla Carol Martha Skosana - 950715 0684 087 - 2229 Block V Extension, SOSHANGUVE, 0152 - *Nonhlanhla Carol Mofenyi*
156. Patrick Modau - 891226 5288 082 - 1166 Boekonhouthoof Street, Unit 23, Brookfield, MANOR, 0082 - *Phumudzo Patrick*
157. Sindiswo Princess Hlunza - 670923 0444 085 - 61489 Kuyasa, KHAYELITSHA, 7784 - *Sindiswa Princess*
158. Thokozile Ngidi - 670311 0555 086 - Thokoza Grey Street, DURBAN, 4001 - *Thokozile Happiness*
159. Ishmael Msokoli Nonzaba - 961207 5132 087 - 2103 Mabe Street, Tikwane, HOOFFSTAD, 9477 - *Nonzaba*
160. Rebecca Mmadira Motiang - 660615 1098 082 - 1065 Zone 7, GA RANKUWA, 0208 - *Jeremiah*
161. Gymartha Zolelwa Fish - 651115 0387 082 - 9152 Tshele Street, Tokoza Gardens, TOKOZA, 1426 - *Ghaliyah Zurafa*
162. Mahlatsi Rampedi - 000909 0825 085 - Caprive, GA MOLOI, 1085 - *Bafedi Mahlatsi*
163. Tshireletso Maibelo - 000516 5694 083 - Stand No 0161, Doornlaagte, MARBLEHALL, 0450 - *Tshireletso Teddy*
164. Prudence Tau - 920825 0842 085 - Stand 47, MOTETI C, 0458 - *Prudence Lethiba*

165. Father Banda Aphone - 960523 5247 084 - Stand No 2118, Elanskraal, MARBLE HALL, 0450 - *Father Banda Amit*
166. Abram Lesiba Shika - 900411 5857 081 - Ga Monyeke, LEPHALALE, 0555 - *Mokwele Abram Lesiba*
167. Raphuti Zad Shongoane - 000627 5638 085 - Shongoane 03, LEPHALALE, 0555 - *Raphuti Zeth*
168. Victor Augustine Dryden - 731223 5074 087 - 63 Lavender Street, Lentegour, MITCHELLS PLAIN, 7785 - *Yaseen*
169. Nazeema Bird - 701018 0250 088 - 40 Begonia, Lentegour, MITCHELLS PLAIN, 7785 madam - *Lizelle Rosslyne*
170. Martha Sonny - 730708 0210 083 - 2522 South Gama Street, TOEKOMSRUS, 1759 - *Nomasonto Martha*
171. Adeebah Johnstone - 711204 0245 082 - 58 -5th Avenue, SHERWOOD PARK, 7764 - *Ismaeel Ahmad Oethmaan*
172. Desmond Gavin Samuels - 720917 5080 084 - 43 Mouritius Way, Portlands, MITCHELLS PLAIN, 7785 - *Mohamad Waseem*
173. S'phamandla Donation Mnisi - 881129 5464 087 - 10 Mzamo Section, CAROLINA, 1185 - *Donation Sphamandla*
174. Butfolakazi Mashaba - 850920 5854 088 - Stand 373, Buffelspruit, SHONGWE MISSION, 1331 - *Bonginkosi Welcome*
175. Goodness Madi - 851224 0300 083 - 3343 Extension 1, LAKESIDE, 1984 - *Lungile Goodness*
176. Sarah Ramagole - 961015 0493 085 - 2486/3 Eaton Side, SEBOKENG, 1983 - *Rorisang Sarah*
177. Agnes Masigo - 951214 0721 080 - 18900 Tshwane Street, Extension 14, KAGISO, 1754 - *Refilwe Agnes*
178. Bulelwa Ngcobozi - 890219 0835 081 - 1303 Extension 1, LAWLEY, 1830 - *Bulelwa Nosandiso*
179. Ndzunisani Helman Ngoveni - 991030 5149 081 - 8918 Uhlanga Street, IVORY PARK, 1635 - *Dzunisani Helman*
180. Ndlanla Lucky Mdlaba - 000820 5060 083 - 566 Umthambheka Section, TEMBISA, 1632 - *Nhlanhla Lucky*
181. Nompumelelo Mthembu - 771123 0028 081 - 667 Diepkloof, Extension 3, Legakabe Street, DIEPKLOOF, 1864 - *Nompumelelo Joshua*
182. Thabile Sentle Matlala - 001225 0105 082 - 90 Papillion, Farm Road, PRETORIA, 0184 - *Sentle Rheima Thabile*
183. Petrus Mongale - 910423 5445 088 - 1660 Alfred Mzo Street, Rietville, RITCHIE, 8701 - *Petrus Thamsanqa*
184. Pricious Rosemary Leeuw - 001009 0247 080 - 13434 Goitsemang Street, Boemanda, KIMBERLEY, 8300 - *Precious Rosemary*
185. Malehlohonolo Gladys Nakedi - 910826 0218 088 - 1235 Zone 6, Extension 2, SEBOKENG, 1982 - *Mbali Malehlohonolo Gladys*
186. Nomsa Monasi Mbambo - 801227 0841 080 - 13818 Ivory Park, Extension 3, MIDRAND, 1628 - *Nomsa Sandra*
187. Anitha Ramadimetsa Mashilo - 850206 0509 087 - Unit B, Ajo Building, PRETORIA, 0411 - *Phuthego*
188. Laezar Shole - 700424 0941 083 - 7441 Katlego Street, Ikageng, POTCHEFSTROOM, 2531 - *Laezer*
189. Nomzi Julian Nomboniso Mbohi - 600920 0176 084 - 1335 Zone 3, EZIBELENI, 5326 - *Nomboniso Julian*
190. Kude Mhlakaza - 920515 5819 085 - 74 Pholane Street, Sotho Section, VOSLOORUS, 1475 - *Mveli Kude*
191. Hilary Macmilane Snyders - 920122 5137 087 - 446 Trinity Street, VREDENDAL, 8160 - *Macmilane Hilary*
192. Dlangamandla Myeza - 931205 5709 083 - 24962 Mashila Street, KWA-THEMBA, 1575 - *Dlangamandla Willie Khayelihle*
193. Costy Mashabela - 901122 5923 083 - Riding Way Village, SEKHUKHUNE, 1124 - *Ramphelane Costy*
194. Masegwane Andronica Kome - 991008 0664 080 - Plot 81, Bighouse, MARIKANA, 0299 - *Lesego Adronica*
195. Maleshwane Talitha Tuge - 901018 0376 089 - 12 Luiperd Street, Mayerton Farm, CENTURION, 1960 - *Maleshwane Tsholofelo Talitha*
196. Jane Thabo Asnath Molepo - 990122 0622 088 - Moshate Village, MOKOPANE, 0600 - *Jenny Asnath*
197. Oupa Tiktoy Kgalane - 940630 5521 080 - 4530 Phagameng, Unit 6, MODIMOLLE, 0510 - *Gwarimbo John*

198. Anda Molisi - 991108 0820 086 - 5 Dawn Road, Capricorn, MUIZENBERG, 7945 - *Andiswa Penelope Anda*
199. Tiishetjo Malahlela - 940127 5686 088 - 16463 Mabuya Road, VOSLOORUS, 1475 - *Mogole Tiishetjo*
200. Precious Rethabile Disipi - 980803 0242 082 - H49 Thokoza Section, GANYESA, 8613 - *Rethabile Precious*
201. Azwihangwisi Mmbadi - 980129 0919 085 - Tshilidzini, Stand No 81, Phiphidi, VHEMBE, 0950 - *Azwihangwisi Lucia*
202. Kabelo Neville Modingoana - 821203 5661 084 - 31/613 Kerio Crescent, Cosmo Creek, Zandspruit, JOHANNESBURG, 2169 - *King Kabelo*
203. Elsie Makgethwa Manaswe - 960926 0375 083 - 1040 Block T, SOSHANGUVE, 0152 - *Mokgethwa Elsie*
204. Mmatshokolo Reginah Batlhaping - 881106 0671 080 - Kumba Section, Magajaneng, KURUMAN, 8460 - *Boitshoko Reginah*
205. Constance Seitibaleng Lekgetho - 800526 0600 086 - 3550 Moremi Street, DOBSONVILLE, 1865 - *Darlene Seitibaleng*
206. Mbali Zulu - 930708 0256 084 - 8257 B Sihlelele Street, Zone 6, PIMVILLE, 1809 - *Mbalenhle*
207. Noncebo Mtshali - 980505 0567 083 - Nkonjeni Area, MAHLABATHINI, 3865 - *Nongcebo S'nothile Nonjabulo*
208. Charity Simphiwe Londeka Dlamini - 961012 0339 087 - Sishwili Area, ULUNDI, 3838 - *Charity Londeka Simphiwe*
209. Nkhesani Sylvia Baloyi - 840612 0551 081 - 17 Rorich Street, NEWLANDS, 2092 - *Nkhensani Sylvia*
210. Shadi Lekgoathi - 911208 0396 082 - 6 Burgeroord Street, KEMPTON PARK, 1619 - *Shadi Masechaba*
211. Kanya Zukani Sifuba - 940121 0572 088 - 5338 Ipotwe Street, Extension 4, PROTEA GLEN, 1818 - *Khanya Zukani*
212. Philip Davids - 950505 5101 082 - 16 Buffelsdoring Avenue, WELTEVREDENPARK, 1709 - *George Philippus*
213. Agisanyang Musluhuddin - 940413 0841 088 - Lokaleng Village, MAFIKENG, 2745 - *Agisanyang Naseerah*
214. Mme Annah Ndlhovu - 690307 0853 089 - Gamarole Section, Lekkubu, ZEERUST, 2881 - *Pheletso Annah*
215. Likou Boitumelo Jessica Makhetha - 980608 0276 083 - 15293 Extension 14, JOUBERTON, 2574 - *Boitumelo Jessica*
216. Masego Gladys Kaelo - 920705 0722 083 - 3588 Extension 1, MERITING, 0308 - *Masego Keletso Gladys*
217. Asha Kok - 000215 0632 087 - Mshongoville Section, VRIESGEWACHT, 2776 - *Aisha*
218. Shané Lee Crossman - 991220 0200 084 - 26 Tenor 10th Avenue, BOKSBURG, 1459 - *Chané Lee*
219. Lumsday Feleza - 440329 5399 085 - 2763 Nu 7, MDANTSANE, 5219 - *Mlungisi Lumsday*
220. Botlhali Mmope - 980624 0022 088 - Mountainsong 271, P R N 119, Rietflei, RULSTENBURG, 0299 - *Botlhale-Ba-Modimo*
221. Senzeni Tedikie Ntshangase - 700202 1302 087 - 5 Olechwenimrod Park, KEMPTON PARK, 1919 - *Senzeni Mavis*
222. Zana Ndongeni - 750313 5658 082 - 221 Heiwer Street, IVORYPARK, 1632 - *Zama*
223. Kenneth Majosi Mokwena - 750316 5379 088 - 177 Siyabuswa A, SIYABUSWA, 0472 - *Kenneth Majosi Sango*
224. Patricia Mukateko Majoko - 750328 0400 082 - No 56 Sienna, Rocky Place, Monavoni, CENTURION, 0157 - *Mikateko Patricia*
225. Frank Sello Seboane - 751017 5414 086 - Unit 7 Stressa Court, Cnr Koch & Claim Streets, JOUBERT PARK, 2001 - *Frank Lefao*
226. Zibuyile Christinah Mkhize - 751206 0423 081 - Ezimbokodweni, ISIPINGO, 4105 - *Elihle Christinah*
227. Mary Nhlapo - 760719 0318 084 - 65 Zulu Section, Khutsong Township, CARLETONVILLE, 0499 - *Mary Jabu*
228. Refilwe Gladys Faduco - 780813 0314 080 - 24 Suricate Street, THERESAPARK, 0182 - *Michael*
229. Bantlhoile Catherine Moumakwe - 740528 0493 085 - 13162 Mathlare Street, MAMELODI, 0122 - *Catherine Blessing*
230. Cornelia Jacoba Weyers - 741222 0173 082 - 2 Harry Street, Dunvegan, EDENVALE, 1609 - *Nellie*
231. Christhia Pienaar - 950801 0308 081 - 2 Penguin Street, Avian Park, WORCESTER, 6850 - *Chrisinthia*

232. Muzokhona Khoza - 970904 5655 088 - Kwakhoza Reserve, ESHOWE, 3815 - *Muzokhona Emmanuel*
233. Geven Ramogelo Ndzimankulu - 990822 5316 087 - 12326 Extension 7, Agisanang Street, POTCHEFSTROOM, 2520 - *Given Kamogelo*
234. Ntombenhle Tracey Mbangwa-Rahman - 950731 0657 080 - Mbude Extension, MTHATHA, 5099 - *Tracey*
235. Kelebetseng Millicent Segano - 900419 0760 085 - 10141 Lomanyaneng Trlust, MAFIKENG, 2745 - *Peloentle Millicent*
236. Jan Sirungwa - 860420 5426 084 - 10595 Miga Village, Ramatlabama, MAFIKENG, 2745 - *Selelo Jan*
237. Ashlin Singh - 911009 5195 085 - No 41 Surat Road, LADYSMITH, 3370 - *Muhammed Rehaan*
238. Luwellyn Zaan-Pierre Adams - 960422 5323 088 - Gouwsblom Singel, RIVIERSONDEREND, 7250 - *Lluwellyn Jean-Pierre*
239. Fika Sobandla Ndwandwe - 970925 5726 082 - Stand No 352, KWALUGEDLANE, 1343 - *Mafika Sobandla*
240. Refentse Briget Chabangu - 900705 0821 087 - 1802 Block U X, MABOPANE, 0190 - *Refentse Bridget Zandile*
241. Felega Ramolwetsi Maila - 960629 0403 083 - Stand No 728 R D P, Leeuwfontein, MOGANYAKA, 0459 - *Felicia Ramolwetsi*
242. Jerida Mirriam Takalane - 570306 0783 085 - 3070 Block L, SOSHANGUVE, 0152 - *Jerita Mirriam*
243. Nomntu Ethelia Mbolekwana - 570414 0450 083 - G46 Lager Crescent, KHAYELITSHA, 7784 - *Nomntu Ethelina*
244. Ramoahlo Christina Mogoba - 570628 0350 080 - Ga Mmela, SEKHUKHUNE, 1124 - *Mamelete Christina*
245. Patricia Thersa Tito - 550106 0806 082 - 18 Marsden Road, WALMLER ESTATE, 7925 - *Patricia Theresa*
246. Nowenyindile Mahlasela - 540927 0866 088 - Plot 4, Rietfontein, MUIDERSDRIFT, 0179 - *Nowayindile Namba*
247. Zandel Robson - 610408 0047 081 - 16 Drakenstein Street, SOMWERSET WEST, 7130 - *Zandel Ariana*
248. Rita Pereisa Indiveri - 561114 0140 087 - North Hyde, 20 North Road, DUNKELD WEST, 2196 - *Rita Pereira*
249. Shameen Chilwan - 520718 5127 087 - 11 Mars Road, Surrey Estate, ATHLONE, 7764 - *Shameem*
250. Merica Dampies - 620202 0270 084 - No 28 Disa Street, PAARL, 7620 - *Mercia*
251. Gloudina Maria Van Tonder - 610918 0165 089 - 20 Redcliff Close, PARKLANDS, 7441 - *Louna*
252. Mary-Ann Micheals - 620526 0235 089 - 4 Commond Court, HANOVERPARK, 7780 - *Mariam*
253. Tom Leeuw - 630223 5192 089 - 3707 Maak W Las, Kruisfontein, HUMANSDORP, 6300 - *Tommy*
254. Souda Reganie - 580226 0172 089 - 32 Colesburg Road, RUYTERWALCHT, 7460 - *Saudah*
255. Elizabeth Ann Heuvel - 601115 0116 086 - 1 Lorikeet Street, PALICAN PARK, 7941 - *Gamieda*
256. Auma Fortuin - 650411 0479 081 - Andries Van Der Spuy, Latergansvlei, OUDTSHOORN, 6625 - *Alima*
257. Matshwenyego David Moraba - 641231 5795 089 - 2701 Kagiso I I, LEDIG, 0338 - *Molokane David*
258. Rechale Khutsahalo Ponatshego Otukele - 660528 0819 087 - 31034 Tlhaping Section, GANYESA, 8613 - *Khutsahalo Ponatshego*
259. Zane Moagi - 800915 5855 086 - 4 Marico Street, Riviera, KIMBERLEY, 8301 - *Mosimaneotsile Ishmael Zane*
260. Beni Beni - 001105 5712 084 - 1565 Ezintenteni Location, Ndevana, KING WILLIAMS TOWN, 5600 - *Mbasa*
261. Rifumuni Glory Baloyi - 810615 0983 085 - Stand No K W 21, VALDEZIA, 0935 - *Rhandzu Glory*
262. Nonandi Gontshi - 700503 1171 087 - Lower Kroza Area, QUMBU, 5180 - *Nandipha*
263. Martha Monyela - 700828 0440 088 - Stand No 42, SHATALE, 1282 - *Marrychrist*
264. Asana Mashele - 001009 5764 089 - Block A, Stand No 1715, NKOMAZI, 1341 - *Asanda Phumlani*

265. Lebogang Geraldine Manthata - 831116 0666 080 - 2631 John Teffo Street, Mahube Valley, Extension 1, MAMELODI, 0122 - *Samuel Geraldine*
266. Motlatle Lebethal Mailula - 710323 0684 081 - 37567 Monakedi Street, Extension 22, MAMELODI EAST, 0122 - *Motlatle Lillian*
267. Nkaija Lebogang Kawa - 921204 0570 089 - 36654 Extension 22, MAMELODI EAS, 0122 - *Lebogang Mokopo*
268. Siyamthanda Fila - 000627 5572 086 - 28 Tonjeni Street, KWANOBUHLE, 6242 - *Siyamthanda Calvin*
269. Amanda Lethinlanhla Nene - 960714 5820 083 - E 513 Iphesi Street, EZAKHENI, 3381 - *Lethinlanhla*
270. Vishnu Reddy - 700214 6105 084 - 6 Adelaide Avenue, Belvedere, TONGAAT, 4399 - *Eric*
271. Nkosinathi Lucky Zikhali - 720406 5324 080 - Mzingezi Reli, RICHARDS BAY, 3901 - *Nkosinathi Bhubesi*
272. Sydeney Njabulo Siwela - 001120 5616 086 - 146 Hlanzeni Section, TEMBISA, 1632 - *Thabo Njabulo Sydeney*
273. Nosiphoxolo Missworld Mdiya - 980920 0453 087 - Xura Area, LUSIKISIKI, 4820 - *Nomanyuswa Missworld*
274. Justine Grootboom - 991127 5432 085 - Bluecliff Farm, KIRKWOOD, 6120 - *Justin*
275. Geenbooi Madiba - 920919 6049 082 - Gamasha, SEKHUKHUNE, 1124 - *Geelbooi Mamogolo*
276. Kgabiso Rosly Mokwena - 990402 0870 089 - P O Box 1539, MASEMOLA, 0632 - *Boitumelo Rosly*
277. Nocolene Bajabhile Motsepe - 760411 0652 080 - No 87 Bouganville Street, Ebony Park, HALF WAY HOUSE, 1585 - *Nicoleen Bayabhile*
278. Nobuhle Immaculate Dlamini - 951211 0882 086 - Delfkom 1329, PIET RETIEF, 2380 - *Sthandwa Ncamiso*
279. Jappie Mataboge - 940821 5466 083 - The Fields, HATFIELD, 0083 - *Bothale*
280. Sikhumbuzo Maroala - 831013 0708 089 - 27319 Mekgoe Street, Extension 5, MAMELODI EAST, 0122 - *Sikhumbuzo Veronica*
281. Simbonile Edward Ketani - 950712 5388 087 - Mphoha Street, NELMAPIUS, 0122 - *Simbonile Siphon Edward*
282. Vumani Mlaba - 930801 5413 089 - 30 Bealvadele Road, Carwash Hill, PINETOWN, 3610 - *Vumani Mthokozisi*
283. Letsika Maifo - 980317 5269 081 - P O Box 392, RADITSHABA, 0718 - *Letsika Kenny*
284. Mmanoko Leonard Boshielo - 840923 5692 089 - P O Box 15, GA RAKGWADI, 1068 - *Mothibedi Leonard*
285. Sibongile Emily Mlangeni - 680520 0353 080 - 3800 Zone 10, MEADOWLANDS, 1852 - *Sibongile Emily Bonokwane*
286. Marian Jaffer - 671014 0661 081 - 17 Viola Street, LENTEGEUR, 7785 - *Mariam*
287. Basil Herbert - 690320 5138 083 - 28 Gazalia Way, BELHAR, 7493 - *Abubakr*
288. Thembile Julia Mdemka - 680906 0589 080 - 2420 Bhambatha Street, Kagiso I I, KRUGERSDORP, 1740 - *Thabile Julia*
289. Katjie Johanna Reent - 681007 0212 085 - Augrabies, Watervalle, AUGRABIES, 8874 - *Johanna Ingrid*
290. Modula Marcia Soana - 980122 0619 086 - Ga Tisan, MARISHANA, 1064 - *Lekubjane Marcia*
291. Tshегоfatso Grace Phetla - 850420 0815 085 - Stand No 195, Sephaku, MPUDULLE, 1257 - *Kwetepe Grace*
292. Abram Leonardo Sall - 921028 5281 081 - 3 Damon Maasdorp Street, Melkstroom, UPINGTON, 8001 - *Leonardo*
293. Chilly Baster - 911009 0386 085 - 124 Wilgerboom Street, BOEGOEBERG, 8943 - *Shirley*
294. Nomakorinte Mfino-Mathandela - 850318 0779 089 - 28464 Bloom Court, DELFT, 7100 - *Noma*
295. Peba Gasenewe - 981215 5820 086 - 10300 Matioding Village, MAFIKENG, 2745 - *Thatoyaone Jackson*
296. Makeeditse Rabecamolapo - 820326 0335 080 - 133 Tokologo Street, WOLMARANSSTAD, 2630 - *Makeeditse Rebecca*
297. Mmasello Francina Nthoroane - 820420 0872 083 - House No P27, Barolong Section, GANYESA, 8613 - *Mmasello Jeanette*
298. Maele Welheminah Mokgotho - 820302 0636 082 - P O Box 950, ATOK, 0749 - *Maele Veronica*

299. Priscilla Majuba Masango - 820226 0485 085 - 1340 New Stands Section, MOTHOTLUNG, 0268 - *Priscilla*
300. Mapolo Katrinah Lesie - 820213 0251 089 - 2638 Extension 4, MAKWASSIE, 2650 - *Katrinah*
301. Kenalemang Venesa Olyn - 801014 0827 081 - H61 Hadjebrahim, Cressent, Belgravia, ATHLONE, 9974 - *Aisha*
302. Thivhileli Godfrey Mukhwathi - 800918 5501 080 - 6803 Extension 44, Mokongwa Street, BIRCH ACRES, 1619 - *Thivhileli*
303. Nomsa Selly Shabangu - 860402 0722 089 - Nr 7 Protea, Dekock Street, BARBERTON, 1300 - *Phillip Gibash Gabriella*
304. Mereline Evelyn Hendricks - 661114 0684 083 - 68 Didloff Street, Bloemendal, PORT ELILZABETH, 6059 - *Fatimha*
305. Mponeng Mirriam Makalla - 660710 0263 082 - 1805 Sangela Crescent, SPRUITVIEW, 1431 - *Mponeng Machaka*
306. Sentdone Agnes Khola - 650603 0780 084 - 9980 Zone 4 Extension, THABA NCHU, 9780 - *Sempone Agnes*
307. Olebile William Moleleki - 631020 5753 087 - 223 Mosutlane Street, WOLMARANSSTAD, 2630 - *Emmanuel Olebile William*
308. Johannes Sibasa - 630211 5422 085 - K131 Road Reserve, Extension 16, SAULSVILLE, 0008 - *Johannes Lucky Malose*
309. Linda Kutwane - 620524 0948 082 - 12-6th Avenue, Alexandra, JOHANNESBURG, 2090 - *Naomi Peace Joy*
310. Mmagolo Mokgaetje Leah Kekana - 591203 0392 089 - No 030180 Parkmore, MOKOPANE, 0600 - *Mmagolo Mokgaetje Cecilia*
311. Goshetseng Gift Ramabele - 750208 0426 081 - 540 B Kopopa Street, Zone 7, MEADOWLANDS, 1852 - *Goshetseng Refiloe*
312. Azola Qokoqa - 950419 5920 089 - Extension 10, CALA, 5457 - *Lazola*
313. Edith Mulaudzi - 691206 0362 084 - 2868/33 Usasa Street, PROTEA GLEN, 1819 - *Brenda Edith*
314. Emmanuel Kagiso Louw - 950616 5212 082 - 8 De Vries, Heidedal, BLOEMFONTEIN, 9306 - *Emmanuel Kagiso Justin*
315. Violanter Patience Benjamin - 820115 0310 080 - 27706 Vista Park, BLOEMFONTEIN, 9301 - *Boitumelo Violanter Patience*
316. Serurubele Relebohile Rapitsi - 961122 0124 080 - 6628 Jonga Street, Phahameng, BLOEMFONTEIN, 9323 - *Relebohile*
317. William Mojalefa Zwane - 920901 5312 083 - 6986 Extension 2, Lakeside, ORANGE FARM, 1841 - *Codesa Cody*
318. Justene Georgewin Fortuin - 950621 5354 082 - 366 B Vaalhoek 2, OKIEP, 8270 - *Justin Georgewin*
319. Siyabonga Jolice Gxila - 970306 5348 088 - 7439 Khumalo Street, ORLANDO WEST, 1804 - *Siyabonga Gauleiter*
320. Crystal Jo-Anne Ruiters - 931002 0354 084 - 65 Living Stone Road, Top Town, QUEENSTOWN, 5320 - *Chryslie Jo-Anne*
321. Puleng Petunia Katane - 981222 0238 082 - 7566 Thulo Street, Rocklands, BLOEMFONTEIN, 9323 - *Petunia Puleng*
322. Shereedan Rivombo - 860423 5545 085 - P O Box 1786, GIYANI, 0826 - *Sheridan*
323. Mphela Nkgoasepadi Ntabo - 991224 5532 087 - P O Box 320, SEKHUKHUNE, 1124 - *Mothathe Jack*
324. Katlego Ngoanammele Moruthane - 880224 0625 088 - P O Box 189, LEFALANE, 0241 - *Katlego Madinoge*
325. Putana Ranger Mohlala - 760706 5569 084 - Stand 20299, Mohlakekoma, JANE FURSE, 1085 - *Tumedi Ranger*
326. Kaliswa Constance Otola - 660827 0540 085 - 25 Buster Bowden, KIMBERLEY, 8301 - *Koliswa Constance*
327. Doris Ntombifikile Vilakazi - 740716 0466 082 - 60111a Sheleni Road, ADAMS MISSION, 4110 - *Ntombifikile Nthomby*
328. Nothando Samukelisiwe Dlamini - 000406 0887 082 - P O Box 12460, ELANDSKOP, 3226 - *Noluthando Samukelisiwe*
329. Matimba Johannes Ngobeni - 990806 5412 087 - 685 Tshamahanse, MOKOPANE, 0600 - *Fanie Johannes*
330. Reealeboa Thatho - 900805 5422 087 - 37894 Qhawe Street, KHAYELITSHA, 7784 - *Siyabulela*
331. Veronica Ramadimetja Mapholo - 930126 0531 085 - 318 Elidinga Section, TEMBISA, 1632 - *Mary Veronica Lebogang*



332. Facility Tshilidzi Mudau - 910228 0618 088 - 1351 Molapo Stand, WINTERVELDT, 0152 - *Felicia Tshilidzi*
333. Ashly Choene Maremane - 001229 5236 082 - 310 Mihlothi Street, Mahube Valley, MAMELODI, 0122 - *Ashley Choene*
334. Itumeleng Komane – 990413 5566 085 -, SEKHUKHUNE, 1124 - *Itumeleng Hlajane*
335. Johannes Mashakane - 980512 5656 085 - 1035 Armoed Village, MAPELA, 0610 - *Johannes Makgabo*
336. Magabotje Johannes Makwana - 780515 5724 086 - 389 Lois Avenue, JANE FURSE, 1085 - *Makwana*
337. Vikise Dayeli - 790209 5294 088 - P O Box 13215, WITFIELD, 1467 - *Bongani Vikise*
338. Khofela Esther Kgosana - 771115 0493 083 - P O Box 163, ZEBEDIELA, 0632 - *Kholofelo Esther*
339. Zameka Ngqiniso - 821230 0812 081 - 3 Cam Street, Bollonia, KRUGERSDORP, 1740 - *Zameka Lily*
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342. Euphonia Khayi - 920706 0142 082 - 35075 Ncumo Road, Harare, KHAYELITSHA, 7784 - *Nomphelo Euphonia*
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382. Maureen Sibongile Maduna - 731011 0558 083 - 469/47 Dlamini Avenue, Jabulani, KWAXUMA, 1868 - *Bongi Oasis Siba Conquest*
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NON-GOVERNMENTAL ORGANIZATION

NO. 478

29 MARCH 2019



# ENFORCEMENT POLICY



## OFFICE OF HEALTH STANDARDS COMPLIANCE

### NATIONAL HEALTH ACT, 2003 (ACT NO. 61 OF 2003)

I Sipiwe Mndaweni hereby publish the Draft Enforcement Policy contained in the Schedule hereto, in terms of regulation 22(2) of the Procedural Regulations Pertaining to the Functioning of the Office of Health Standards Compliance and Handling of Complaints by the Ombud published in *Government Gazette* No. 40396, Notice No. 1365 of 2 November 2016, for consultation.

Interested persons are hereby invited to submit written comments on the draft Policy within ninety (90) working days from the publication date of this notice. Comments may be directed to:

Attention: Adv. Makhwedi Makgopa-Madisa

Director: Certification and Enforcement

MRC Building

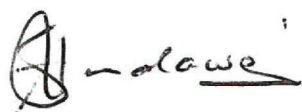
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**DR SIPHIWE MNDAWENI**

**CHIEF EXECUTIVE OFFICER: OFFICE OF HEALTH STANDARDS COMPLIANCE**

**DATE: 13/03/2019**

	<b>OFFICE OF HEALTH STANDARDS COMPLIANCE</b>		
Policy title	ENFORCEMENT POLICY		
Policy no	ENF: 001	1 <sup>st</sup> Issue date	
Policy version	Version 01	Effective date	
		Review Date	
Administrator	Approval date	Chairperson of the Board (signature)	
Certification and Enforcement Unit			

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## 1. DEFINITIONS

- 1.1 **“Board”** means the Board of the Office of Health Standards Compliance appointed in terms of Section 79A of the Act;
- 1.2 **“Chief Executive Officer”** means the person appointed as Chief Executive Officer of the Office in terms of Section 79H (1) of the Act;
- 1.3 **“Constitution”** means the Constitution of the Republic of South Africa, 1996;
- 1.4 **“Compliance Enforcement Committee”** means an administrative body established by the Office to adjudicate on formal hearings relating to breaches or non-compliance with the prescribed norms and standards;
- 1.5 **“Early warning system”** means the surveillance systems that collect information of serious user-related incidents that prompt interventions by the health establishment, the Office or relevant authority;
- 1.6 **“Health establishment”** means the whole or part of a public or private institution, facility, building or place, whether for profit or not, that is operated or designed to provide inpatient or outpatient treatment, diagnostic or therapeutic interventions, nursing, rehabilitative, palliative, convalescent, preventative or other health services;
- 1.7 **“Inspector”** means a person appointed as an inspector in terms of Section 80(2) of the Act;
- 1.8 **“Minister”** means the Minister responsible for Health;
- 1.9 **“Norms and standards”** mean the norms and standards prescribed by the Minister in terms of Section 90(1)(b) and (c) of the Act;
- 1.10 **“Office”** means the Office of Health Standards Compliance established by Section 77(1) of the Act;
- 1.11 **“Ombud”** means a person appointed as an Ombud in terms of Section 81(1) of the Act;
- 1.12 **“Person-in-charge”** means a person designated by the relevant authority, as a person in charge of a health establishment;
- 1.13 **“Policy”** means this Enforcement Policy of the Office;
- 1.14 **“Regulations”** means the Procedural Regulations Pertaining to the Functioning of the Office of Health Standards Compliance and Handling of Complaints by the Ombud;
- 1.15 **“Relevant Authority”** refers to provincial department of health, district health authority, municipal authority or equivalent authority in the private sector;
- 1.16 **“the Act”** means the National Health Act, 2003 (Act No. 61 of 2003);



1.17 **“User”** means the person receiving treatment in a health establishment, including receiving blood or blood products, or using a health service, and if the person receiving treatment or using a health service is:

- a) below the age contemplated in Section 39 (4) of the Child Care Act, 1983 (Act No. 74 of 1983), **“user”** includes the person’s parent or guardian, or another person authorised by law to act on the first mentioned person’s behalf; or
- b) incapable of taking decisions, **“user”** includes the person’s spouse or partner or, in the absence of such spouse or partner, the person’s parent, grandparent, adult child or brother or sister, or another person authorised by law to act on the first mentioned person’s behalf.

## 2. BACKGROUND

2.1 The Office of Health Standards Compliance was established by section 77(1) of the National Health Act, 2003 (Act No. 61 of 2003), which recognised the need to foster good quality health services. The rationale behind the establishment of the Office was to put in place institutional mechanisms, to advise on how to improve quality of care, monitor, enforce and report on non-compliance with the prescribed norms and standards.

2.2 The norms and standards for different types of health establishments were developed to ensure that health users receive health services at the acceptable standard.

2.3 The following are some of the activities that the Office is enjoined to perform as part of its responsibilities:

- 2.3.1 Inspect health establishments to ensure compliance with the prescribed norms and standards;
- 2.3.2 Certify health establishments found to be compliant with the prescribed norms and standards;
- 2.3.3 Enforce compliance with the prescribed norms and standards;
- 2.3.4 Provide guidance and support on the interpretation and application of the prescribed norms and standards; and
- 2.3.5 Investigate complaints relating to the breaches of the prescribed norms and standards.

### 3. THE PURPOSE OF THE ENFORCEMENT POLICY

- 3.1 The purpose of the Enforcement Policy is to set out the approach to be followed by the Office in enforcing compliance by health establishments with the prescribed norms and standards, to guide its employees, the Board as well as the categories of health establishments to whom the prescribed norms and standards apply.
- 3.2 This Enforcement Policy also sets out the roles and responsibilities of all the relevant stakeholders.

### 4. LEGISLATIVE MANDATE

- 4.1 The Constitution of the Republic of South Africa, 1996;
- 4.2 The National Health Act, 2003 (Act No. 61 of 2003), as amended;
- 4.3 Promotion of Access to Information Act, 2000 (Act No. 2 of 2000);
- 4.4 The Protection of Personal Information Act, 2013 (Act No. 4 of 2013);
- 4.5 Promotion of Administrative Justice Act, 2003 (Act No. 3 of 2000);
- 4.6 Criminal Procedure Act, 1977 (Act No. 51 of 1977);
- 4.7 Norms and Standards Regulations applicable to different categories of health establishments, 2016; and
- 4.8 Procedural Regulations Pertaining to the Functioning of the Office of Health Standards Compliance and Handling of Complaints by the Ombud, 2016.

### 5. PRINCIPLES

In exercising its enforcement powers and to promote the statutory objective of promoting and protecting the health and safety of health users, the Office has adopted the following five (5) principles in its daily operations and regulatory decisions:

PRINCIPLES	
5.1 Accountability	The prescribed norms and standards set explicit benchmarks for health establishments that are objectively assessed and held accountable for compliance.
5.2 Transparency	Clear, specific and explicit obligations are placed on health establishments through the norms and standards,

	assessment tools and procedures. Furthermore, regulatory findings and decisions are published, as required by the Regulations.
<b>5.3 Targeting</b>	Enforcement target those health establishments and components of services which pose the greatest risk and whose levels and persistence of non-compliance with the norms and standards reflect ongoing actual risks to users' health and safety and potential poor outcomes.
<b>5.4 Proportionality</b>	The response as well as the use of enforcement powers must be assessed by the Office to be proportionate to the circumstances of an individual case. Where the health establishment can remedy the breach and the risk to health users is not immediate, the Office provides guidance to the health establishment in remedying the breach before taking enforcement action.
<b>5.5 Consistency</b>	The Office must take a similar approach, in similar cases, to achieve similar outcomes, and ensure that regulatory and enforcement processes are consistent, and decisions are reliable and fair (similar action in similar circumstances to achieve similar results).

## 6. SCOPE AND APPLICATION

6.1 This policy applies to:

- 6.1.1 The Board;
- 6.1.2 Employees of the Office;
- 6.1.3 Health establishments; and
- 6.1.4 Relevant authorities.

## 7. COMPLIANCE MONITORING

7.1 The Office monitors compliance with the norms and standards in several ways including, but not limited to: -

- 7.1.1 Inspections and investigations;

- 7.1.2 Incident notifications and complaints; and
- 7.1.3 Early warning system.

## **8. EDUCATION, ADVICE AND GUIDANCE ON COMPLIANCE**

8.1 The purpose of education, advice and guidance is to:

- 8.1.1 Raise awareness of all stakeholders' rights and obligations in relation to the prescribed norms and standards,
- 8.1.2 Guide the persons in charge of the health establishments on how to comply with the norms and standards and other applicable legislation, and
- Empower and capacitate health establishments to timeously address breaches of norms and standards and achieve compliance.

## **9. INSPECTIONS**

9.1 The purpose of inspections is to assess the extent of compliance by health establishments with the prescribed norms and standards.

9.2 Inspectors appointed by the Office must:

- 9.2.1 Inspect health establishments in accordance with the Inspection Strategy of the Office;
- 9.2.2 Interview any person who is believed to have in her or his possession any relevant information;
- 9.2.3 Request documents from the person in charge of a health establishment;
- 9.2.4 Take samples of any substance or relevant photographs; or
- 9.2.5 Issue a compliance notice to the person in charge of a health establishment if the health establishment is found to have breached any norms and standards.

## **10. RESPONSE TO NON-COMPLIANCE**

10.1 The health establishment is responsible for taking timely and appropriate actions to remedy any identified breaches of norms and standards.

10.2 If a health establishment fails to correct any identified breaches of norms and standards a compliance notice shall be issued to the health establishment.

## 11. COMPLIANCE NOTICE

- 11.1 A compliance notice is issued by an inspector to a health establishment that is found to have breached any prescribed norms and standards.
- 11.2 The health establishment must be given reasonable time to comply with the compliance notice prior to invoking any enforcement action.

## 12. ENFORCEMENT

### 12.1 PURPOSE OF ENFORCEMENT

- 12.1.1 The primary purpose of enforcement is:
- 12.1.1.1 To ensure compliance by health establishments with the prescribed norms and standards;
  - 12.1.1.2 To protect health users from harm and the risk of harm caused by non-compliance by health establishments with prescribed norms and standards
  - 12.1.1.3 To ensure that users receive health services of acceptable standard.

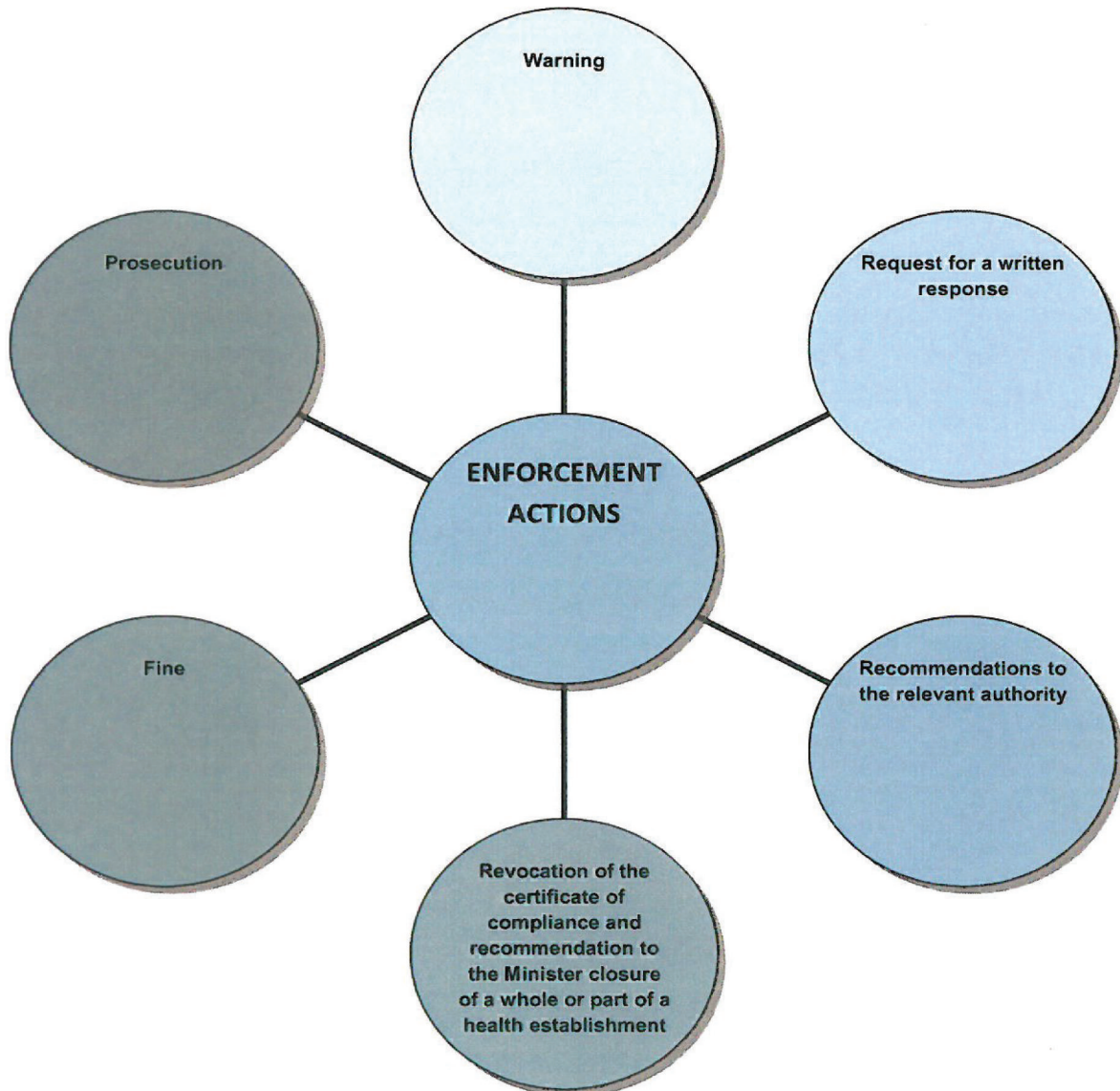
### 12.2 CRITERIA FOR ENFORCEMENT

- 12.2.1 In deciding the most appropriate action to take, the Office may be guided by the following considerations:
- 12.2.1.1 The severity of the breach and the actual or potential consequences;
  - 12.2.1.2 The extent to which the person in charge or employees of the health establishment contributed to the breach;
  - 12.2.1.3 The compliance history of the health establishment;
  - 12.2.1.4 Any mitigating or aggravating factors, including efforts undertaken by the person in charge of the health establishment to prevent / control the risks;
  - 12.2.1.5 Whether the breach is imminent or immediate.

## 12.3 ENFORCEMENT ACTIONS

The following diagram outlines the enforcement actions enjoined on the OHSC by the National Health Act, 2003 (Act No. 61 of 2003):

**Diagram 1 - Enforcement actions**



### 12.3.1 WARNING AND REQUEST FOR RESPONSE

- 12.3.1.1 If a health establishment fails to comply with a compliance notice issued by an inspector, the Office may issue a written warning to the person in charge of the health establishment, requiring her or him to provide a written response for such failure to comply with the compliance notice.
- 12.3.1.2 A written warning must include a reasonable time frame within which the written response must be provided to the Office and set out the consequences of failure to respond.
- 12.3.1.3 Failure by the person in charge to respond to a written warning within the set time frame would lead to the matter being referred for formal enforcement.

### 12.3.2 FINE

- 12.3.2.1 The Office shall afford the health establishment an opportunity to submit a request for leniency prior to imposing a fine.
- 12.3.2.2 The fine, if imposed, will be subject to the thresholds determined by the Minister by notice in the *Gazette*.
- 12.3.2.3 The health establishment must pay the imposed fine into a designated account within twenty (20) working days of the decision.
- 12.3.2.4 A separate banking account shall be opened by the Office for the purpose of payment of fines.

### 12.3.3 REVOCATION OF A COMPLIANCE CERTIFICATE

- 12.3.3.1 If a health establishment fails to comply with a compliance notice issued by an Inspector, the Office may revoke the compliance certificate issued to a health establishment.
- 12.3.1.1 The Office shall afford the health establishment an opportunity to submit a request for leniency prior to revocation of a compliance certificate.

## 12.3.2 RECOMMENDATION FOR TEMPORARY CLOSURE OF A HEALTH ESTABLISHMENT OR PART THEREOF

- 12.3.2.1 After revoking a certificate of compliance, the Office may make a recommendation to the Minister to temporarily or permanently close a health establishment or a part thereof that constitutes a serious risk to public health or health of the users.
- 12.3.2.2 The recommendation to the Minister must include all the information contained in regulation 27(2) of the Regulations, to enable the Minister to decide.
- 12.3.2.3 Any recommendations to the Minister for temporary or permanent closure of a health establishment or a part thereof must be submitted to the Board for consideration and approval.

## 12.3.3 FORMAL HEARING

- 12.3.3.1 The Office must notify the health establishment of its intention to revoke the certificate of compliance or to impose a fine and initiate a hearing which must be presided over by a suitable person appointed by the Chief Executive Officer, to allow the health establishment an opportunity to make representations before taking a final decision.
- 12.3.3.2 The person appointed as a presiding officer for the hearings must not have a personal interest in the matter or be in any way associated with any of the parties.
- 12.3.3.3 The hearings must be open to the public, subject to the determination of the presiding officer.
- 12.3.3.4 The Chief Executive Officer must report the recommendations of the presiding officer and the decision of the Compliance Enforcement Committee to the Board for noting.
- 12.3.3.5 The Office must communicate the final decision of the person in charge of a health establishment as well as the relevant authority within the prescribed timeframe.



## 12.3.4 NOTICE OF HEARING

- 12.3.4.1 A notice of hearing must be given to both the Office and the health establishment to prepare for the hearing.
- 12.3.4.2 A notice of hearing or notice of the Office's intention to revoke a certificate of compliance or to impose a fine would be deemed to have been received by the party or parties, as the case may be, if such notice was: -
- 12.3.4.2.1 sent to the registered postal or physical address of either party and there is enough proof thereof;
  - 12.3.4.2.2 sent to either party's official fax number and there is a fax transmission as proof that the fax was sent or received;
  - 12.3.4.2.3 hand-delivered and signed for at either party's registered business address; or
  - 12.3.4.2.4 sent by e-mail to either party's official email address.
  - 12.3.4.2.5 Where there is proof that the notice of hearing was delivered late, the receiving party may request extension of time or postponement of the hearing, which may not be unreasonably denied.

## 12.3.5 RECOMMENDATION TO THE RELEVANT AUTHORITY

- 12.3.5.1 The Office must recommend to the relevant authority any appropriate or suitable action to be taken against the person in charge of a health establishment or the health establishment.
- 12.3.5.2 The Office must monitor all recommendations sent to the relevant authority and report to the Minister on the implementation thereof.

### 12.3.6 PROSECUTION

12.3.6.1 Where an alleged breach of prescribed norms and standards is considered to amount to a criminal offence, the Office shall refer the matter to the National Prosecuting Authority for consideration.

12.3.6.2 The decision to prosecute lies solely with the National Prosecuting Authority after considering all the relevant factors relating to the alleged offence or offences.

### 12.3.7 APPEAL

12.3.7.1 An appeal against any decision of the Office must be in writing and lodged with the Minister within thirty (30) days from the date of gaining knowledge of the decision.

## 13. PUBLICATION OF TRIBUNAL DECISIONS AND REPORTS

13.1 The Office must publish the decisions of the *ad hoc* tribunal in the *gazette* within twenty-five (25) working days from the date of the decision.

13.2 All other reports relating to the outcome of the hearings conducted and recommendations made to the Minister or other relevant authorities shall be published on the Office's website every six (6) months.

## 14. ROLES AND RESPONSIBILITIES OF STAKEHOLDERS

Health establishments and the Employees	<ul style="list-style-type: none"> <li>• Familiarise themselves with prescribed norms and standards.</li> <li>• Comply with the prescribed norms and standards.</li> <li>• Cooperate with the Office and its employees.</li> </ul>
Relevant Authorities	<ul style="list-style-type: none"> <li>• Ensure that breaches of the prescribed norms and standards are dealt with as and when referred by the Office.</li> </ul>

Health Users	<ul style="list-style-type: none"> <li>• Provide inspectors with required information / documentation.</li> <li>• Report breaches of norms and standards / non-compliance by health establishments by way of complaints / whistle blowing.</li> </ul>
The Office	<ul style="list-style-type: none"> <li>• Inspect compliance with the norms and standards.</li> <li>• Guide health establishment on compliance with the norms and standards.</li> <li>• Enforce compliance with the norms and standards.</li> <li>• Issue certificate of compliance to compliant health establishments.</li> </ul>

## 15. REVIEW OF THE ENFORCEMENT POLICY

This Policy must be reviewed every five (5) years or earlier, as may be necessary.

## 16. PUBLICATION OF THE ENFORCEMENT POLICY

A copy of this Policy shall be published in the *Government Gazette* and made available at the Office's official website: <http://www.ohsc.org.za>.

DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

NO. 479

29 MARCH 2019

**GENERAL NOTICE IN TERMS OF THE RESTITUTION OF LAND RIGHTS ACT, 1994 (ACT NO. 22 OF 1994)**

Notice is hereby given in terms of section 11(1) of the Restitution of Land Rights Act, 1994 (Act No. 22 of 1994 as amended) that a claim for restitution of land rights on:

REF NO.	CLAIMANT	PROPERTY	PORTION	DISTRICT	CURRENT LAND OWNER	DEED OF TRANSFER	INTERESTED PARTIES
AD 015	Mr. Michael Monegro Kgari	Vlakfontein 207 JP	Portion 9	Bojanala District	State land	T369121/1968 BP	Mr. P J Robertze, Chief T. Mogale and the lessees

Any person who has an interest in the above-mentioned land is hereby invited to submit, within 90 (Ninety) days from the publication of this notice, any comments/information to:

The Regional Land Claims Commissioner: North-West  
 Private Bag X 8  
**MMABATHO**  
 2735

Tel: (018) 388 7000  
 Fax:

Submissions may also be delivered to Office no15, Cnr. James Moroka and Sekame Drive, 2<sup>nd</sup> Floor West Gallery Megacity, Mmabatho

  
**MR L.H. MAPHUTHA**  
 REGIONAL LAND CLAIMS COMMISSIONER: NORTH-WEST  
 DATE: 2019/03/06

  
**MR V. TITIES**  
 DEPUTY DIRECTOR: INFORMATION MANAGEMENT SUPPORT: NORTH WEST  
 DATE 2018/11/22

## DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

NO. 480

29 MARCH 2019

## WITHDRAWAL OF NOTICE NO 2050 OF 2000

## GENERAL NOTICE IN TERMS OF THE RESTITUTION OF LAND RIGHTS ACT, 1994 (ACT NO. 22 OF 1994)

Withdrawal Notice is hereby given in terms of section 11(1) of the Restitution of Land Rights Act, 1994 (Act No. 22 of 1994 as amended) that a claim for restitution of land rights on:

REF NO.	CLAIMANT	PROPERTY	PORTION	CURRENT OWNER	LAND	DEED OF TRANSFER
AD 015	Mr. Michael Monegro Kgari	Vlakfontein 207 JP	0 (R/E), 17 (R/E), 42 (R/E), 43 (R/E), 44 (R/E), 45 (R/E) & 4 Portion 2 1 (R/E), 7 (R/E), 12 (R/E), 13 (R/E), 15 (R/E), 39 (R/E) & 16 R/E of Portion 14 & 46 Portion 5 & 52 34 (R/E), 35 (R/E), & 36 (R/E) 7 (R/E), 38 (R/E), 40 (R/E), 47 (R/E) & 41 48 (R/E), 26 (R/E), 19, 24, 25, 32 & 33 3 (R/E), 20, 22 & 23 6 (R/E), 27 & 28 29 & 30 31 & 53 56 & 57 58	National Government of RSA		T 38774/1967 BP T 32012 /1967 BP T 36900/ 1967 BP T 878 / 1968 BP T 29987 / 1967 BP T 30359 / 1967 BP T 36754 / 1967 BP T 26614 / 1967 BP T 41633 / 1967 BP T 39902 / 1967 BP T 47067 / 1967 BP T 30808 / 1964 BP T 40161 / 1967 BP T 45010 / 1967 BP
			11 (R/E) 54	Republic Bophuthatswana	of	T 381 / 1988 BP T 39902 / 1967 BP
			8	Evangelical Church in Southern Africa – Tswana	Lutheran Church in Southern Africa – Tswana	T 140 / 1979 BP

		10 & 18	Viakfontein Nickel PTY LTD	T 3 / 1993 BP
	Diamant JP	206 0,1 (R/E) 2 (R/E), 6		T30359/1967 BP T36900/1967 BP

Any person who has an interest in the above-mentioned land is hereby invited to submit, within 90 (Ninety) days from the publication of this notice, any comments/information to:

The Regional Land Claims Commissioner: North-West  
 Private Bag X 8  
**MMABATHO**  
 2735

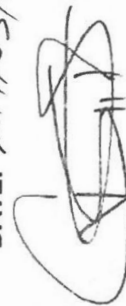
Tel: (018) 388 7000  
 Fax:

Submissions may also be delivered to Office no15, Cnr. James Moroka and Sekame Drive, 2<sup>nd</sup> Floor West Gallery Megacity, Mmabatho

  
**MR L.H MAPHUTHA**

**REGIONAL LAND CLAIMS COMMISSIONER: NORTH-WEST**

DATE: 2019/05/06



**MR V TITIES**

**DEPUTY DIRECTOR: INFORMATION MANAGEMENT SUPPORT: NORTH WEST**

DATE: 2018/11/22

## DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

NO. 481

29 MARCH 2019

**GENERAL NOTICE IN TERMS OF THE RESTITUTION OF LAND RIGHTS ACT, 1994  
(ACT NO. 22 OF 1994)**

Notice is hereby given in terms of Section 11(1) of the Restitution of Land Rights Act, 1994 (Act No. 22 of 1994 as amended), that claim/s for restitution of land rights on:

REF NO.	CLAIMANT	PROPERTY	LOT NUMBER	DISTRICT	CURRENT LAND OWNER	INTERESTED PARTIES
U 0104	Claudette Mbane	Lot No. 53 Roodepoort Location	Lot No. 53 Roodepoort Location	Johannesburg Metropolitan Municipality	Johannesburg Metropolitan Municipality	Department of Rural Development and Land Reform Johannesburg Metropolitan Municipality

has/have been submitted to the office of the Regional Land Claim Commission. The Commission on Restitution of Land Rights will investigate the claim in terms of the provisions of Rule 5 of the Rules Regarding Procedure of Commission Established in terms of section 16 of Restitution of Land Rights Act as amended. Any interested party on the claim is hereby invited to submit, representations in terms of section 11A of the Restitution of Land Rights Act No. 22 of 1994 as amended within 90 (ninety) working days from the publication date of this notice, any comments/information may be send to:



MR. L.H. MAPHUTHA  
The Regional Land Claims Commissioner  
Gauteng Province  
Private Bag X 03  
ARCADIA  
0007  
TEL: (012) 310-6500/6620  
FAX: (012) 323-2961

## DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

NO. 482

29 MARCH 2019

**NOTICE IN TERMS OF SECTION 11A(2) OF THE RESTITUTION OF LAND RIGHTS ACT, 1994 (ACT NO. 22 OF 1994), AS AMENDED**

**GENERAL NOTICE IN TERMS OF THE RESTITUTION OF LAND RIGHTS ACT, 1994 (ACT NO. 22 OF 1994), AS AMENDED**

Notice is hereby given in terms of the abovementioned Act of the intention of the Regional Land Claim Commissioner to, at the expiry date of 14 days commencing from the date of publication hereof and unless cause to the contrary is shown, withdraw in terms of Section 11A(3) portions of the farm Conterberg 665 KS listed below from the Gazette Notice 290004, Notice 893 of 2006

FARM	OWNER	TITLE DEED NOTICE	EXTENT (ha)	ENDORSEMENTS	HOLDER
Conterberg 665 KS					
Remaining Extent	Stols Anna Catharina Dina Whilhemina	T52786/1990	222.9000	K2204/1986S K3134/1983RM	No details No details
Portion 1	RieRieket, Abraham Carel	T34365/1975	798.0180	B8403/2000 B8404/200 KS, 665, 1 K1072/1986S K2793/1975S	ABSA Bank Ltd ABSA Bank Ltd No details No details RieRieket, Abraham Carel
Remaining Extent of Portion 2	Rieket, Leon	T61612/1998	399.0090	KS, 665, 2	No details
Portion 5	Stassen Boerdery cc	T128337/2002	412.3379	B56886/2005	ABSA Bank Ltd No Details

Page 1 of 3



Portion 7	Fanie Kemp Familie Trust	,26575/2005	917.5164	B29508, J05 KS, 665, 7 K2955/1974S	Land & Landbouontwikkelings Bank van Suid Afrika No Details No Details
Remaining Extent of Portion 8	Turvey, Unetsie	T143031/2004	538.0956	B121462/2004 KS, 665, 8	ABSA Bank Ltd No Details
Portion 9	William Young Familie Trust	T125237/2001	917.5164	B24173/2004 KS, 665, 9	Ned Bank Ltd No Details
Remaining Extent of Portion 10	Turvey, Unetsie	T143031/2004	489.0744	B121462/2004 KS, 665, 9	ABSA Bank Ltd No Details
Remaining Extent of Portion 12	Stassen Boerdery cc	T52525/2005	111.6791	KS, 665, 12 K547/1992S K548/1992S	No Details No Details No Details
Portion 13	Wade Porp Pty Ltd	T37649/1995	489.0744	KS, 665, 13	No Details
Portion 14	Riekert, Leon	T156368/2002	399.0090	B107651/2002 KS, 665, 13 K2896/1986S K593/1972S K7263/2002S	Brits, Terisa No Details No Details No Details Riekert, Jeanneane Henrietta
Portion 15	Turvey, Unetsie	T143031/2004	440.3275	B121462/2004 KS, 665, 15	ABSA Bank Ltd No Details
Portion 18	Stassen Boerdery cc	T52525/2005	171.3064	B56886/2005 KS, 665, 18	ABSA Bank Ltd No Details

Portion 19	Stassen Boerdery cc	.52525/2005	175.5891	KS, 665 9	No Details
Portion 23	Vos, Johannes Jurgens	T87145/2002	216.0608	B62495/2002	ABSA Bank Ltd
Portion 24	Peet Venter Trust	T87146/2002	941.0144	B43048/2004	First Rand Bank Ltd

Any party that has an interest in the above-mentioned property is invited to submit in writing within 14 days of publication of this notice, comments, information or object to the below mentioned address under reference number **KRP 2071**.

**Office of the Regional Land Claims Commissioner: Limpopo**  
**Private Bag X 9552**  
**Polokwane**  
**0700**

**Submission may also be delivered to:**  
**Koos Smith Building**  
**61 Biccard Street**  
**Polokwane**  
**0700**



**MR. LEBJANE MAPHUTHA**  
**REGIONAL LAND CLAIMS COMMISSIONER**

**DATE: 2019/03/15**

DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

NO. 483


29 MARCH 2019

GENERAL NOTICE IN TERMS OF THE RESTITUTION OF LAND RIGHTS ACT, 1994  
(ACT NO. 22 OF 1994)

Notice is hereby given in terms of Section 11(1) of the Restitution of Land Rights Act, 1994 (Act No. 22 of 1994 as amended), that claim/s for restitution of land rights on:

REF NO.	CLAIMANT	PROPERTY	LOT NUMBER	DISTRICT	CURRENT OWNER	LAND	INTERESTED PARTIES
F 0567	Solomon Ntsimane Morulane	Remaining Extent of Portion 3 of the Farm Wallmansthal No. 287 JR	Remaining Extent of Portion 3 of the Farm Wallmansthal No. 287 JR	Tshwane Metropolitan Municipality	The Department of Public Works	The Department of Public Works	The Department of Public Works SANDF Department of Rural Development and Land Reform City of Tshwane

has/have been submitted to the office of the Regional Land Claim Commission. The Commission on Restitution of Land Rights will investigate the claim in terms of the provisions of Rule 5 of the Rules Regarding Procedure of Commission Established in terms of section 16 of Restitution of Land Rights Act as amended. Any interested party on the claim is hereby invited to submit representations in terms of section 11A of the Restitution of Land Rights Act No. 22 of 1994 as amended within 21 (twenty one) working days from the publication date of this notice, any comments/information may be send to:

  
MR. L.H. MAPHUTHA  
The Regional Land Claims Commissioner  
Gauteng Province  
Private Bag X 03  
ARCADIA  
0007

TEL: (012) 310-6500/6620  
FAX: (012) 323-2961

## DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

NO. 484

29 MARCH 2019

## GENERAL NOTICE IN TERMS OF RESTITUTION OF LAND RIGHTS ACT, 1994 [ACT 22 OF 1994] AS AMENDED

Notice is hereby given in terms of Section 11[1] of the Restitution of the Land Rights Act 1994 [Act 22 of 1994] as amended, that a Land claim for Restitution of Land Rights has been lodged by Mr Josiah Qitha Mahlangu ID. NO. 550510 5494 082 in his capacity as the direct dispossessed person on the property mentioned hereunder situated in Mbombela Local Municipality, Mpumalanga Province: KRP: 10630

CURRENT PARTICULARS OF THE PROPERTY  
SMALDEEL 1 IS

Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements
The Remaining extent of Portion 2	Ingwe Surface Holdings Ltd {196901635101}	T64936/2003	255.6714ha	None	None	I – 765/2018C  K2463/1990RM

The Regional Land Claims Commissioner, Mpumalanga Province will investigate all the claims in terms of the provisions of the Act, any party interested in the above mentioned property is hereby invited to submit within **14 [Fourteen days]** from the date of publication of this notice to submit any comments, or further information to:

Commissioner for Restitution of Land Rights

Private Bag X7201

Witbank

1035

Or High- Tech House

23 Botha Avenue

Witbank

1035

TEL NO: 013 - ~~655 1000~~

FAX NO: 013 / 690 3438

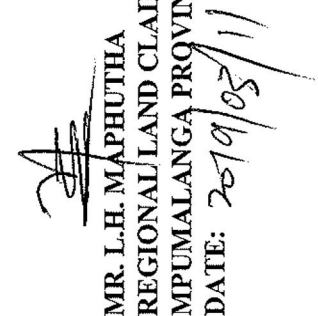


CHECKED BY: RENALL

RESTITUTION ADVISOR

DATE: 25/02/2017

MR. L.H. MAPHUTHA  
REGIONAL LAND CLAIMS COMMISSIONER  
MPUMALANGA PROVINCE



DATE: 20/03/17

## DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

NO. 485

29 MARCH 2019

AMENDING NOTICE NO: 1387 OF 2003 IN THE GOVERNMENT GAZETTE NO: 24845 DATED 16 MAY 2003

AMENDMENT NOTICE IN TERMS OF SECTION 11A {4} OF THE RESTITUTION OF LAND RIGHTS ACT 1994 [ACT 22 OF 1994] AS AMENDED.

Notice is hereby given in terms of Section 11A {4} of the Restitution of Land Rights Act 1994 [ACT 22 OF 1994] as amended, that the Commissioner for Restitution of Land Rights is amending the said gazette, lodged by Chief Tikhonetele Dlamini ID. NO. 4302125155081 in his capacity as a chairperson of the Mac – Mac community formerly known as Meke – Meke, the said gazette is amended to add Ms Citsokile Kate Fakude ID. NO. 3510100295083 in the gazette who was erroneously excluded in the said gazette, situated in Nkomazi Local Municipality, Ehlanzeni District: in Mpumalanga Province KRP No. 9084

1. MAC - MAC 264 JU

Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements
The Remaining Extent of the farm of the 264 JU	Kalanyandza Community Trust (8561/2004)	T4515/2012	490.0562ha	None	None	<ul style="list-style-type: none"> <li>• K2688/1980S</li> <li>• K4077/2001S</li> <li>• K492/2010L-in favour of Reatile Timrite PTY LTD</li> <li>• K6259/2004-in favour of Mondli PTY LTD</li> <li>• K628/2015L-in favour of Timrite PTY LTD</li> <li>• K790/2016L</li> <li>• VA3471/2005-in favour of the Sherlock Forest PTY LTD</li> </ul>

2. LOUIEVILLE 325 JU							
Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements	
The remaining extent of the farm 325 JU	KaNgwane Government	T25078/1976	436.0176 ha	None	None	None	• VA80/2013-in favour of Kalanyandza Community Trust
The Remaining Extent of Portion 1	National Government of the Republic of South Africa	T1303/2017	69.5787ha	None	None	<ul style="list-style-type: none"> <li>• K1163/1974\$- in favour of Louws Creek Irrigation Board</li> <li>• K4422/1991RM</li> <li>• VA155/2017-in favour of Kangwane Government</li> </ul>	
Remaining extent of Portion 4	National Government of the Republic of South Africa	T24289/2002	21.3004ha	None	None	<ul style="list-style-type: none"> <li>• K1009/2002S</li> <li>• VA1791/2002-in favour of Kangwane Government</li> </ul>	
Portion 5	National Government of the Republic of South Afrt	T17071/2015	991.0000ha	None	None	<ul style="list-style-type: none"> <li>• I-4348/1986C-T4100/3</li> <li>• VA2672/2015-in favour of Kangwane Government</li> </ul>	
The remaining extent of Portion 6	Kangwane Government	T17840/1981	70.5647ha	None	None	VA807/2001-in favour of Kangwane Government	

The remaining extent of Portion 7	Republic of South Africa	T11738/2001	65.1157ha	None	None	<ul style="list-style-type: none"> <li>• K598/2001S</li> <li>• VA807/2001-in favour of Kangwane Government</li> </ul>
Portion 9	National Government of the Republic of South Africa	T159/2016	60.7093ha	None	None	<ul style="list-style-type: none"> <li>• K1175/1973S</li> <li>• VA26/2016-in favour of Kangwane Government</li> </ul>
Portion 10	S C Christie PTY LTD (050942007)	T49750/1980	702.3562ha	None	None	<ul style="list-style-type: none"> <li>• K307/2000S</li> <li>• VA1316/2000-in favour of S C Christie PTY LTD</li> </ul>
The remaining extent of Portion 11	National Government of the Republic of South Africa	T23816/1981 T159/2016	84.9045ha	None	None	<ul style="list-style-type: none"> <li>• K41/1974S-in favour of Louws Creek Irrigation Board</li> <li>• VA27/2016-in favour of Kangwane Government</li> </ul>
Portion 14 (consolidation of portion 12 & 13)	Mabuza Esther (3908080423081)	T62573/1991 T30531/2001	19.6574ha	None	None	K6896/2002S
Portion 17 (consolidation of portion 15 & 16)	Ripinga Simean Selby (4809165613084)	T62575/1991	1.7259ha	None	None	None



## 3. ALBERTS HOME 266 JU

Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements
Remaining extent of the farm 266 JU	Kalanyandza Community Trust (8561/2004)	T4515/2012	368.9512ha	None	None	<ul style="list-style-type: none"> <li>• K2688/1980S</li> <li>• K4077/2001S</li> <li>• K492/2010L-in favour of Reatile Timrite PTY LTD</li> <li>• K6259/2004L-in favour of Mondi LTD</li> <li>• K628/2015L-in favour of Timrite PTY LTD</li> <li>• K790/2016L</li> <li>• VA3471/2005-in favour of Sherlock Forest PTY LTD</li> <li>• VA80/2013-in favour of Kalanyandza Trust</li> </ul>

## 4. IGWALAGWALA 263 JU

Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements
The remaining extent of the farm 263 JU	Piet Van Helsdingen Trust (6620/2004)	T361/2014	121.9776ha	B149/2014	Nedbank LTD	K2576/1979S
Portion 1	Kalanyandza Community Trust (8561/2004)	T4515/20122	268.9250ha	None	None	<ul style="list-style-type: none"> <li>• I-92/2013C</li> <li>• K2688/1980S</li> <li>• K4077/2001S</li> </ul>

						<ul style="list-style-type: none"> <li>• K492/2010L- Reatile Timrite PTY LTD</li> <li>• K6259/2004L-in favour of Mondri LTD</li> <li>• K628/2015L-in favour of Timrite PTY LTD</li> <li>• K790/2016L</li> <li>• VA3471/2005-in favour of Sherlock Forest PTY LTD</li> <li>• VA80/2013-in favour of Kalanyandza Community Trust</li> </ul>
<b>5. HOLNEKT 331 JU</b>						
Description of property The Remaining Extent of the farm of the Holnekt 331 JU	Owner of Property Kalanyandza Community Trust (8561/2004)	Title Deed Number T4515/2012	Extent of Property 944.3052ha (the claim is affecting only 0.8842)	Bonds None	Bond Holder None	Other Endorsements <ul style="list-style-type: none"> <li>• K2688/1980S</li> <li>• K4077/2001S</li> <li>• K492/2010L-in favour of Reatile Timrite PTY LDT</li> <li>• K6259/2004-in favour of Mondri PTY LTD</li> <li>• K628/2015L-in favour of Timrite</li> </ul>

6. FOURIESKRAAL 267 JU						
Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements
The remaining extent of the farm 267 JU	Kalanyandza Community Trust (8561/2004)	T4515/2012	2233.7733ha	None	None	PTY LTD <ul style="list-style-type: none"> <li>• K790/2016L</li> <li>• VA3471/2005-in favour of Sherlock Forest PTY LTD</li> <li>• VA80/2013-in favour of Kalanyandza Community Trust</li> </ul>
						<ul style="list-style-type: none"> <li>• K4077/2001S</li> <li>• K492/2010L-in favour of the Reatile Timrite PTY LTD</li> <li>• K527/1997L</li> <li>• K6259/2004L-in favour of Mondi LTD</li> <li>• K628/2015L-in favour of Timrite PTY LTD</li> <li>• K790/2016L</li> <li>• VA3471/2005-in favour of Sherlock Forest PTY LTD</li> </ul>

Portion 3	Kalanyandza Community Trust (8561/2004)	T4515/2012	81.0056ha	None	None	<ul style="list-style-type: none"> <li>VA80/2013-in favour of Kalanyandza Community Trust</li> <li>K2575/1979S</li> <li>K492/2010L-in favour of Reatile timrite PTY LTD</li> <li>K508/1954S</li> <li>K6259/2004L-in favour of Mondri LTD</li> <li>K628/2015L-in favour of Timrite PTY LTD</li> <li>K790/2016L</li> <li>VA3471/2005-in favour of Sherlock Forest PTY LTD</li> <li>VA80/2013-in favour of Kalanyandza Community Trust</li> </ul>
<b>7. KAMSULUBANA KOP (CONSOLIDATION OF PORTION 1 AND R/E OF PORTION 2 OF 267 JU)</b>						
Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements
The remaining extent of the farm 268 JU	Kalanyandza Community Trust (8561/2004)	T4515/2012	1998.9279 ha	None	None	<ul style="list-style-type: none"> <li>1304/1977S in favour of Louw's Creek Timbers LTD</li> </ul>

									<ul style="list-style-type: none"> <li>• K145/1962L</li> <li>• K492/2010L in favour of Reatile Temrite Pty Ltd</li> <li>• K506/1954S</li> <li>• K508/1954S</li> <li>• K52/1950RM</li> <li>• 6259/2004L in favour of Mondri LTD</li> <li>• K628/2015L in favour of Timrite Pty Ltd</li> <li>• K790/2016L</li> <li>• VA3471/2005 in favour of Sherlock Forest Pty Ltd</li> <li>• VA80/2013 in favour of Kalanyandza Community Trust</li> </ul>
<b>8. RUSSORD 261 JU</b>									
Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements			
The remaining extent of Portion 1	National Government of the Republic of South Africa	T12846/2010	284.5819ha	None	None	<ul style="list-style-type: none"> <li>• K1060/1975S</li> <li>• K2419/1974S</li> </ul>			
Portion 3 (consolidation of the R/E & Portion 2)	Kalanyandza Community Trust (8561/2004)	T7699/2018	382.0084ha	None	None	I-803/2015C			

The Regional Land Claims Commissioner, Mpumalanga Province will investigate all the claims in terms of the provisions of the Act, any party interested in the above mentioned property is hereby invited to submit within 30 [thirty days] from the date of publication of this notice to submit any comments, or further information to:

**Commissioner for Restitution of Land Rights**

Private Bag X11330

Nelspruit

1200

Or 30 Samora Machel Drive


Nelspruit

1200

Tel No: 013 756 6000

Fax No: 013 752 3859

CHECKED BY:  RENALL SINGH  
RESTITUTION ADVISOR  
DATE: 2019/03/11

  
MR L H MAPHUTHA  
THE REGIONAL LAND CLAIMS COMMISSIONER  
MPUMALANGA PROVINCE  
DATE: 2019/03/11

## DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

NO. 486

29 MARCH 2019

## GENERAL NOTICE IN TERMS OF RESTITUTION OF LAND RIGHTS ACT, 1994 [ACT 22 OF 1994] AS AMENDED

Notice is hereby given in terms of Section 11(1) of the Restitution of the Land Rights Act 1994 [Act 22 of 1994] as amended, that a land claim for Restitution of Land Rights has been lodged on the properties mentioned hereunder situated in Emalahleni Local Municipality, Nkangala District in the Mpumalanga Provinces.

Property Description	Claimant	KRP
Blaauwpoort 257 JS	<ul style="list-style-type: none"> <li>• Manzele Speelman Masango (2104055129082)</li> <li>• Selina Masango (4801240107087)</li> </ul>	<ul style="list-style-type: none"> <li>• 10584</li> <li>• 680</li> </ul>

CURRENT PARTICULARS OF THE PROPERTY  
BLAAUWPOORT 257 JS

Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements
The remaining extent of the farm 257 JS	Quick Leap Inv 197 Pty Ltd (200402240907)	T29781/2006	830.5526 ha	None	None	VA2309/2006
Portion 2	National Gov. of the Republic of South Africa	T13596/2012	171.4920 ha	None	None	None
Portion 4	Quick Leap Inv 197 Pty Ltd (200402240907)	T169996/2006	830.5527 ha	None	None	None

**CONTINUES ON PAGE 130 - PART 2**





# Government Gazette Staatskoerant

REPUBLIC OF SOUTH AFRICA  
REPUBLIEK VAN SUID AFRIKA

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**AIDS HELPLINE: 0800-0123-22 Prevention is the cure**

**The Masango Land Claim is only affecting 662.69 hectors**

The Regional Land Claims Commissioner, Mpumalanga Province will investigate all the claims in terms of the provisions of the Act, any party interested in the above mentioned property is hereby invited to submit within 30 [thirty days] from the date of publication of this notice to submit any comments, or further information to:

**Commissioner for Restitution of Land Rights**

Private Bag X7201

Witbank

1035

Or High-Tech House

23 Botha Avenue

Witbank

1035

TEL NO: 013 – 655 1000

FAX NO: 013 – 690 3438



CHECKED BY: RENALL SINGH  
ACTING-D-D : LEGAL (Restitution Adviser)  
DATE: 20/03/2019



**MR. L.H. MAPHUTHA  
REGIONAL LAND CLAIMS COMMISSIONER  
MPUMALANGA PROVINCE**

DATE: 20/03/2019

## DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

NO. 487

29 MARCH 2019

## GENERAL NOTICE IN TERMS OF RESTITUTION OF LAND RIGHTS ACT, 1994 [ACT 22 OF 1994] AS AMENDED

Notice is hereby given in terms of Section 11[1] of the Restitution of the Land Rights Act 1994 [Act 22 of 1994] as amended, that a Land claim for Restitution of Land Rights has been lodged by Mr Lucas Dalisa Sibanyoni ID. NO. 4306075264082 on behalf of the Sibanyoni family on the property mentioned hereunder situated in Steve Tshwete Local Municipality, Nkangala District in Mpumalanga Province: KRP: 5607

CURRENT PARTICULARS OF THE PROPERTY  
SPRINGBOKKLAAGTE 416 JS

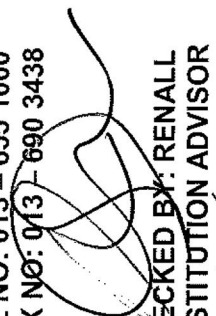
Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements
Remaining extent of Portion 2	Matube Coal Mining Pty Ltd (200401753207)	T7441/2010	172.5884 ha (the claim is affecting 38.4207 ha only)	None	None	1 – 2545/1986LG – 5/3/86

The Regional Land Claims Commissioner, Mpumalanga Province will investigate all the claims in terms of the provisions of the Act, any party interested in the above mentioned property is hereby invited to submit within 14 [Fourteen days] from the date of publication of this notice to submit any comments, or further information to:

Commissioner for Restitution of Land Rights  
Private Bag X7201  
Witbank  
1035

Or Shop No. E 8  
Saveways Crescent Centre  
Cnr OR Tambo and Mandela Street  
Witbank  
1035

TEL NO: 013 – 655 1000  
FAX NO: 013 – 690 3438



CHECKED BY: RENALL  
RESTITUTION ADVISOR

DATE: 27/03/2019



MR. L.H. MAPHUTHA  
REGIONAL LAND CLAIMS COMMISSIONER  
MPUMALANGA PROVINCE

DATE: 20/03/19

## DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

NO. 488

29 MARCH 2019

## GENERAL NOTICE IN TERMS OF RESTITUTION OF LAND RIGHTS ACT, 1994 [ACT 22 OF 1994] AS AMENDED

Notice is hereby given in terms of Section 11[1] of the Restitution of the Land Rights Act 1994 [Act 22 of 1994] as amended, that a Land claim for Restitution of Land Rights has been lodged by Mr Msoli Jakob Simelane ID. NO. 470711 5556 082 on behalf of Simelane family, KRP NO. 6451 and the late Mr Jabulane Zephania Dhludhlu ID NO 470711556082 on behalf of Dhludhlu family KRP NO. 6507 on the property mentioned here under situated in Mkhondo Local Municipality, Gert Sibande District in Mpumalanga Province

CURRENT PARTICULARS OF THE PROPERTY  
STAFFORD 399 IT

Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements
The remaining extent of Portion 8	Republic of South Africa	<ul style="list-style-type: none"> <li>• T18433/1977</li> <li>• T38420/2003</li> </ul>	154.7764 ha (the claim is only affecting 0.3981 ha for Simelane family and 3.5633 ha for Dhludlu family)	None	None	None

The Regional Land Claims Commissioner, Mpumalanga Province will investigate all the claims in terms of the provisions of the Act, any party interested in the above mentioned property is hereby invited to submit within **30 [thirty days]** from the date of publication of this notice to submit any comments, or further information to:

Commissioner for Restitution of Land Rights

Private Bag X 11330

Nelspruit

1200

or 30 Samora Machel Drive

Restitution House

Nelspruit

1200

TEL NO: 013 756 6000

FAX NO: 013 752 3859

CHECKED BY: RENALL  
RESTITUTION ADVISOR  
DATE:

  
MR. L.H. MAPHUTHA  
REGIONAL LAND CLAIMS COMMISSIONER  
MPUMALANGA PROVINCE

DATE: 2019/03/11

## DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM

NO. 489

29 MARCH 2019

## GENERAL NOTICE IN TERMS OF RESTITUTION OF LAND RIGHTS ACT, 1994 [ACT 22 OF 1994] AS AMENDED

Notice is hereby given in terms of Section 11(1) of the Restitution of the Land Rights Act 1994 [Act 22 of 1994] as amended, that a Land claim for Restitution of Land Rights has been lodged by the late Mr Mbalekelwa Philemon Duba ID. NO. 400923 5214 0840 on behalf of Duba family on the property mentioned here under situated in Mkhondo Local Municipality, Gert Sibande District in Mpumalanga Province (KRP: 6492)

CURRENT PARTICULARS OF THE PROPERTY  
STAFFORD 399 IT

Description of property	Owner of Property	Title Deed Number	Extent of Property	Bonds	Bond Holder	Other Endorsements
The remaining extent of Portion 11	Republic of South Africa	<ul style="list-style-type: none"> <li>• T23332/1975</li> <li>• T38420/2003</li> </ul>	538.9094 ha (the claim is only affecting 196.2145 ha)	None	None	<ul style="list-style-type: none"> <li>• VA2363/2003 in favour of KaNgwane Government</li> </ul>

The Regional Land Claims Commissioner, Mpumalanga Province will investigate all the claims in terms of the provisions of the Act, any party interested in the above mentioned property is hereby invited to submit within **30 [thirty days]** from the date of publication of this notice to submit any comments, or further information to:

**Commissioner for Restitution of Land Rights**

Private Bag X 11330

Nelspruit

1200

or 30 Samora Machel Drive

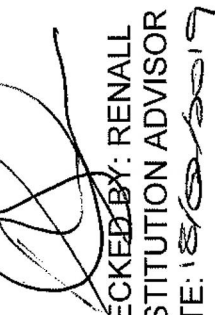
Restitution House

Nelspruit

1200

TEL NO: 013 756 6000

FAX NO: 013 752 3859

  
CHECKED BY: RENALL  
RESTITUTION ADVISOR  
DATE: 18/03/19

  
MR. L.H. MAPHUTHA  
REGIONAL LAND CLAIMS COMMISSIONER  
MPUMALANGA PROVINCE  
DATE: 20/03/19



## DEPARTMENT OF SOCIAL DEVELOPMENT

NO. 490

29 MARCH 2019

## INCREASE IN RESPECT OF SOCIAL GRANTS

The Minister of Social Development has, in terms of the Social Assistance Act, 2004 (Act No. 13 of 2004) as amended, with the concurrence of the Minister of Finance, announced the increase in social grants.

The new maximum monthly amounts are as follows:

Type of Grant	Current Amount	New Amount 1 April 2019	New Amount 1 October 2019
Older Persons (60 – 74 yrs)	R 1 700	R 1 780	
Older Persons (75+ yrs)	R 1 700 + R20	R 1 780 + R20	
War Veterans'	R 1 700 + R20	R 1 780 + R20	
Disability	R 1 700	R 1 780	
Care Dependency	R 1 700	R 1 780	
Foster Child	R 960	R 1000	
Child Support	R 410	R420	R 430
Grant-in-Aid	R 410	R420	R430

The increases will be effected on 1 April and 1 October 2019 respectively.

  
MINISTER OF SOCIAL DEVELOPMENT

DATE:

22/02/2019

## DEPARTMENT OF TRADE AND INDUSTRY

NO. 491

29 MARCH 2019

**NON-PROLIFERATION OF WEAPONS OF MASS DESTRUCTION ACT, 1993  
(ACT NO. 87 OF 1993)****DECLARATION OF CERTAIN MISSILE TECHNOLOGY AND RELATED ITEMS AS  
CONTROLLED GOODS AND CONTROL MEASURES APPLICABLE TO SUCH  
GOODS****Definitions**

1. In this Notice a word or expression to which a meaning has been assigned in the Act bears the meaning so assigned and, unless the context otherwise indicates—

**"component parts"** means an integral part of plants, systems, assemblies or equipment without which the plant, system, assemblies or equipment will not perform their intended function or achieve the characteristics or performance level that make the plants, systems, assemblies or equipment controlled goods;

**"fabrication"** includes production, prototyping, installation, commissioning, and contractual after-sales servicing;

**"manufacture"** includes research, development and fabrication;

**"Missile Technology Control Regime"** is an informal political understanding amongst states that seek to limit the proliferation of missiles, missile technology and weapons of mass destruction by controlling exports of goods and technologies that could make a contribution to delivery systems (other than manned aircraft) for such weapons;

**"production facilities"** means production equipment and specially designed software that are, or can be utilised in facilities for development or for one or more phases of production;

**"services"** includes freight forwarding, storing and stockpiling (if not part of the manufacture and transfer processes), transporting, maintaining (repairing, overhauling, refurbishing), trading, consulting, disposing, and technical assistance;

**"the Act"** means the Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993) and

**"transfer"** means the change of ownership or custodianship, or a change in the location, of goods, services and technology related to controlled goods, whether or not such goods, services and technology cross an international border.

### **Declaration**

2. I, Dr Rob Davies, Minister of Trade and Industry, under section 13(1) of the Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993), and on the recommendation of the South African Council for the Non-Proliferation of Weapons of Mass Destruction, hereinafter referred to as the Council, hereby declare—

- (a) the goods listed in the Missile Technology Control Regime MTCR/TEM/2018/Annex dated 22 March 2018, hereinafter referred to as the MTCR Annex, as published on the Council website at <http://www.thedti.gov.za/nonproliferation>, to be controlled goods;
- (b) that the implementation of the controls contained herein, on the controlled goods, would also be subject to consideration of the applicable guidelines as determined by the Missile Technology Control Regime;
- (c) the services with regard to goods indicated in paragraph 2(d) of this Notice to be controlled goods; and
- (d) component parts to be controlled goods.

3. I hereby—

- (a) in terms of section 13(2)(a) of the Act, further prohibit the transfer of

Category I production facilities listed in the MTCR/TEM/2018/Annex dated 22 March 2018 (MTCR Annex);

- (b) in terms of section 13(2)(b) of the Act, determine that the import, export, re-export or transit (including transshipment) of the controlled goods listed in the MTCR Annex, shall take place under a permit issued by the Council;
- (c) in terms of section 13(2)(c) of the Act, determine that the Council may require a State-to-State assurance, or an end-user or end-use certificate for the export or re-export of the controlled goods listed in the MTCR Annex; and
- (d) in terms of section 13(2)(f) of the Act, determine that the manufacture of, and provision of services with respect to the controlled goods listed in paragraphs 1, 2, 19 and 20 of the MTCR Annex, shall take place under a permit issued by the Council.

#### **Controlled goods**

4. The list of missile-related controlled goods and related technology is contained in the MTCR Annex, as published on the Council website at <http://www.thedti.gov.za/nonproliferation>.

#### **Guidelines**

5. The implementation of controls contained herein on the controlled goods would also be subject to consideration of the Missile Technology Control Regime Guidelines published as Guidelines for Sensitive Missile-Relevant Transfers on the Council website at <http://www.thedti.gov.za/nonproliferation>, and any other obligation required in terms of section 6(1) of the Act.

**Application forms**

6. Application forms for permits contemplated in paragraph 3 of this Notice may be obtained from any of the following addresses:

(a) Postal address:

The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
Private Bag X84  
PRETORIA  
0001; or

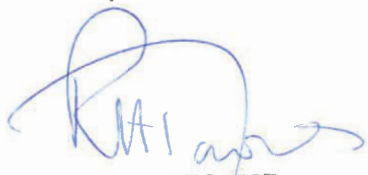
(b) Physical address:

The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
77 Meintjies Street  
Sunnyside  
PRETORIA; or

(c) Website of the South African Council for the Non-Proliferation of Weapons of Mass Destruction at <http://www.thedti.gov.za/nonproliferation>.

**Repeal**

7. Government Notice No. 22 of 3 February 2010, as amended by the Notice of Amendment, Government Notice No. 77 of 15 February 2015 is hereby repealed.



**DR ROB DAVIES, MP**  
**MINISTER OF TRADE AND INDUSTRY**

## DEPARTEMENT VAN HANDEL EN NYWERHEID

NO. 491

29 MAART 2019

WET OP NIE-PROLIFERASIE VAN WAPENS VAN GROOTSKAALSE  
VERNIETIGING, 1993 (WET NO. 87 VAN 1993)VERKLARING VAN SEKERE MISSIELTEGNOLOGIE EN TERSAAKLIKE ITEMS  
TOT BEHEERDE GOEDERE EN BEHEERMAATREËLS VAN TOEPASSING OP  
DAARDIE GOEDERE**Woordomskrywing**

1. In hierdie Kennisgewing het 'n woord of uitdrukking waarop 'n betekenis in die Wet toegeskrif die aldus toegeskrewe betekenis, tensy die samehang anders aandui, en beteken—

**"Beheerbedeling oor Missieltegnologie"** 'n informele politieke verstandhouding onder state wat die proliferasie van missiele, missieltegnologie en wapens van grootskaalse vernietiging wil beperk deur uitvoer van goedere en tegnologieë te beheer wat kan bydra tot die leweringstelsels (behalwe bemande lugvaartuie) vir daardie wapens;

**"dienste"** ook aanstuur van vrag, berging en opgegaarde voorraadopgaring (indien nie deel van die vervaardigings- en oordragprosesse nie), vervoer, onderhoud (herstel, opknapping, vernuwing), verhandeling, konsultasie, beskikking, en tegniese bystand;

**"die Wet"** die Wet op Nie-proliferasie van Wapens van Grootskaalse Vernietiging, 1993 (Wet No. 87 van 1993); en

**"fabrikasie"** ook produksie, prototipering, installering, ingebruikstelling en kontraktuele naverkoopdiens;

**"onderdele"** 'n integrerende deel van installasies, sisteme, monterings of toerusting waarsonder die installasie, sisteem, monterings of toerusting nie hul beoogde funksie sal verrig of die kenmerke of werkverrigtingsvlak sal bereik wat die installasies, sisteme, monterings of toerusting beheerde goedere maak nie;

**"oordrag"** die verandering van eienaarskap of kuratorskap, of 'n verandering in die ligging, van die goedere, dienste en tegnologie wat met beheerde goedere verband hou, hetsy daardie goedere, dienste en tegnologie 'n internasionale grens oorstek, al dan nie;

**"produksiefasiliteite"** produksietoerusting en spesiaal ontwerpte sagteware wat gebruik word of gebruik kan word in fasiliteite vir ontwikkeling of vir een of meer fases van produksie;

**"vervaardiging"** ook navorsing, ontwikkeling en fabrikasie.

### Verklaring

2. Ek, Dr Rob Davies, Minister van Handel en Nywerheid, kragtens artikel 13(1) van die Wet op Nie-proliferasie van Wapens van Grootse Vernietiging, 1993 (Wet No. 87 van 1993), en op aanbeveling van die Suid-Afrikaanse Raad vir die Nie-proliferasie van Wapens van Grootse Vernietiging, hierna die Raad genoem, verklaar hierby—

- (a) die goedere gelys in die *Missile Technology Control Regime MTCR/TEM/2018/Annex* gedateer 22 Maart 2018, hierna die MTCR-bylae genoem, soos gepubliseer op die Raad se webwerf by <http://www.thedti.gov.za/nonproliferation>, tot beheerde goedere;
- (b) dat die inwerkingstelling van die beheermaatreëls hierin vervat, op die beheerde goedere, ook aan die oorweging van van die toepaslike riglyne soos bepaal deur die Beheerbedeling oor Missieltegnologie, onderhewig sal wees;
- (c) die dienste ten opsigte van goedere in paragraaf 2(d) van hierdie Kennisgewing tot beheerde goedere; en
- (d) onderdele tot beheerde goedere.

3. Hierby—

- (a) verbied ek verder, ingevolge artikel 13(2)(a) van die Wet, die oordrag van Kategorie I-produksiefasiliteite gelys in die *MTCR/TEM/2018/Annex* gedateer 22 Maart 2018 (MTCR-bylae);
- (b) bepaal ek, ingevolge artikel 13(2)(b) van die Wet, dat die invoer, uitvoer, heruitvoer of vervoer (met inbegrip van oorlaai) van die beheerde goedere gelys in die MTCR-bylae, kragtens 'n permit deur die Raad uitgereik, moet geskied;
- (c) bepaal ek, ingevolge artikel 13(2)(c) van die Wet, dat die Raad 'n Staat-na-Staat versekering, of 'n eindgebruikersertifikaat of eindgebruiksertifikaat vir die uitvoer of heruitvoer van beheerde goedere gelys op die MTCR-bylae kan vereis; en
- (d) bepaal ek, ingevolge artikel 13(2)(f) van die Wet, dat die vervaardiging van, en voorsiening van dienste ten opsigte van die beheerde goedere in paragrawe 1, 2, 19 en 20 van die MTCR-bylae, kragtens 'n permit deur die Raad uitgereik, moet geskied.

**Beheerde goedere**

4. Die lys van missielverwante beheerde goedere en verwante tegnologie word vervat in die MTCR-anneks, soos gepubliseer op die Raad se webwerf by <http://www.thedti.gov.za/nonproliferation>.

**Riglyne**

5. Die instelling van beheermaatreëls hierin vervat op die beheerde goedere sal ook onderhewig wees aan oorweging van die *Missile Technology Control Regime Guidelines published as Guidelines for Sensitive Missile-Relevant Transfers* op die Raad se webwerf by <http://www.thedti.gov.za/nonproliferation>, en enige ander verpligting vereis ingevolge artikel 6(1) van die Wet.

**Aansoekvorms**

6. Aansoekvorms vir permitte in paragraaf 3 van hierdie Kennisgewing beoog,



kan by enige van die volgende adresse verkry word:

(a) Posadres:

Die Sekretariaat  
Suid-Afrikaanse Raad vir die Nie-proliferasie van Wapens van  
Grootskaalse Vernietiging  
Privaat Sak X84  
PRETORIA  
0001; of


(b) Liggingsadres:

Die Sekretariaat  
Suid-Afrikaanse Raad vir die Nie-proliferasie van Wapens van  
Grootskaalse Vernietiging  
Meintjiesstraat 77  
Sunnyside  
PRETORIA; of

(c) Webwerf van die Suid-Afrikaanse Raad vir die Nie-proliferasie van  
Wapens van Grootskaalse Vernietiging by  
<http://www.thedti.gov.za/nonproliferation>.

## Herroeping

7. Goewermentskennisgewing No. 22 van 3 Februarie 2010, soos gewysig deur die Kennisgewing van Wysiging, Goewermentskennisgewing No. 77 van 15 Februarie 2015 word hierby herroep.



**DR ROB DAVIES, LP**  
**MINISTER VAN HANDEL EN NYWERHEID**

## DEPARTMENT OF TRADE AND INDUSTRY

NO. 492

29 MARCH 2019

NON-PROLIFERATION OF WEAPONS OF MASS DESTRUCTION ACT, 1993  
(ACT NO. 87 OF 1993)

DECLARATION OF NUCLEAR-RELATED DUAL-USE EQUIPMENT, MATERIALS,  
SOFTWARE AND RELATED TECHNOLOGY AS CONTROLLED GOODS, AND  
CONTROL MEASURES APPLICABLE TO SUCH GOODS

**Definitions**

1. In this Notice any word or expression to which a meaning has been assigned in the Act bears the meaning so assigned and, unless the context otherwise indicates—

**"component parts"** means an integral part of plants, systems, assemblies or equipment without which the plant, system, assemblies or equipment will not perform their intended function or achieve the characteristics or performance level that make the plants, systems, assemblies or equipment controlled goods;

**"fabrication"** includes production, prototyping, installation, commissioning and contractual after-sales servicing;

**"manufacture"** includes research, development and fabrication;

**"Nuclear Suppliers Group"** is a group of nuclear supplier countries that seeks to contribute to the non-proliferation of nuclear weapons through the implementation of two sets of guidelines for nuclear exports and nuclear-related exports;

**"services"** includes freight forwarding, storing and stockpiling (if not part of the manufacture and transfer processes), transporting, maintaining (repairing, overhauling, refurbishing), trading, consulting, disposing, and technical assistance;

"the Act" means the Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993), and

"transfer" means the change of ownership or custodianship, or a change in the location of goods, services and technology related to controlled goods, whether or not such goods, services and technology cross an international border.

### **Declaration**

2. I, Dr Rob Davies, Minister of Trade and Industry, under section 13(1) of the Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993), and on the recommendation of the South African Council for the Non-Proliferation of Weapons of Mass Destruction, hereinafter referred to as the Council, hereby declare—

- (a) all the goods listed in the Annex: List of Nuclear-Related Dual-Use Equipment, Materials, Software, and Related Technology as contained in the International Atomic Energy Agency (IAEA) INFCIRC/254/Rev.10/Part 2 (Corrected) dated 5 February 2018, hereinafter referred to as the NSG Part 2 Guidelines, as published on the Council website at <http://www.thedti.gov.za/nonproliferation>, to be controlled goods;
- (b) that the implementation of controls contained herein, on the controlled goods, shall be subject to consideration of the Nuclear Suppliers Group Guidelines for Transfers of Nuclear-Related Dual-Use Equipment, Materials, Software, and related Technology, as contained in the NSG Part 2 Guidelines, as published on the Council website at <http://www.thedti.gov.za/nonproliferation>, and any other obligation required in terms of section 6(1) of the Act.
- (c) the services with regard to goods indicated in paragraph 2(c) of this notice to be controlled goods; and
- (d) the component parts contemplated in Item 4 of the General Note of the NSG Part 2 Guidelines to be controlled goods.

3. I hereby—

- (a) in terms of section 13(2)(b) of the Act, further determine that the import, export, re-export and transit (including transshipment) of the controlled goods, as listed in the NSG Part 2 Guidelines, may only take place under a permit issued by the Council;
- (b) in terms of section 13(2)(c) of the Act, determine that the Council may require a State-to-State assurance or an end-user or end-use certificate for the export or re-export of controlled goods as listed in the NSG Part 2 Guidelines; and
- (c) in terms of section 13(2)(f) of the Act, determine that the manufacture of, and provision of, services with regard to controlled goods listed in Items 2.E.1, 3.B.5, 3.E.1, 4.B.1, 4.B.2, and 4.E.1 of the NSG Part 2 Guidelines, shall take place under a permit issued by the Council.

#### **Controlled goods**

4. The list of nuclear-related dual-use equipment, materials, software and related technology items is contained in the INFCIRC/254/Rev.10/Part 2a (Corrected) dated 5 February 2018, as published on the Council website at <http://www.thedti.gov.za/nonproliferation>.

#### **Application forms**

5. Application forms for the permits contemplated in paragraph 3 of this Notice may be obtained from any of the following addresses:

- (a) Postal address:  
The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
Private Bag X84  
PRETORIA  
0001; or

- (b) Physical address:  
The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
77 Meintjies Street  
Sunnyside  
PRETORIA; or
- (c) The website of the South African Council for the Non-Proliferation of  
Weapons of Mass Destruction at  
<http://www.thedti.gov.za/nonproliferation>.

### Repeal

6. Government Notice No. 20 of 3 February 2010, as amended by the Notice of Amendment, Government Notice No. 76 of 15 February 2015 is hereby repealed.



**DR ROB DAVIES, MP**  
**MINISTER OF TRADE AND INDUSTRY**

**KITSISO YA PUSO****LEFAPHA LA KGWEBISANO LE MADIRELO****NON-PROLIFERATION OF WEAPONS OF MASS DESTRUCTION ACT, 1993  
(MOLAO 87 WA 1993)**

**TLHOMAMISO YA DIDIRISWAGABEDI TSE DI AMANANG LE NYUTLELIA, DIMATERIALE, DIKAROLOFEFO LE THEKENOLOJI E E MALEBA JAAKA DITHOTO TSE DI KA FA TLASE GA TAOLO, LE MEKGWATAOLO E E DIRISWANG MO DITHOTONG TSEO**

**Ditlhaloso**

1. Mo Kitsisong eno, lefoko kgotsa tlhagiso nngwe le nngwe e e neilweng bokao mo Molaong e na le bokao jo e bo neilweng e bile, ntle le fa bokao bo kaya ka mokgwa mongwe—

**"dikarolo tsa komponente"** di kaya karolo ya botlhokwa ya dipolante, disisitime, diagwa kgotsa didiriswa tseo ntle le tsona polante, sisitime, diagwa kgotsa didiriswa di ka se direng tiro e e ikaeletsweng kgotsa di ka se fitheleleng dipharologantsho kgotsa maemo a tiragatso a a dirang gore dipolante, disisitime, diagwa kgotsa didiriswa di nne dithoto tse di ka fa tlase ga taolo;

**"tlhagiso"** e akaretsa tlhagisokumo, go dira dikaotheo, kgokelelo, go dira ditlhatlhobo le dikonteraka tsa morago ga theko ya ditlhagiso;

**"popo"** e akaretsa tlhotlhomiso, tshimololo le tlhagiso;

**"Setlhopha sa Batlamedi ba Nyutlelia"** ke setlhopha sa dinaga tse di tlamelang ka nyutlelia tse di batlang go tshegetsatshegetsa thibelo ya kanamo ya dibetsa tsa nyutlelia ka go tsenya mo tirisong disete tse pedi tsa ditaello tsa dithomelontle tsa nyutlelia le dithomelontle tse di amanang le nyutlelia;

"ditirelo" di akaretsa keteletsopele ya morwalo, peo le poloko ya dithoto (fa e se karolo ya dikgato tsa popo le phuduso), thwalo, pabalelo (go baakanya, go ntšhwafatsa, go tlhabolola), kgwebisano, therisano, thotloetso le thuso ya setegeniki;

"Molao" o kaya *Non-Proliferation of Weapons of Mass Destruction Act, 1993* (Molao 87 wa 1993), le

"tshutiso" e kaya phetolelo ya bong kgotsa tsholo, kgotsa phetolo ya lefelo le dithoto, ditirelo le dithoto tse di tse di amanang le thekenoloji go dithoto tse di ka fa tlase ga taolo, go sa kgathalesege gore dithoto, ditirelo le thekenoloji eo di tshela melelwane ya boditšhabatšhaba kgotsa nnyaa.

### Tlhomamiso

2. Nna, Ngaka Rob Davies, Tona ya Kgwebisano le Madirelo, ka fa tlase ga karolo 13(1) ya *Non-Proliferation of Weapons of Mass Destruction Act, 1993* (Molao 87 wa 1993), le ka katlanegiso ya Khansele ya Aforikaborwa ya Thibelo ya Kanamo ya Dibetsa tsa Tshenyo ka Mogoso, e fano e bidiwang Khansele, ke tlhomamisa—

- (a) dithoto tsotlhe tse di tlhagisitsweng mo Mametlelelong: Lenane la Didiriswagabedi tse di Amanang le Nyutlelia, Dimateriale, Dikarolofefo le Thekenoloji e e Maleba jaaka di fitlhelwa mo *International Atomic Energy Agency (IAEA) INFCIRC/254/Rev.10/Part 2* (E e siamisitsweng) ya di 5 Tlhakole 2018, e fano e bidiwang *NSG Part 2 Guidelines*, jaaka e phasaladitswe mo webesaeteng ya Khansele mo <http://www.thedti.gov.za/nonproliferation>, go nna dithoto tse di ka fa tlase ga taolo;
- (b) gore go tsenngwa mo tirisong ga ditaolo tse di fitlhelwang fano, mo dithotong tse di ka fa tlase ga taolo, go tla dirwa go ya ka *Nuclear Suppliers Group Guidelines for Transfers of Nuclear-Related Dual-Use Equipment, Materials, Software, and related Technology*, jaaka di fitlhelwa mo *NSG Part 2 Guidelines*, jaaka e phasaladitswe mo webesaeteng ya Khansele mo <http://www.thedti.gov.za/nonproliferation>, le ditlamego dingwe le dingwe tse di tlhokegang go ya ka karolo 6(1) ya Molao.

- (c) ditirelo mabapi le dithoto tse di tlhagisitsweng mo temaneng 2(c) ya kitsiso eno go nna dithoto tse di ka fa tlase ga taolo; le
  - (d) dikarolo tsa komponente tse di kailweng mo Ntlheng 4 ya Ntlhakakaretso ya *NSG Part 2 Guidelines* go nna dithoto tse di ka fa tlase ga taolo.
3. Ke—
- (a) go ya ka karolo 13(2)(b) ya Molao, tlhomamisa gape gore thomeloteng, thomelontle, thomelogape le phetiso (go akaretsa le thomelo kwa lefelogareng) ya dithoto tse di ka fa tlase ga taolo, jaaka di tlhagisitswe mo *NSG Part 2 Guidelines*, e ka dirwa ka fa tlase ga tumelelo e e rebotsweng ke Khansele;
  - (b) go ya ka karolo 13(2)(c) ya Molao, tlhomamisa gore Khansele e ka lopa netefatso ya go tswa kwa Pusong go ya kwa Pusong kgotsa kwa modirising kgotsa setifikeiti sa tiriso mabapi le thomelontle kgotsa thomelogape ya dithoto tse di ka fa tlase ga taolo jaaka di tlhagisitswe mo *NSG Part 2 Guidelines*; le
  - (c) go ya ka karolo 13(2)(f) ya Molao, tlhomamisa gore popo ya, le tlamele ya, ditirelo mabapi le dithoto tse di ka fa tlase ga taolo tse di tlhagisitsweng mo Dintlheng 2.E.1, 3.B.5, 3.E.1, 4.B.1, 4.B.2, le 4.E.1 tsa *NSG Part 2 Guidelines*, e tla diragala ka fa tlase ga tumelelo e e rebotsweng ke Khansele.

#### **Dithoto tse di ka fa tlase ga taolo**

4. Lenane la dintlha tsa didirswagabedi tse di amanang le nyutlelia, dimateriale, dikarolofefo le thekenoloji e e maleba le fitlhelwa mo *INFCIRC/254/Rev.10/Part 2a* (Ee siamisitsweng) ya di 5 Tlhakole 2018, jaaka e phasaladitswe mo webesaeteng ya Khansele mo <http://www.thedti.gov.za/nonproliferation>.



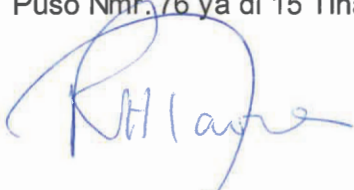
**Diforomo tsa kopo**

5. Diforomo tsa kopo tsa ditumelelo tse di kailweng mo temaneng 3 ya Kitsiso eno di ka fitlhelwa mo nngweng ya diaterese tse di latelang:

- (a) Aterese ya poso:  
The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
Private Bag X84  
PRETORIA  
0001; kgotsa
- (b) Aterese ya ofisi:  
The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
77 Meintjies Street  
Sunnyside  
PRETORIA; kgotsa
- (c) Webesaete ya Khansele ya Aforikaborwa ya Thibelo ya Kanamo ya  
Dibetsa tsa Tshenyo ka Mogoso  
[http://www.thedti.gov.za/nonproliferation.](http://www.thedti.gov.za/nonproliferation)

**Phimolo**

6. Kitsiso ya Puso Nmr. 20 ya di 3 Tlhakole 2010, jaaka e tlhabolotswe ka Kitsiso ya Puso Nmr. 76 ya di 15 Tlhakole 2015, e a phimolwa.



**NGAKA ROB DAVIES, MP**

**TONA YA KGWEBISANO LE MADIRELO**

## DEPARTMENT OF TRADE AND INDUSTRY

NO. 493

29 MARCH 2019

**NON-PROLIFERATION OF WEAPONS OF MASS DESTRUCTION ACT, 1993  
(ACT NO. 87 OF 1993)****DECLARATION OF CERTAIN NUCLEAR-RELATED DUAL-USE EQUIPMENT,  
MATERIALS AND SOFTWARE AND RELATED TECHNOLOGY AS  
CONTROLLED GOODS, AND CONTROL MEASURES APPLICABLE TO SUCH  
GOODS****Definitions**

1. In this Notice a word or expression to which a meaning has been assigned in the Act shall have the meaning so assigned and, unless the context otherwise indicates—

**"component parts"** means an integral part of plants, systems, assemblies or equipment without which the plant, system, assemblies or equipment will not perform their intended function or achieve the characteristics or performance level that make the plants, systems, assemblies or equipment controlled goods;

**"design research"** means an experimental or theoretical work that is undertaken principally to acquire new knowledge of the fundamental principles of phenomena and observable facts and that is not primarily directed towards a specific practical aim or objective;

**"development"** means—

- (a) design;
- (b) design research;
- (c) design analysis;
- (d) design concepts;
- (e) assembly and testing of prototypes;
- (f) pilot production schemes;
- (g) design data;

- (h) process of transforming design data into a product;
- (i) configuration design;
- (j) integration design; and
- (k) layouts;

**"fabrication"** includes production, prototyping, installation, commissioning and contractual after-sales servicing;

**"manufacture"** includes research, development and fabrication;

**"microprogram"** means a sequence of elementary instructions, maintained in a special storage, the execution of which is initiated by the introduction of its reference instruction into an instruction register;

**"Nuclear Suppliers Group"** means a group of nuclear supplier countries that seeks to contribute to the non-proliferation of nuclear weapons through the implementation of two sets of guidelines for nuclear exports and nuclear-related exports;

**"other elements"** means all elements other than hydrogen, uranium and plutonium;

**"program"** means a sequence of instructions to carry out a process in a form, or convertible into a form, executable by an electronic computer;

**"services"** includes freight forwarding, storing and stockpiling (if not part of the manufacture and transfer processes), transporting, maintaining (repairing, overhauling, refurbishing), trading, consulting, disposing, and technical assistance;

**"software"** means a collection of one or more programs or microprograms fixed in any tangible medium of expression;

**"the Act"** means the Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993).

**Declaration**

2. I, Dr Rob Davies, Minister of Trade and Industry, under section 13(1) of the Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993), and on the recommendation of the South African Council for the Non-Proliferation of Weapons of Mass Destruction, hereinafter referred to as the Council, hereby declare—

- (a) the goods listed in paragraph 4(1) to be controlled goods;
- (b) the services with regard to goods listed in paragraph 4(1) to be controlled goods; and
- (c) that the implementation of controls contained herein on the controlled goods shall be subject to the consideration of the Nuclear Suppliers Group Guidelines for Isotope Separation Activities Involving “Other Elements” as published on the Council website at <http://www.thedti.gov.za/nonproliferation>, and any other obligation required in terms of section 6(1) of the Act.

3. I hereby—

- (a) in terms of section 13(2)(b) of the Act, further determine that the import, export, re-export or transit (including transshipment) of the controlled goods listed in paragraph 4(1) shall take place only under a permit issued by the Council;
- (b) in terms of section 13(2)(c) of the Act, determine that the Council may require a State-to-State assurance or an end-user or end-use certificate for the export or re-export of such controlled goods; and
- (c) in terms of section 13(2)(f) of the Act, determine that the manufacture of, and provision of services with regard to, such controlled goods shall take place under a permit issued by the Council.

**Controlled goods**

4. (1) Nuclear-related dual-use equipment, materials and software, and related technology, which can be used in their entirety or in part for the separation of uranium isotopes, are as follows:

- (a) Equipment, assemblies and components of any plant or component parts of such plants, including the separating elements, which match all of the following conditions:
  - (i) Designed for the separation of other elements;
  - (ii) can be used directly or is modified to separate uranium isotopes; and
  - (iii) are made of materials resistant to uranium hexafluoride (UF<sub>6</sub>).
- (b) software that is designed for the use of equipment indicated in paragraph (a); and
- (c) technology directly applicable to the development, production or use of equipment, materials or software as indicated in paragraph (a) or (b).

(2) Plants, equipment and technology specially designed or prepared for the separation of uranium isotopes have, in many instances, a direct relationship to plants, equipment and technology designed or prepared for the isotope separation of other elements. Control over plants, equipment and technology for the isotope separation of other elements is, in terms of the Act, complementary to control over plants, equipment and technology specially designed or prepared for the processing, use or production of special nuclear material in terms of the Nuclear Energy Act, 1999 (Act No. 46 of 1999).

**Application forms**

5. Application forms for permits contemplated in paragraph 3 of this Notice may be obtained from any of the following addresses:

- (a) Postal address:  
The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
Private Bag X84  
PRETORIA  
0001; or
- (b) Physical address:  
The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
77 Meintjies Street  
Sunnyside  
PRETORIA ; or
- (c) The website of the South African Council for the Non-Proliferation of  
Weapons of Mass Destruction at  
<http://www.thedti.gov.za/nonproliferation>.

**Repeal**

6. Government Notice No. 21 of 3 February 2010 is hereby repealed.



**DR ROB DAVIES, MP**  
**MINISTER OF TRADE AND INDUSTRY**

DATE 5/3/19

**KITSISO YA PUSO**  
**LEFAPHA LA KGWEBISANO LE MADIRELO**

***NON-PROLIFERATION OF WEAPONS OF MASS DESTRUCTION ACT, 1993***  
**(MOLAO 87 WA 1993)**

**TLHOMAMISO YA DIDIRISWAGABEDI TSE DI RILENG TSE DI AMANANG LE NYUTLELIA, DIKAROLOFEFO LE THEKENOLOJI E E MALEBA JAAKA DITHOTO TSE DI KA FA TLASE GA TAOLO, LE MEKGWATAOLO E E DIRISWANG MO DITHOTONG TSEO**

**Ditlhaloso**

1. Mo Kitsisong eno, lefoko kgotsa tlhagiso nngwe le nngwe e e neilweng bokao mo Molaong e na le bokao jo e bo neilweng e bile, ntle le fa bokao bo kaya ka mokgwa mongwe—

**"dikarolo tsa komponente"** di kaya karolo ya botlhokwa ya dipolante, disisitime, diagwa kgotsa didiriswa tseo ntle le tsona polante, sisitime, diagwa kgotsa didiriswa di ka se direng tiro e e ikaeletsweng kgotsa di ka se fitlheleleng dipharologantsho kgotsa maemo a tiragatso a a dirang gore dipolante, disisitime, diagwa kgotsa didiriswa di nne dithoto tse di ka fa tlase ga taolo;

**"tlhotlhomisokakanyetso"** e kaya tiro ya tekelelo kgotsa ya tiori e e dirwang ka lebakalegolo la go fitlhelela kitso e ntšhwa ya meono e e botlhokwa ya ponagalo le dintlha tse di kgonang go lemogwa le gape e e sa lebiswang segolo kwa maitlhomong a a tsepameng a a kgonang go direga kgotsa kwa maikaelelong;

**"tshimololo"** e kaya—

- (a) kakanyetso;
- (b) tlhotlhomisokakanyetso;
- (c) tshekatsheko ya kakanyetso;
- (d) megopolo ya kakanyetso;
- (e) kago le tlhatlhobo ya dikaotheo;
- (f) dikema tsa tekeletso tsa tlhagiso;
- (g) tshedimosetso ya kakanyetso;
- (h) kgato ya go fetolela tshedimosetso ya kakanyetso go setlhagiswa;

- (i) kakanyetso ya sebopego;
- (j) Kakanyetso ya tetlanyo; le
- (k) mekgwathulaganyo;

**"tlhagiso"** e akaretsa tlhagisokumo, go dira dikaotheo, kgokelelo, go dira ditlhatlhobo le dikonteraka tsa morago ga theko ya ditlhagiso;

**"popo"** e akaretsa tlhotlhomiso, tshimololo le tlhagiso;

**"lenaneolennye"** le kaya tatelano ya ditaello tsa tshimologo, tse di babaletsweng mo polokelong e e kgethegileng, tiragatso ya tsona e simololwa ka go itsisiwe ga taelokaello ya tsona mo rejisetareng ya ditaello;

**"Setlhopha sa Batlamedi ba Nyutlelia"** ke setlhopha sa dinaga tse di tlamelang ka nyutlelia tse di batlang go tshegetsisa thibelo ya kanamo ya dibetsa tsa nyutlelia ka go tsenya mo tirisong disete tse pedi tsa ditaello tsa dithomelontle tsa nyutlelia le dithomelontle tse di amanang le nyutlelia;

**"dielemente tse dingwe"** di kaya dielemente tsothe ntle le haeterojene, yureniamo le pulutoniamo;

**"lenaneo"** le kaya tatelano ya ditaello tsa go diragatsa kgato ka mokgwa, kgotsa phetolelo mo mokgweng, o o diragatswang ke khomputara ya seileteroniki;

**"ditirelo"** di akaretsa keteletsopole ya morwalo, peo le poloko ya dithoto (fa e se karolo ya dikgato tsa popo le phuduso), thwalo, pabalelo (go baakanya, go ntšhwafatsa, go tlhabolola), kgwebisano, therisano, thotloetso le thuso ya setegeniki;

**"karolofefo"** e kaya kgobokanyo ya porokerama e le esi kgotsa go feta kgotsa mananeomannye a a rulagantsweng ka mokgwa mongwe le mongwe wa tlhagiso o o ka tshwaregang;

**"Molao"** o kaya *Non-Proliferation of Weapons of Mass Destruction Act, 1993* (Molao 87 wa 1993).



**Tlhomamiso**

2. Nna, Ngaka Rob Davies, Tona ya Kgwebisano le Madirelo, ka fa tlase ga karolo 13(1) ya *Non-Proliferation of Weapons of Mass Destruction Act, 1993* (Molao 87 wa 1993), le ka katlanegiso ya Khansele ya Aforikaborwa ya Thibelo ya Kanamo ya Dibetsa tsa Tshenyo ka Mogoso, e fano e bidiwang Khansele, ke tlhomamisa—

- (a) dithoto tse di tlhagisitsweng mo temaneng 4(1) go nna dithoto tse di ka fa tlase ga taolo;
- (b) ditirelo mabapi le dithoto tse di tlhagisitsweng mo temaneng 4(1) go nna dithoto tse di ka fa tlase ga taolo; le
- (c) gore go tsenngwa mo tirisong ga ditaolo tse di fitlhelwang fano, mo dithotong tse di ka fa tlase ga taolo, go tla dirwa go ya ka kelotlhoko ya *Nuclear Suppliers Group Guidelines for Isotope Separation Activities Involving "Other Elements"* jaaka e phasaladitswe mo webesaeteng ya Khansele mo <http://www.thedti.gov.za/nonproliferation>, le ditlamego dingwe le dingwe tse di tlokegang go ya ka karolo 6(1) ya Molao.

3. Ke—

- (a) go ya ka karolo 13(2)(b) ya Molao, tlhomamisa gape gore thomeloteng, thomelontle, thomelogape le phetiso (go akaretsa le thomelo kwa lefelogareng) ya dithoto tse di tlhagisitsweng mo temaneng 4(1) e tla dirwa fela ka fa tlase ga tumelelo e e rebotsweng ke Khansele;
- (b) go ya ka karolo 13(2)(c) ya Molao, tlhomamisa gore Khansele e ka lopa netefatso ya go tswa kwa Pusong go ya kwa Pusong kgotsa kwa modirising kgotsa setifikeiti sa tiriso mabapi le thomelontle kgotsa thomelogape ya dithoto tse di ka fa tlase ga taolo; le

- (c) go ya ka karolo 13(2)(f) tlhomamisa gore popo ya, le tlamelo ya, ditirelo mabapi le, dithoto tseo tse di ka fa tlase ga taolo, e tla diragala ka fa tlase ga tumelelo e e rebotsweng ke Khansele.

#### **Dithoto tse di ka fa tlase ga taolo**

4.(1) Didiriswagabedi tse di amanang le nyutlelia, dimateriale le dikarolofefo, le thekenoloji e e maleba, tse di ka diriswang ka gotlhe kgotsa ka dikarolwana mabapi le kgaoganyo ya diaesothoupo tsa yureniamo, di eme jaana:

- (a) Didiriswa, diagwa le dikomponente tsa polante nngwe le nngwe kgotsa dikarolo tsa komponente tsa dipolante tseo, go akaretsa le dielemente tse di kgaoganyang, tse di tsamaelanang le dipeelo tsotlhe tse di latelang:
- (i) Di bopetswe go kgaoganya dielemente tse dingwe;
- (ii) di ka diriswa ka tshamalalo kgotsa di fetotswe go le gonnye gore di kgaoganye diaesothoupo tsa yureniamo; e bile
- (iii) di dirilwe ka dimateriale tse di palelang hekesafoloraete ya yureniamo (uranium hexafluoride) (UF<sub>6</sub>).
- (b) karolofefo e e bopetsweng go dirisetswa didiriswa tse di tlhagisitsweng mo temaneng (a); le
- (c) thekenoloji e e diriswang ka tshamalalo mo tshimololong, tlhagisong kgotsa tirisong ya didiriswa, dimateriale kgotsa karolofefo jaaka go kailwe mo temaneng (a) kgotsa (b).

(2) Dipolante, didiriswa le thekenoloji e e bopetsweng ka tsepamo kgotsa e e baakanyeditsweng kgaoganyo ya diaesothoupo tsa yureniamo e, ka makgetlo a le mantsi, na le kamano ka tshamalalo mo dipolanteng, didirisweng le thekenolojing e e bopetsweng kgotsa e e baakanyeditsweng kgaoganyo ya diaesothoupo tsa dielemente tse dingwe. Taolo ya dipolante, didiriswa le thekenoloji mabapi le kgaoganyo ya diaesothoupo tsa dielemente tse dingwe, go ya ka Molao, e tlaletsa mo godimo ga taolo ya dipolante, didiriswa le thekenoloji e e bopilweng ka tsepamo

kgotsa e e baakantsweng mabapi le go dirwa, tiriso kgotsa tlhagiso ya materiale wa nyutlelia o o kgethegileng go ya ka *Nuclear Energy Act, 1999* (Molao 46 wa 1999).

**Diforomo tsa kopo**

5. Diforomo tsa kopo tsa ditumelelo tse di kailweng mo temaneng 3 ya Kitsiso eno di ka fitlhelwa mo nngweng ya diaterese tse di latelang:

(a) Aterese ya poso:

The Secretariat

South African Council for the Non-Proliferation of Weapons of Mass  
Destruction

Private Bag X84

PRETORIA

0001; kgotsa

(b) Aterese ya ofisi:

The Secretariat

South African Council for the Non-Proliferation of Weapons of Mass  
Destruction

77 Meintjies Street

Sunnyside

PRETORIA

0001 ; kgotsa

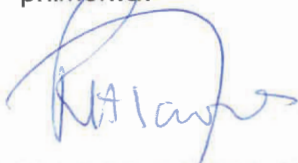
(c) Webesaete ya Khansela ya Aforikaborwa ya Thibelo ya Kanamo ya

Dibetsa tsa Tshenyo ka Mogoso

mo <http://www.thedti.gov.za/nonproliferation>.

**Phimolo**

6. Kitsiso ya Puso Nmr. 21 ya di 3 Tihakole 2010, jaaka e tlhabolotswe, e a phimolwa.



**NGAKA ROB DAVIES, MP**

**TONA YA KGWEBISANO LE MADIRELO**

**LETLHA**

## DEPARTMENT OF TRADE AND INDUSTRY

NO. 494

29 MARCH 2019

**NON-PROLIFERATION OF WEAPONS OF MASS DESTRUCTION ACT,  
1993 (ACT NO. 87 OF 1993)****DECLARATION OF CERTAIN BIOLOGICAL GOODS AND TECHNOLOGIES AS  
CONTROLLED GOODS AND CONTROL MEASURES APPLICABLE TO SUCH  
GOODS****Definitions**

1. In this Notice any word or expression to which a meaning has been assigned in the Act shall have the meaning so assigned and, unless the context otherwise indicates—

**"Biological and Toxin Weapons Convention"** means the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, added as a schedule to the Act;

**"biological weapons"** means microbial or other biological agents or toxins, regardless of the origin or method of production thereof, of types and in quantities that have no justification for prophylactic, protective or other peaceful purposes, and weapons, equipment or means of delivery designed to use such agents or toxins for hostile purposes or in armed conflict;

**"development"** means all phases before production, and includes conceptualisation, research, analysis, testing, configuration or pilot production schemes;

**"services"** includes freight forwarding, storing and stockpiling (if not part of the manufacture and transfer processes), transporting, maintaining (repairing, overhauling, refurbishing), trading, consulting, disposing, and technical assistance;

**"the Act"** means the Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993);

**"transfer"** means the change of ownership or custodianship, or change in the location, of controlled goods, whether or not they cross an international border.

### **Declaration**

2. I, Dr Rob Davies, Minister of Trade and Industry, under section 13(1) of the Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993), and on the recommendation of the South African Council for the Non-Proliferation of Weapons of Mass Destruction, (hereinafter referred to as the "Council"), hereby declare microbial or other biological agents, toxins and related equipment and technology that may be used in the manufacture of biological and toxin weapons as listed in Annexures A and B to this Notice, to be controlled goods.
  
3. I hereby—
  - (a) in terms of section 13(2)(a) and (e) of the Act and pursuant to South Africa's obligations under the Biological and Toxin Weapons Convention, further prohibit—
    - (i) the import, export, re-export, transit (including transshipment), possession, development, manufacture, production, acquisition in any manner, use, operation, stockpiling, maintenance, transport, disposal, sale, and retention of biological weapons;
    - (ii) any person to assist, encourage or to induce any State, group of States, international organisations or non-State actors to manufacture or otherwise acquire biological weapons;
  - (b) in terms of section 13(2)(b) of the Act, determine that the export, re-export or transit (including transshipment) of controlled goods listed in the annexures to this Notice, shall take place under a permit issued by the Council. A permit is not required for quantities of 5 milligrams or less of saxitoxin, if the transfer is made for medical or diagnostic purposes, in which case a notification to that effect shall be made to the Council before the transfer.

- (c) in terms of section 13(2)(c) of the Act, determine that the Council may require a State-to-State assurance or an end-user or end-use certificate for the export or re-export of controlled goods listed in the annexures to this Notice; and
- (d) in terms of section 13(2)(d) of the Act, determine that all transport of controlled goods within the Republic of South Africa be declared to the Council within 21 calendar days of such transportation.

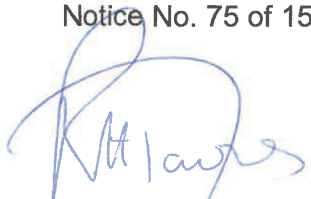
#### **Application forms**

4. Application forms for permits contemplated in paragraph 3 of this Notice can be obtained from any of the following addresses:

- (a) Postal address:  
The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
Private Bag X84  
PRETORIA  
0001; or
- (b) Physical address:  
The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
77 Meintjies Street  
Sunnyside  
PRETORIA or
- (c) The website of the South African Council for the Non-Proliferation of  
Weapons of Mass Destruction at  
<http://www.thedti.gov.za/nonproliferation>.

**Repeal**

5. Government Notice No. 19 of 3 February 2010 as amended by Government Notice No. 75 of 15 February 2015 is hereby repealed.

**DR ROB DAVIES, MP****MINISTER OF TRADE AND INDUSTRY****DATE** 5/3/19

**ANNEXURE A****I. HUMAN PATHOGENS, ZOOSES AND TOXINS, AS FOLLOWS:**

a. Viruses, whether natural, synthetic, enhanced or modified, either in the form of isolated live cultures or as material, including living material which has been deliberately inoculated or contaminated with such cultures, as follows:

- Chikungunya virus;
- Eastern equine encephalitis virus;
- Western equine encephalitis virus;
- Venezuelan equine encephalitis virus;
- Oropouche virus;
- Rocio virus;
- Dengue fever virus;
- Yellow fever virus;
- Japanese encephalitis virus;
- Tick-borne encephalitis complex viruses, including Russian Spring-Summer encephalitis, Kyasanur Forest, Louping ill, Omsk haemorrhagic fever and Powassan;
- St Louis encephalitis virus;
- Murray Valley encephalitis virus;
- Rift Valley fever virus;



- Crimean-Congo haemorrhagic fever virus;
  - Hantaviruses, including Hantaan, Seoul, Dobrava, Puumala and Sin Nombre;
  - Arenaviruses, associated with haemorrhagic fevers including Lassa fever, Junin, Machupo, Lymphocytic choriomeningitis, Sabia, Flexal, Dandenong, Lujo and Guanarito;
  - Variola virus;
  - Monkey pox virus;
  - Ebola virus;
  - Marburg virus;
  - Hendra virus;
  - Nipah virus.
- b. Rickettsiae, whether natural, synthetic, enhanced or modified, either in the form of isolated live cultures or as material, including living material which has been deliberately inoculated or contaminated with such cultures, as follows:
- *Coxiella burnetii*;
  - *Bartonella quintana* (*Rochalimaea quintana*, *Rickettsia quintana*);
  - *Rickettsia prowazekii*;
  - *Rickettsia rickettsii*.

- c. Bacteria, whether natural, synthetic, enhanced or modified, either in the form of isolated live cultures or as material, including living material which has been deliberately inoculated or contaminated with such cultures, as follows:
- *Bacillus anthracis*;
  - *Brucella abortus*;
  - *Brucella melitensis*;
  - *Brucella suis*;
  - *Chlamydia psittaci*;
  - *Clostridium botulinum*;
  - *Clostridium perfringens*, epsilon toxin producing types;
  - *Clostridium tetani*;
  - Enterohaemorrhagic *Escherichia coli*, serotype 0157 and other verotoxin producing serotypes;
  - *Francisella tularensis*;
  - *Legionella pneumophila*;
  - *Burkholderia mallei* (*Pseudomonas mallei*);
  - *Burkholderia pseudomallei* (*Pseudomonas pseudomallei*);
  - *Salmonella typhi*;
  - *Shigella dysenteriae*;
  - *Vibrio cholerae*;

- 
- *Yersinia pestis*;
  - *Yersinia pseudotuberculosis*.
- d. Toxins, as follows, and subunits of toxins thereof:
- Abrin;
  - Botulinum toxins;
  - Cholera toxin;
  - *Clostridium perfringens* toxins;
  - Conotoxin;
  - Modeccin;
  - Ricin;
  - Saxitoxin;
  - Shiga toxin;
  - *Staphylococcus aureus* toxins;
  - Tetanus toxin;
  - Tetrodotoxin;
  - Trichothecene mycotoxins, such as T-2 toxin, HT-2 toxin and Diacetoxyscirpenol toxin;
  - Verotoxin;
  - Microcystin (Cyanginosin);

- Aflatoxin;
- Volkensin;
- Viscum album Lectin 1 (Viscumin);

**Except:**

1. Any goods in the form of a vaccine or toxoid.
2. Botulinum toxin used for cosmetic / medicinal purposes

e. Fungi, as follows:

- *Coccidioides immitis*;
- *Coccidioides posadasii*.

**II. ANIMAL PATHOGENS, AS FOLLOWS:**

i. Viruses, whether natural, synthetic, enhanced or modified, either in the form of isolated live cultures or as material, including living material which has been deliberately inoculated or contaminated with such cultures, as follows:

- African swine fever virus;
- African horse sickness virus;
- Avian influenza virus, which can be:
  1. Uncharacterised; or
  2. Defined as having high pathogenicity, as follows:

- i. Type A viruses with an IVPI (intravenous pathogenicity index) in six-week-old chickens of greater than 1.2; or
  - ii. Type A viruses, H5 or H7 subtype, for which nucleotide sequencing has demonstrated multiple basic amino acids at the cleavage site of haemagglutinin;
- Bluetongue virus;
  - Foot-and-mouth disease virus;
  - Goat pox virus;
  - Porcine herpesvirus (Aujeszky's disease);
  - Swine fever virus (Hog cholera virus);
  - Lyssaviruses;
  - Newcastle disease virus;
  - 'Peste des petits ruminants' virus;
  - Porcine enterovirus type 9 (swine vesicular disease virus);
  - Rinderpest virus;
  - Sheep pox virus;
  - Teschen disease virus;
  - Vesicular stomatitis virus;
  - Lumpy skin disease.

- ii. *Mycoplasma mycoides* subspecies *mycoides* SC (small colony), whether natural, synthetic, enhanced or modified, either in the form of isolated live cultures or as material, including living material which has been deliberately inoculated or contaminated with such *Mycoplasma mycoides* (*mycoides* SC).
- iii. *Mycoplasma capricolum* subspecies *capripneumoniae* ("strain F38")

**Except:**

Any goods in the form of a vaccine or toxoid.

**III. PLANT PATHOGENS, AS FOLLOWS:**

- a. Bacteria, whether natural, synthetic, enhanced or modified, either in the form of isolated live cultures or as material which has been deliberately inoculated or contaminated with such cultures, as follows:
  - *Xanthomonas albilineans*;
  - *Xanthomonas campestris* pv. *citri*, including strains referred to as *Xanthomonas campestris* pv. *citri* types A, B, C, D, E or otherwise classified as *Xanthomonas citri*, *Xanthomonas campestris* pv. *aurantifolia*, *Xanthomonas campestris* pv. *citrumelo*, *Xanthomonas axonopodis* pv. *citri*, *Xanthomonas axonopodis* pv. *citrumelo*, *Xanthomonas axonopodis* pv. *aurantifolii*;
  - *Xanthomonas oryzae* pv. *oryzae*;
  - *Xylella fastidiosa*;
  - *Clavibacter michiganensis* subspecies *sepedonicus* (*Corynebacterium michiganensis* subspecies *sepedonicum* or *Corynebacterium sepedonicum*);

- *Ralstonia solanacearum* races 2 and 3 (*Pseudomonas solanacearum* races 2 and 3 or *Burholderia solanacearum* races 2 and 3).
- b. Fungi, whether natural, synthetic, enhanced or modified, either in the form of isolated live cultures or as material which has been deliberately inoculated or contaminated with such cultures, as follows:
- *Colletotrichum kahawae* (*Colletotrichum coffeanum* var. *virulans*);
  - *Cochliobolus miyabeanus* (*Helminthosporium oryzae*);
  - *Deuterophomonas tracheiphila* (syn. *Phoma tracheiphila*);
  - *Microcyclus ulei* (syn. *Dothidella ulei*);
  - *Monilia rorei* (syn. *Moniliophthora rorei*);
  - *Puccinia graminis* (syn. *Puccinia graminis* f. sp. *tritici*);
  - *Puccinia striiformis* (syn. *Puccinia glumarum*);
  - *Magnaporthe grisea* (*Pyricularia grisea*/*Pyricularia oryzae*).
- c. Viruses, whether natural, synthetic, enhanced or modified, either in the form of isolated live cultures or as material, including living material which has been deliberately inoculated or contaminated with such cultures, as follows:
- Banana bunchy top virus;
  - Potato Andean latent tymovirus;
  - Potato spindle tuber viroid.

**IV. GENETICALLY MODIFIED MICRO-ORGANISMS, AS FOLLOWS:**

- a. Genetically modified micro-organisms or genetic elements that contain nucleic acid sequences associated with pathogenicity of organisms specified in **(I.a)** to **(I.c)** or **(II)** or **(III)**.
  
- b. Genetically modified micro-organisms or genetic elements that contain nucleic acid sequences coding for any of the toxins specified in **(I.d)** or subunits of toxins thereof.



## ANNEXURE B

### I. EQUIPMENT CAPABLE OF USE IN HANDLING BIOLOGICAL MATERIALS, AS FOLLOWS:

- a. Complete biological containment facilities at Biosafety Level 3 or 4 containment level (BSL3/4).

#### **Technical Note:**

Biosafety Level 3 or 4 containment levels are as specified in Government Notice No. R. 178 of 02 March 2012 promulgated in terms of the National Health Act, 2003 (Act No. 61 of 2003)

- b. Major components that can be used to build a functional Biosafety Level 3 or 4 facility as follows:
  - i) Safe-change filter-housings [Bag-in-Bag-out (BIBO)] with in-situ filter test system and filtration efficiency greater than 99,99% at Most Penetrating Particle Size (MPPS) (Leakage less than 0.01%);
  - ii) Effluent Decontamination Systems (EDS) (thermal or chemical process).
- c. Fermenters, roller/cassette type incubators capable of cultivating biological agents as follows:
  - i) Fermenters controlling the release of aerosols and are capable of sterilisation/decontamination in-situ;
  - ii) Incubators that are fitted with disposable/sterilisable sealed culture flasks/bottles/cassettes that have aerosol control devices fitted.

- d. Autoclaves with internal effluent/condensate decontamination and/or sterilisation systems. The autoclaves must be the double door type (as per BSL3/4 laboratory use) or attachable to Biosafety Cabinet Class III isolators.

**Technical Note:**

In this control, 'sterilisation' denotes the elimination of all viable microbes from the equipment through the use of either physical (e.g. steam) or chemical agents. 'Decontamination' denotes the destruction of potential microbial infectivity in the equipment through the use of chemical agents with a germicidal effect.

- e. Freeze-drying equipment with condensate collection systems to safely collect potentially contaminated condensate or with disinfection systems (such as EDS) including vacuum line HEPA (High Efficiency Particulate Arrestor/Air) filtration.
- f. Spray Drying equipment that comply with all of the following:
- i) capacity to control/contain aerosols;
  - ii) all internal areas that are in contact with the biological agent are sterilisable / decontaminatable / disposable;
  - iii) used in conjunction with a containment system (BSL3/4 or Class III Cabinet).
- g. Milling equipment with all of the following:
- i) capacity to grind biological material to a powder;
  - ii) capacity to control aerosols; and
  - iii) sterilise/decontaminate internal areas/components.
- h. Biological safety cabinets or isolators, which allow manual operations to be performed within, whilst providing an environment equivalent to Class III biological protection.

The Biological safety cabinets or isolators shall comply with all of the following:

- i) exhaust air ducted to the outside atmosphere or treated (HEPA filtered and activated carbon adsorption) to safely recirculate within the working environment;
- ii) airflow velocity through the glove ports of at least 0.75m/s, when all gloves are detached;
- iii) smooth, rigid, flat and chemically resistant work floor;
- iv) fitted with pressure and/or airflow quantity controls, and/or
  - Interlocking door pass-through chamber, and/or
  - Disinfectant dunk tank, and/or
  - Fitted gaseous decontamination system (for example, formaldehyde gas generator).

**Technical Note:**

Isolators include flexible isolators, drying boxes, anaerobic chambers and glove boxes that can protect the operator from biological agents and toxins (direct contact and/or aerosols exposures) with condensate collection systems to safely collect potentially contaminated condensate or with disinfection systems (such as EDS) including vacuum line HEPA filtration.

- i. Chambers designed for aerosol challenge testing with micro-organisms, viruses or toxins and equipped with any of the following:
  - i) capacity of 1 m<sup>3</sup> or greater;
  - ii) operating under negative pressure and having controllable airflows;
  - iii) equipped with HEPA filtration on the chambers exhaust;
  - iv) fitted with a nebuliser capable for aerosolising controlled biological agents;
  - v) having at least one aerosol sample collector, capable of being controlled from outside of the chamber or live animal attachment/introduction capabilities.

**ISIHLOKOMISO SIKARHULUMENTE****ISEBE LORHWEBO NEMIZI-MVELISO****UMTHETHO I-NON-PROLIFERATION OF WEAPONS OF MASS  
DESTRUCTION ACT 87 KA-1993****UKUBHENGEZWA KWEMPAHLA ETHILE YOHLOBO LWEBHAYOLOJI  
NEZINTO EZITHILE ZOBUCHWEPHESHE NJENGEMPAHLA EMAYILAWULWE,  
NAMANYATHELO OKUZILAWULA ASEBENZA KULOO MPAHLA****Ukuchazwa kwamagama**

1. Kwesi Sihlokomiso naliphi na igama okanye ibinzana elinikwe intsingiselo kuMthetho ongunozala wesi Sihlokomiso liza kuba naloo ntsingiselo nakwesi Sihlokomiso, kuze kuthi, ngaphandle kokuba okanye okubhaliweyo kubonisa ngenye indlela—

**"iBiological and Toxin Weapons Convention"** kube siSivumelwano Sokwalelwa Kokuphuculwa, Nokuveliswa Nokufunjwa Kwezixhobo Zebhayoloji Neziyityhefu Nokutshatyalaliswa Kwazo, esongezwe njengesihlomelo kulo Mthetho;

**"izixhobo zebhayoloji"** ziityhefu zeemayikhrobhu okanye ezinye iityhefu zebhayoloji, kungakhathaliseki ukuba zivela phi okanye indlela eziveliswe ngayo, kungakhathaliseki iintlobo nobungakanani ezingathethelelekiyo, okanye ezinye iinjongo zokukhusela okanye zoxolo, kwakunye nezixhobo okanye iindlela zokuthutha eziyilelwe ukusebenzisa ezo tyhefu zizisebenzisa iinjongo zobutshaba okanye kungquzulwano ekuxhotyiweyo kulo;

**"inkqubela"** ngawo onke amanqanaba ngaphambi kokuveliswa kwento, kwaye eli gama liquka uphando, uhlolisiso, ukuvavanya, okanye iindlela zokuveliswa kweephayilothi;

**elithi "iinkonzo"** liquka ukuthunyelwa kwemithwalo ngezithuthi, ukugcinwa koovimba (ukuba akuyiyo inxalenye yokwenziwa kwempahla efektri nokuthunyelwa kwayo), ukuthutha, ukulondoloza (ukugciba, ukuhlaziya ubume bento), ukurhweba, ukubonisana, ukwahlakana nayo, noncedo lobuchwepheshe;

**elithi "Io Mthetho"** lithetha i*Non-Proliferation of Weapons of Mass Destruction Act* 87 ka-1993;

**"ukudlulisela"** kukwenziwa kotshintsho kubumnini okanye kumntu oyigcinileyo into, okanye utshintsho kwindawo, kwimpahla ephantsi kolawulo, kungakhathaliseki ukuba iwela umda wamanye amazwe kusini na;

### **Ndiyavakalisa**

2. Mna, Gqr Rob Davies, uMphathiswa Worhwebo Nemizimveliso, ngokugunyazwa sisiqendu 13(1) se*Non-Proliferation of Weapons of Mass Destruction* 87 ka-1993. Nangokwesindululo esenziwe seSouth African Council for the Non-Proliferation of Weapons of Mass Destruction (ukususela ngoku eliza kubizwa ngokubha li-"Bhunga"), ngokwenjenje ndivakalisa ukuba izixhobo zeemayikhrowubhu okanye ezinye izixhobo zebhayoloji, iityhefu nezinto eziyelele apho nobuchwepheshe obunokuthi busetyenziswe ekwenziweni kwezixhobo zebhayoloji nezetyhefu njengoko zidweliswe kwiSongezo A no-B kwesi Sihlokomiso, ndizivakalisa ziyimpahla emayilawulwe.
3. Ngokwenjenje—
  - (a) ngokwesiqendu 13(2)(a) no-(e) salo Mthetho, nangokukhumbula iimbophelelko onazo uMzantsi-Afrika ngokweSivumelwano Sezixhobo Zebhayoloji Neziyityhefu, ndiyakwalela kananjalo—
    - (i) uku-odwa kwezixhobo zebhayoloji kwamanye amazwe, ukuthunyelwa kwazo kwamanye amazwe, ukuphindwa kwazo zithunyelwe kwamanye amazwe, ukuhanjiswa kwazo (kuquka ukuhanjiswa kwazo ngenqanawa, ukuba umntu abe nazo kuye, aziphucule, azenze, azivelise, azizuze nokuba kungayiphi na indlela, azisebenzise, asebenze ngazo, azifumbe, azilondoloze, azithuthe, ahlukane nazo, azithengise, azigcine;
    - (ii) ukuba nawuphi na umntu ancedise, akhuthaze okanye athundeze nawuphi na urhulumente, iqela loorhulumente, imibutho yamazwe

ngamazwe okanye amaqumrhu angengokarhulumente, ukuba enze izixhobo zebhayoloji okanye azizue;

- (b) ngokwesiqendu 13(2)(b) salo Mthetho, ndigqiba kwelokuba ukuthunyelwa kumazwe angaphandle, ukuphindwa kwakhona kokuthunyelwa kumazwe angaphandle okanye ukuhanjiswa (kuquka nokuhanjiswa ngenqanawa) kwempahla emayilawulwe edweliswe kwizongezo ezikwesi Sihlokomiso, kuza kwenzeka ngokwegunya lesmvume ekhutshwe iBhunga. Akufuneki mvume xa iyi-5 milligrams okanye ingaphantsi koko isaxitoxin, ukuba ukuthunyelwa kwayo kwenziwa ngenjongo yonyango okanye ngenjongo yokufumanisa unobangela wesifo, ekuya kuthi xa kunjalo kwaziswe iBhunga ngaphambi kokuba impahla ihanjiswe.
- (c) ngokwesiqendu 13(2)(c) salo Mthetho, ndigqiba kwelokuba iBhunga lisengafuna isiqinisekiso esisuka komnye uRhulumente esiya komnye uRhulumente okanye esiya kumntu oza kuyisebenzisa okanye lifune isiqinisekiso sokusetyenziswa, isesokuthunyelwa kwelinye ilizwe okanye ukuphinda ukuthunyelwa kwelinye ilizwe kwempahla emayilawulwe edweliswe kwizongezo ezikwesi Sihlokomiso; kwaye
- (d) ngokwesiqendu 13(2) salo Mthetho, ndigqiba kwelokuba konke ukuthuthwa kwempahla emayilawulwe ngaphakathi kwemida yeRiphabliki yoMzantsi-Afrika makudandalaziswe kwiBhunga zingekapheli iintsuku ezingama-21 zekhalenda zithuthiwe.

#### **lifom zesicelo**

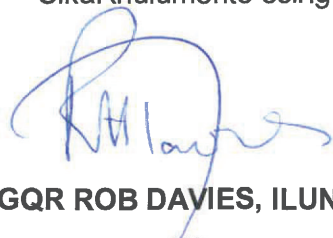
4. lifom zesicelo zokufumana iimvumeo ezixelwe kwisiqendu 3 sesi Sihlokomiso zinokufunyanwa nakweyiphi na yezi dilesi zilandelayo:

- (a) Idilesi yeposi:  
The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
Private Bag X84  
PRETORIA  
0001; okanye

- (b) Idilesi yesitrato:  
The Secretariat  
South African Council for the Non-Proliferation of Weapons of Mass  
Destruction  
77 Meintjies Street  
Sunnyside  
PRETORIA; okanye
- (c) kwiwebsayithi yeSouth African Council for the Non-Proliferation of  
Weapons of Mass Destruction ethi  
<http://www.thedti.gov.za/nonproliferation>.

#### **Ukutshitshiswa**

5. Apha kutshitshiswa iSihlokomiso SikaRhulumente esinguNombolo sikaFebruwari 3, 2010 esathi senziwa utshintsho siSihlokomiso SikaRhulumente esinguNombolo 75 sikaFebruwari 15, 2015.



**GQR ROB DAVIES, ILUNGU LEPALAMENTE  
UMPHATHISWA WORHWEBO NEMIZIMVELISO  
UMHLA**

## ISONGEZO A

### I. IINTSHOLONGWANE EZINOKUBANGELA IZIFO EBANTWINI, IZIFO EZINOKUSULELA ABANTU ZISUKA KWIZILWANYANA, IITYHEFU, NGALE NDLELA ILANELAYO:

a. Iintsholongwane, kungakhathaliseki ukuba zezendalo, zeziyintlanguanisela, zeziphuculiweyo okanye zezilungisiweyo, kungakhathaliseki ukuba zihamba ngazinye okanye ndawonye, kuquka ulutho oluphilayo olugonywe ngabom okanye lwangcoliswa ngezinto ezinjenge—

- intsholongwane yesifo seengcongconi;
- intsholongwane yasempuma esuleleka ebantwini nasemahasheni ngokulunywa yingcongconi esulelekileyo;
- intsholongwane yasentshona esuleleka ebantwini nasemahasheni ngokulunywa yingcongconi esulelekileyo;
- intsholongwane yaseVenezuela esuleleka ebantwinini nasemahasheni;
- intsholongwane yomkhuhlane ongena ngengcongconi;
- intsholongwane *i-rocio*;
- intsholongwane yomkhuhlane *idengue*;
- intsholongwane *ye-yellow fever*;
- intsholongwane *iJapanese encephalitis*;
- iintsholongwane ezintsonkothileyo *i-encephalitis* ezithwalwa ngamaqhizana, ekukho phakathi kwazo *iRussian Spring-Summer*



*encephalitis*, i-Kyasanur Forest, i-Louping ill, i-Omsk  
*haemorrhagic fever ne-Powassan*;

- intsholongwane i*St Louis encephalitis*;
  - intsholongwane i*Murray Valley encephalitis*;
  - intsholongwane yomkhuhlane iRift Valley;
  - intsholongwane yomkhuhlane i*Crimean-Congo haemorrhagic*;
  - i-Hantaviruses, kunye ne-Hantaan, iSeoul, iDobrava, iPuumala neSin Nombre;
  - iintsholongwane ii-Arena, ezinxulunyaniswa nemikhuhlane yokopha equka umkhuhlane i-Lassa, i-Junin, i-Machupo, i-Lymphocytic choriomeningitis, i-Sabia, i-Flexal, i-Dandenong, i-Lujo ne-Guanarito;
  - intsholongwane i-*variola*;
  - intsholongwane iMonkey pox;
  - intsholongwane ye-Ebola;
  - intsholongwane i-Marburg;
  - intsholongwane iHendra;
  - intsholongwane iNipah.
- b. Ii-Rickettsiae, noba zezendalo, zeziyintlanganisela, zeziphuculiweyo okanye zezilungisiweyo, kungakhathaliseki ukuba zihamba ngazinye okanye ndawonye, kuquka ulutho oluphilayo olugonywe ngabom okanye lwangcoliswa ngezinto ezinjenge--

- *Coxiella burnetii*;
- *Bartonella quintana* (*Rochalimaea quintana*, *Rickettsia quintana*);
- *Rickettsia prowazekii*;
- *Rickettsia rickettsii*.

c. Iintsholongwane, kungakhathaliseki ukuba zezendalo, zeziyintlanganisela, zeziphuculiweyo okanye zezilungisiweyo, kungakhathaliseki ukuba zihamba ngazinye okanye ndawonye, kuquka ulutho oluphilayo olugonywe ngabom okanye lwangcoliswa ngezinto ezinjenge—

- *Bacillus anthracis*;
- *Brucella abortus*;
- *Brucella melitensis*;
- *Brucella suis*;
- *Chlamydia psittaci*;
- *Clostridium botulinum*;
- *Clostridium perfringens*, iintlobo ezivelisa iityhefu eziyi-epsilon;
- *Clostridium tetani*;
- *Enterohaemorrhagic Escherichia coli*, uhlobo olungu-0157 nezinye iintlobo ezivelisa i-verotoxin;
- *Francisella tularensis*;

- 
- iLegionella pneumophila;
  - iBurkholderia mallei (Pseudomonas mallei);
  - iBurkholderia pseudomallei (Pseudomonas pseudomallei);
  - iSalmonella typhi;
  - iShigella dysenteriae;
  - iVibrio cholerae;
  - iYersinia pestis;
  - iYersinia pseudotuberculosis.
- d. iintsholongwane, ezinjengezi zilandelayo, namasuntswana azo:
- iAbrin;
  - iBotulinum toxins;
  - ityhefu iCholera;
  - iityhefu iClostridium perfringens;
  - iConotoxin;
  - iModeccin;
  - iRicin;
  - iSaxitoxin;
  - ityhefu iShiga;
  - iityhefu iStaphylococcus aureus;

- ityhefu iTetanus;
- iTetrodotoxin;
- ii-Trichothecene mycotoxins, njenge-T-2 toxin, i-HT-2 toxin ne-Diacetoxyscirpenol toxin;
- iVerotoxin;
- iMicrocystin (Cyanginosin);
- iAflatoxin;
- iVolkensin;
- iViscum album Lectin 1 (Viscumin);

**Ngaphandle:**

1. kwempahla ekwimo yomgonyo okanye yesibulala-tyhefu.
2. iBotulinum toxin esetyenziselwa nje ubuhle okanye ukunyanga

e. ukungunda, ngale ndlela ilandelayo:

- iCoccidioides immitis;
- iCoccidioides posadasii.

**II. IINTSHOLONGWANE EZINOKUBANGELA IZIFO  
KWIZILWANYANA, NGALE NDLELA ILANDELAYO:**

- i. lintsholongwane, kungakhathaliseki ukuba zezendalo, zeziyintlanganisela, zeziphuculiweyo okanye zezilungisiweyo, kungakhathaliseki ukuba zihamba ngazinye okanye ndawonye,

kuquka ulutho oluphilayo olugonywe ngabom okanye lwangcoliswa ngezinto ezinjenge—

- intsholongwane yomkhuhlane weehagu yaseAfrika;
- intsholongwane egulisa amahashe yaseAfrika;
- intsholongwane yemfuxane iAvian, enokuthi:
  1. ingabi nazimpawu; okanye
  2. ichazwe njengeneentsholongwane ezininzi kakhulu, ngale ndlela ilandelayo:
    - i. iintsholongwane eziluhlobo A ezine-IVPI (intravenous pathogenicity index) kumantshontsho eenkuku abudala buziiveki ezintandathu ngaphezu kwe-1.2; okanye
    - ii. iintsholongwane zohlobo A, okanye uhlotyana H5 okanye H7, ekuthe ukulandelelana kwe-nucleotide kwabonisa ii-amino acid ezisisiseko ezininzi kwindawo ye-haemagglutinin;
- iBluetongue virus;
- intsholongwane yesifo senyebetu neempuphu;
- iGoat pox virus;
- iPorcine herpesvirus (isifo iAujeszky);
- intsholongwane yomkhuhlane weehagu;
- iLyssaviruses;

- intsholongwane yesifo saseNewcastle;
  - intsholongwane i-'Peste des petits ruminants;
  - iPorcine enterovirus type 9 (swine vesicular disease virus);
  - intsholongwane iRinderpest;
  - intsholongwane iSheep pox;
  - intsholongwane yesifo iTeschen;
  - intsholongwane iVesicular stomatitis;
  - isifo solusu olunamagaqa.
- ii. i-*Mycoplasma mycoides* subspecies *mycoides* SC (small colony), kungakhathaliseki ukuba zezendalo, zeziyintlanganisela, zeziphuculiweyo okanye zezilungisiweyo, kungakhathaliseki ukuba zihamba ngazinye okanye ndawonye, kuquka ulutho oluphilayo oluginywe ngabom okanye lwangcoliswa ngezinto ezinjenge*Mycoplasma mycoides* (*mycoides* SC).
- iii. I-*Mycoplasma capricolum* subspecies *capripneumoniae* ("strain F38")

### **Ngaphandle:**

Nayiphina na impahla ekwimi yomgonyo okanye isibulala-tyhefu.

### **III. IINTSHOLONGWANE EZINOKUBANGELA IZIFO KWIZITYALO, NGALE NDLELA ILANDELAYO:**

iintsholongwane, kungakhathaliseki ukuba zezendalo, zeziyintlanganisela, zeziphuculiweyo okanye zezilungisiweyo, kungakhathaliseki ukuba zihamba

ngazinye okanye ndawonye, kuquka ulutho oluphilayo olungqongwe ngabom okanye lwangcoliswa ngezinto ezinjenge—

- iXanthomonas albilineans;
  - iXanthomonas campestris pv. citri, kuquka nezinto ekuthethwe ngazo njengeXanthomonas campestris pv. citri types A, B, C, D, E okanye ezidweliswe njengeXanthomonas citri, Xanthomonas campestris pv. aurantifolia, Xanthomonas campestris pv. citrumelo, Xanthomonas axonopodis pv. citri, Xanthomonas axonopodis pv. citrumelo, Xanthomonas axonopodis pv. aurantifolii;
  - iXanthomonas oryzae pv. oryzae;
  - iXylella fastidiosa;
  - iClavibacter michiganensis subspecies sepedonicus (Corynebacterium michiganensis subspecies sepedonicum okanye Corynebacterium sepedonicum);
  - iRalstonia solanacearum races 2 no-3 (Pseudomonas solanacearum races 2 no-3 okanye iBurholderia solanacearum races 2 no-3).
- b. ukungunda, kungakhathaliseki ukuba kokwendalo, kokuyintlanganisela, kokuphuculiweyo okanye kokulungisiweyo, kungakhathaliseki ukuba kuhamba ngakunye okanye ndawonye, kuquka ulutho oluphilayo olugonywe ngabom okanye lwangcoliswa ngezinto ezinjenge—
- iColletotrichum kahawae (Colletotrichum coffeanum var. virulans);
  - iCochliobolus miyabeanus (Helminthosporium oryzae);
  - iDeuterophomonas tracheiphila (syn. Phoma tracheiphila);
  - iMicrocyclus ulei (syn. Dothidella ulei);

- iMonilia rorei (syn. Moniliophthora rorei);
  - iPuccinia graminis (syn. Puccinia graminis f. sp. tritici);
  - iPuccinia striiformis (syn. Puccinia glumarum);
  - iMagnaporthe grisea (Pyricularia grisea/Pyricularia oryzae).
- c. lintsholongwane, kungakhathaliseki ukuba zezendalo, zeziyintlanganisela, zeziphuculiweyo okanye zezilungisiweyo, kungakhathaliseki ukuba zihamba ngazinye okanye ndawonye, kuquka ulutho oluphilayo olugonywe ngabom okanye lwangcoliswa ngezinto ezinjenge—
- ntsholongwane iBanana bunchy top;
  - iPotato Andean latent tymovirus;
  - iPotato spindle tuber viroid.

#### IV. IINTSHOLONGWANE ZOKUNGUNDA EZILUNGISIWEYO, NGALE NDLELA ILANDELAYO:

- a. lintsholongwane zokungunda ezilungisiweyo okanye iziqalelo eziqulethe ii-*nucleic acid sequences* ezinxulumene neentsholongwane ezibangela izifo ezixelwe ku-(I.a) ukuya ku-(I.c) okanye (II) okanye (III).
- b. lintsholongwane zokungunda ezilungisiweyo okanye iziqalelo eziqulethe ii-*nucleic acid sequences* zazo naziphi na iityhefu ezixelwe ku-(I.d) okanye amasuntswana eetyhefu zayo.



## ISONGEZO B

### I. IZIXHOBO EZINOKUSETYENZISWA EKUSINGATHENI IZIXHOBO ZEBHAYOLOJI, NGALE NDLELA ILANDELAYO:

- a. Izixhobo ezipheleleyo zokulawula izinto zebhayoloji kwiBiosafety Level Level 3 okanye 4 containment level (BSL3/4).

#### Qaphela:

Ii-Biosafety Level 3 okanye 4 containment levels zixelwe kwiSihlokomiso SikaRhulumente esinguNombolo R. 178 sikaMatshi 2, 2012 esapapashwa ngokwe*National Health Act* 61 ka-2003

- b. Iinxalenye eziphambili ezinokusetyenziselwa ukwakha i-Biosafety Level 3 okanye 4 esebenzayo ngale ndlela ilandelayo:
- i) Ii-filter-housing ekungenabungozi ukuzitshintsha [Bag-in-Bag-out (BIBO)] ezine- in-situ filter test system nezikwazi ukuhlulwa ezinkulu kune-99,99% eMost Penetrating Particle Size (MPPS) (ukuvuza kungaphantsi kwe-0.01%);
  - ii) I-Effluent Decontamination Systems (EDS) (thermal okanye chemical process).
- c. Izibilisi, uhlobo lwezifukamisi eziyi-roller/cassette ezikwazi ukukhulisa amachiza ebhayoloji ngale ndlela ilandelayo:
- i) Izibilisi ezilawula ukukhululwa kwezitshizi nezikwaziyo ukubulala iintsholongwane;
  - ii) Izifukamisi ezifakelwe iiflaski ezilahlwayo okanye ezinokubiliselwa iintsholongwane ezifakelwe iziciko.

- d. Iziphatho ezishushu. Iziphatho ezishushu mazibe ngcango-mbini (njengasekuetyenzisweni elabhoratri BSL3/4) okanye ixokomezelelwe kwiBiosafety Cabinet Class III isolators.

**Qaphela:**

Kolu lawulo, 'ukubulawa kweentsholongwane' kuthetha ukupheliswa kwazo zonke iimayikrobhu ezivela kwizixhobo ngokusetyenziswa kwezinto ezibonakalayo (ezinjengomphunga) okanye amachiza. 'Ukuphelisa ungcoliso' kuthetha ukutshatyalaliswa kweemayikrobhu ezinokuthi zibekho kwizixhobo ngokusetyenziswa kwamachiza abulala iintsholongwane.

- e. Izixhobo ezomisa ngokukhenkcisa nesineendlela zokuqokelela ngokuyondelelanisa umphunga ukuze kuqokeleleke ngendlela engenabungozi okanye ngeendlela eziphelisa ukusuleleka (ezinjengeEDS), kuquka iHEPA (High Efficiency Particulate Arrestor/Air).
- f. Izixhobo zokomisa ngesitshizo esihlangabezana nako konke oku kulandelayo:
- i) ukukwazi ukulawula/ukuqulatha izitshizo;
  - ii) konke okungaphakathi okudibanayo nesixhobo sebhayoloji kunako ukuba kwenziwe kungabi nazintsholongwane / kususwe ukungcoliseka / kulahlwe;
  - iii) kusetyenziswe kunye nendlela yokukuqulatha ngaphakathi (BSL3/4 okanye Class III Cabinet).
- g. Izixhobo zokusila ezinako konke oku:
- i) ukukwazi ukulusila ulutho lwebhayoloji lube ngumgubo;
  - ii) ukukwazi ukuzilawula izitshizo;
  - iii) nokuziphelisa iintsholongwane iindawo zangaphakathi..
- h. Iikhabhinethi zebhayoloji zokhuseleko ezivumela ukuba ukusebenza ngezandla kwenzeke ngaphakathi, ngoxa kwangaxeshanye kusakhiwa imekobume elingana noClass III wokhuseleko lwebhayoloji.

likhabhinethi zebhayoloji zokhuseleko ziza kuhlangebezana nako konke oku kulandelayo:

- i) umoya we-ekzostiokhutshelwa ngaphandle okanye olungisiweyo (ohluzwe ngokweHEPA nokufunxwa kwekhabhoni) kufuneka ujikeleze ngendlela engenabungozi ngaphakathi kwindawo yokusebenzela;
- ii) ukutyhutyhumeza komoya ngee-glove ports eziyi-0.75m/s ubuncinane, xa zonke iigloves zahlukanisiwe;
- iii) umgangatho wokusebenzela otyibilikayo, omcaba nokwaziyo ukumelana namachiza ;
- iv) ofakelwe umoya otyhala ngamandla nezixhobo zokuwulawula,
  - igumbi elineengcango zokudlula,
  - itanki lechiza elibulala iintsholongwane, and/or
  - ubuxhakaxhaka obuxokonyezelelweyo begesi (umzekelo, *igas generator yeformaldehyde*).

### **Qaphela:**

li-ayisoleyitha ziquka ii-ayisoleyitha ezithe ngxi, iibhokisi ezomayo, amagumbi angenayo i-oksijini neebhokisi zeeglavu ezinokumkhusela osebenzayo kumachiza ebhayoloji neetyhefu (ngokudibana ngqo nangokubhenceka kwizitshizo) neendlela zokuyondelelanisa ukuqokelela ngendlela engenabungozi imixube enokuthi kanti ingcolisiwe (EDS) kuquka *i-vacuum line HEPA FILTRATION*.

- i. Amagumbi awenzelwe ukuvavanyelwa izitshizo aneemayikro-oganizm okanye iityhefu aze axhotyiswa ngenye yezi zintio zilandelayo:
  - i) ngento engange-1 m<sup>3</sup> okanye ngaphezulu;
  - ii) ukusebenza phantsi koxinxelelo olungeluhle nokuba nokutyhutyha komoya okulawulekayo;
  - iii) xhotyiswe ngeHEPA *filtration* kwi-ekzosti yegumbi;
  - iv) fakelwe inqawa yokutsal' umoya ekwaziyo ukujikwa ibe sisitshizo;
  - v) enesampulu enye ubuncinane ekwaziyo ukuba ilawulwe ngaphandle kwegumbi.

## DEPARTMENT OF TRADE AND INDUSTRY

NO. 495

29 MARCH 2019

**NON-PROLIFERATION OF WEAPONS OF MASS DESTRUCTION ACT, 1993  
(ACT NO. 87 OF 1993)****DECLARATION OF CERTAIN CHEMICAL GOODS AS CONTROLLED GOODS  
AND CONTROL MEASURES APPLICABLE TO SUCH GOODS****Definitions**

1. In this Notice any word or expression to which a meaning has been assigned in the Act or the Chemical Weapons Convention, as the case may be, shall have the meaning so assigned and, unless the context otherwise indicates—

**"antiplant agent"** means any chemical listed in Annexure F to this Notice, which can defoliate plants or which can destroy crops or plants or which can sterilise the soil to prevent plant growth;

**"Chemical Weapons Convention"** means the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction, as ratified by the Government of the Republic of South Africa on 14 September 1995 and published for general information as Government Notice No. 754 on 2 May 1997;

**"development"** means all phases before production, and includes conceptualisation, research, analysis, testing, configuration or pilot production schemes;

**"discrete organic chemical"** means any chemical belonging to a class of chemical compounds consisting of all compounds of carbon, except for its oxides, sulphides and metal carbides or carbonates, identifiable by chemical structure, by structural formula, if known, and by the Chemical Abstracts Service (CAS) registry number, if

assigned, and not contained in the chemicals listed in Annexures A, B or C to this Notice;

**“riot control agent”** means any toxic chemical, which is not among the toxic chemicals listed in Annexures A, B, C or D to this Notice, which can produce rapidly in humans sensory irritation or disabling physical effects, which disappear within a short time following the termination of exposure;

**"manufacture"**, in relation to a chemical, includes development and production;

**“precursor”** means any chemical reactant which takes part at any stage in the production by whatever method of a toxic chemical. This includes any key component of a binary or multicomponent chemical system;

**"PSF discrete organic chemical"** means any discrete organic chemical containing one or more of the elements phosphorus, sulphur or fluorine;

**“purposes not prohibited under the Chemical Weapons Convention”** means-

- (a) industrial, agricultural, research, medical, pharmaceutical or other peaceful purposes;
- (b) protective purposes, namely those purposes directly related to protection against toxic chemicals and to protection against chemical weapons;
- (c) military purposes not connected with the use of chemical weapons and not dependent on the use of the toxic properties of chemicals as a method of warfare; and
- (d) law enforcement including for domestic riot control purposes;

**"services"** includes freight forwarding, storing and stockpiling (if not part of the manufacture and transfer processes), transporting, maintaining (repairing, overhauling, refurbishing), trading, consulting, disposing, and technical assistance;

**“toxic chemical”** means any chemical which through its chemical action on life processes can cause death, temporary incapacitation or permanent harm to humans or animals. This includes all such chemicals, regardless of their origin or of their method of production, and regardless of whether they are produced in facilities, in munitions or elsewhere;

**"the Act"** means the Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993);

**"transfer"** means the change of ownership or custodianship or change in the location of controlled goods, whether or not they cross an international border; and

**"use"**, in relation to a chemical, means the depletion of reserves by adding a chemical to formulations, as a constituent in a mixture, in a scrubber of unwanted chemicals, as a starting material in a process, as a component of a reaction or as a catalyst.

### **Declaration**

2. I, Dr Rob Davies, Minister of Trade and Industry, under section 13(1) of the Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993), and on the recommendation of the South African Council for the Non-Proliferation of Weapons of Mass Destruction (hereinafter referred to as "the Council"), hereby declare the goods listed in paragraph 4 of, and in the Annexures to, this Notice to be controlled goods.
  
3. I hereby—
  - (a) in terms of section 13(2)(a) and (e) of the Act and pursuant to South Africa's obligations under the Chemical Weapons Convention, further prohibit—
    - (i) the development, production, acquisition, stockpiling or retention of chemical weapons or the transfer, whether direct or indirect, of chemical weapons to any person;
    - (ii) the use of chemical weapons;
    - (iii) engagement in any military preparations to use chemical weapons;
    - (iv) the assistance, encouragement or induction, in any way, of any person to engage in any activity prohibited under the Chemical Weapons Convention;

- (v) the use of riot control agents as a method of warfare; and
  - (vi) the export or re-export of the toxic chemicals or precursors listed in Annexures A and B, whether in substantially pure form or in a mixture with any other substance, to countries which are not States Parties to the Chemical Weapons Convention.
- (b) in terms of section 13(2)(b) of the Act, determine that the import, export, re-export or transit (including transshipment) of the controlled goods, as listed in Annexures A, B, C and E to this Notice, shall take place under a permit issued by the Council: A permit is not required for quantities of 5 milligrams or less of saxitoxin, if the transfer is made for medical or diagnostic purposes, in which case a notification to that effect shall be made to the Council before the transfer;
- (c) in terms of section 13(2)(b) of the Act, determine that the transit (including transshipment), export or re-export of the controlled goods, as listed in Annexures D and F to this Notice, shall take place under a permit issued by the Council;
- (d) in terms of section 13(2)(b) of the Act, determine that the internal (intranational) transfer of chemicals listed in Annexure A to this Notice, shall take place under a permit issued by the Council;
- (e) in terms of section 13(2)(c) of the Act, determine that the Council may require a State-to-State assurance or an end-user or end-use certificate for the export or re-export of the controlled goods listed in the Annexures to this Notice;
- (f) in terms of section 13(2)(c) of the Act, determine that the Council shall require an end-user or end-use certificate for the export or re-export of the controlled goods listed in Annexure C to this Notice, whether in substantially pure form or in a mixture with any other substance in a concentration of greater than or equal to 30 per cent by weight, to countries which are not States Parties to the Chemical Weapons Convention;

- (g) in terms of section 13(2)(c) of the Act, determine that the Council shall require an end-user or end-use certificate for the export or re-export of the controlled goods listed in Annexure E to this Notice, whether in substantially pure form or in a mixture with any other substance, except in products identified as consumer goods packaged for retail sale for personal use or packaged for individual use;
- (h) in terms of section 13(2)(f) of the Act, determine that the manufacture of, and provision of services with respect to, controlled goods listed in Annexure A to this Notice shall take place under a permit issued by the Council; and
- (i) in terms of section 13(3)(b) of the Act determine that the Council should, not less than 60 days before the transfer of controlled goods listed in Annexure A to or from another State Party, be notified of the transfer.

#### **Controlled goods**

4. The following goods are controlled goods at the control thresholds indicated in paragraph 5 of this Notice:

- (a) The toxic chemicals and precursors listed in Annexures A, B and C, which may be used for purposes that are not prohibited as indicated in paragraph 9 of Article II of the Chemical Weapons Convention: Provided that the types and quantities are consistent with such purposes, whether in substantially pure form or in a mixture. Whenever, in Annexures A and B, reference to groups of dialkylated chemicals is followed by a list of alkyl groups in parentheses, all chemicals possible by all possible combinations of alkyl groups listed in the parentheses are considered to be controlled goods, except those explicitly exempted in Annexure B;
- (b) the toxic chemicals listed in Annexure D, whether in substantially pure form or in a mixture;
- (c) the riot control agents listed in Annexure E, whether in substantially pure form or in a mixture, except—



- (i) goods containing capsaicin packaged for retail sale for personal use or packaged for individual use; and
  - (ii) goods containing riot control agents packaged for food production or medical purposes;
- (d) the antiplant agents listed in Annexure F, whether in substantially pure form or in a mixture;
- (e) any chemical facility that produces, acquires, consumes or stores any quantity of the toxic chemicals and precursors listed in Annexure A. As indicated in paragraph 8 of Part VI of the Verification Annex of the Chemical Weapons Convention, the production of the toxic chemicals and precursors listed in Annexure A shall only be carried out at a single small-scale facility. The toxic chemicals and precursors shall only be applied for research, medical, pharmaceutical or protective purposes, and the aggregate amount of such chemicals for such purposes at any given time should be less than or equal to one metric tonne;
- (f) any chemical facility that produced, processed or consumed during the previous calendar year or anticipates to produce, process or consume in the next calendar year 10 grams or more of the toxic chemical BZ listed in Annexure B, one kilogram or more of the toxic chemicals Amiton or PFIB listed in Annexure B or 10 kilograms or more of any precursor listed in Annexure B;
- (g) any chemical facility that produced during the previous calendar year or anticipates to produce in the next calendar year 100 kilograms or more of any toxic chemical listed in Annexure C;
- (h) any chemical facility that produced by chemical synthesis, an aggregate quantity of 100 metric tonnes or more of any number of discrete organic chemicals or their salts, or an aggregate quantity of 15 metric tonnes or more of any single PSF discrete organic chemical or its salts, during the previous calendar year. For the purposes of this paragraph, polymeric and oligomeric substances are not regarded as discrete organic

chemicals. For the purposes of this paragraph, chemical facilities that—

- (i) produce explosives or hydrocarbons exclusively, are exempted;
  - (ii) produce polymeric and oligomeric substances exclusively, are exempted;
  - (iii) produce any discrete organic chemicals or PSF discrete organic chemicals, as well as hydrocarbons, explosives or polymeric and oligomeric substances, are not exempted; and
  - (iv) process chemicals or blend or formulate chemicals into products such as insecticides, paints or detergents, where no chemical reactions take place, are exempted;
- (i) the technology required for the production of the controlled goods listed in Annexure A and the toxic chemicals listed in Annexure B; and
  - (j) the manufacturing of, and provision of services with respect to controlled goods listed in Annexure A.

### **Control thresholds**

5. (1) The control thresholds of controlled goods for the purposes of declarations shall be as follows:

- (a) All quantities of the toxic chemicals and precursors listed in Annexure A, whether in substantially pure form or in a mixture with any other substance;
- (b) an aggregate quantity per calendar year of—
  - (i) the toxic chemical BZ listed in Annexure B greater than or equal to 10 grams, whether in substantially pure form or in a mixture with any other substance in a concentration greater than or equal to one per cent by weight;

- (ii) the toxic chemicals Amiton and PFIB listed in Annexure B greater than or equal to one kilogram, whether in substantially pure form or in a mixture with any other substance in a concentration greater than or equal to one per cent by weight; or
  - (iii) the precursors listed in Annexure B greater than or equal to 10 kilograms, whether in substantially pure form or in a mixture with any other substance in a concentration greater than or equal to 30 per cent by weight;
- (c) an aggregate quantity per calendar year of the toxic chemicals and precursors listed in Annexure C greater than or equal to 100 kilograms, whether in substantially pure form or in a mixture with any other substance in a concentration greater than or equal to 30 per cent by weight;
- (d) an aggregate quantity per calendar year of all discrete organic chemicals or their salts produced within a chemical plant site greater than or equal to 100 metric tonnes in substantially pure form;
- (e) an aggregate quantity per calendar year of all PSF discrete organic chemicals or their salts produced within a chemical facility greater than or equal to 15 metric tonnes in substantially pure form;
- (f) an aggregate quantity per calendar year of the toxic chemicals listed in Annexure D greater than or equal to one metric tonne, whether in substantially pure form or in a mixture with any other substance in a concentration greater than or equal to 30 per cent by weight;
- (g) an aggregate quantity per calendar year of the riot control agents listed in Annexure E greater than or equal to 100 kilograms, whether in substantially pure form or in a mixture with any other substance, except in products identified as consumer goods packaged for retail sale for personal use or packaged for individual use; and

(h) any quantity per calendar year of the antiplant agents listed in Annexure F, whether in substantially pure form or in a mixture with any other substance.

(2) For the purposes of subparagraphs (1)(a), (b) and (c), all threshold quantities shall include quantities of controlled chemicals generated as by-products or as components of waste or effluent streams in a chemical production process.

(3) The control thresholds of controlled goods for the purposes of transfers shall be as follows:

(a) All quantities of the toxic chemicals and precursors listed in Annexure A, whether in substantially pure form or in a mixture with any other substance;

(b) All quantities of toxic chemicals and precursors listed in Annexure B.

Note:

(i) The toxic chemical BZ listed in Annexure B whether in substantially pure form or in a mixture with any other substance in a concentration greater than or equal to one per cent by weight;

(ii) The toxic chemicals Amiton and PFIB listed in Annexure B whether in substantially pure form or in a mixture with any other substance in a concentration greater than or equal to one per cent by weight;  
or

(iii) The precursors listed in Annexure B whether in substantially pure form or in a mixture with any other substance in a concentration greater than or equal to 30 per cent by weight;

(c) an aggregate quantity of the toxic chemicals and precursors listed in Annexure C greater than or equal to 25 kilograms, whether in substantially pure form or in a mixture with any other substance in a concentration greater than or equal to 30 per cent by weight;

- (d) an aggregate quantity of the toxic chemicals listed in Annexure D greater than or equal to 100 kilograms, whether in substantially pure form or in a mixture with any other substance in a concentration greater than or equal to 30 per cent by weight;
- (e) any quantity of the riot control agents listed in Annexure E, whether in substantially pure form or in a mixture with any other substance, except in products identified as consumer goods packaged for retail sale for personal use or packaged for individual use; and
- (f) any quantity of the antiplant agents listed in Annexure F, whether in substantially pure form or in a mixture with any other substance.

(4) Products containing chemicals listed in Annexure B may be exported to countries that are not States Parties to the Chemical Weapons Convention: Provided that the said products contain—

- (a) one per cent or less of the toxic chemicals listed in Annexure B; or
- (b) 10 per cent or less of the precursors listed in Annexure B; and

are identified as consumer goods packaged for retail sale for personal use or packaged for individual use.

(5) Products containing chemicals listed in Annexure C may be exported without a permit to countries that are not States Parties to the Chemical Weapons Convention: Provided that the said products contain less than 30 per cent of a chemical listed in Annexure C and are identified as consumer goods packaged for retail sale for personal use or packaged for individual use.

**Application forms**

6. Application forms for permits contemplated in paragraph 3 of this notice may be obtained from any of the following addresses:

(a) Postal address:

The Secretariat

South African Council for the Non-Proliferation of Weapons of Mass  
Destruction

Private Bag X84

PRETORIA

0001; or

(b) Physical address:

The Secretariat

South African Council for the Non-Proliferation of Weapons of Mass  
Destruction

77 Meintjies Street

Sunnyside

PRETORIA or

(c) The website of the South African Council for the Non-Proliferation of  
Weapons of Mass Destruction at <http://www.thedti.gov.za/nonproliferation>

**Repeal**

7. Government Notice No. 18 of 3 February 2010 as amended by Government  
Notice No. 74 of 18 February 2015 is hereby repealed.



DR ROB DAVIES, MP

MINISTER OF TRADE AND INDUSTRY

DATE

5/3/19

**ANNEXURE A****Schedule 1 of the Chemical Weapons Convention**(Chemical Abstracts Service  
Registry Number)**A. Toxic chemicals:**

- (1) O-Alkyl (equal to or less than C<sub>10</sub>, including cycloalkyl) alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) -phosphonofluoridates, such as

Sarin: O-Isopropyl methylphosphonofluoridate (107-44-8)

Soman: O-Pinacolyl methylphosphonofluoridate (96-64-0)

- (2) O-Alkyl (equal to or less than C<sub>10</sub>, including cycloalkyl) N,N-Dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphor-amidocyanidates, such as

Tabun: O-Ethyl N,N-dimethylphosphoramidocyanidate (77-81-6)

- (3) O-Alkyl (H or equal to or less than C<sub>10</sub>, including cycloalkyl) S-2-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl)-aminoethyl alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphonothiolates and corresponding alkylated or protonated salts, such as

VX: O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate (50782-69-9)

- (4) Sulphur mustards:
- |  |               |
|--|---------------|
| 2-Chloroethylchloromethylsulphide                  | (2625-76-5)   |
| Mustard gas: Bis (2-chloroethyl) sulphide          | (505-60-2)    |
| Bis (2-chloroethylthio) methane                    | (63869-13-6)  |
| Sesquimustard: 1, 2-Bis (2-chloroethylthio) ethane | (3563-36-8)   |
| 1,3-Bis (2-chloroethylthio) -n-propane             | (63905-10-2)  |
| 1,4-Bis (2-chloroethylthio) -n-butane              | (142868-93-7) |
| 1,5-Bis (2-chloroethylthio) -n-pentane             | (142868-94-8) |
| Bis (2-chloroethylthiomethyl) ether                | (63918-90-1)  |
| O-Mustard: Bis (2-chloroethylthioethyl) ether      | (63918-89-8)  |
- (5) Lewisites:
- |  |              |
|--|--------------|
| Lewisite 1: 2-Chlorovinylchloroarsine        | (541-25-3)   |
| Lewisite 2: Bis (2-chlorovinyl) chloroarsine | (40334-69-8) |
| Lewisite 3: Tris (2-chlorovinyl) arsine      | (40334-70-1) |
- (6) Nitrogen mustards:
- |                                      |            |
|--------------------------------------|------------|
| HN1: Bis (2-chloroethyl) ethylamine  | (538-07-8) |
| HN2: Bis (2-chloroethyl) methylamine | (51-75-2)  |
| HN3: Tris (2-chloroethyl) amine      | (555-77-1) |
- (7) Saxitoxin (35523-89-8)
- (8) Ricin (9009-86-3)

**B. Precursors:**

- (9) Alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphonyl-difluorides, such as
- |                                |            |
|--------------------------------|------------|
| DF: Methylphosphonyldifluoride | (676-99-3) |
| Ethylphosphonyl difluoride     | (753-98-0) |



- 
- (10) O-Alkyl (H or equal to or less than C<sub>10</sub>, including cycloalkyl) O-2-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) -aminoethyl alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphonites and corresponding alkylated or protonated salts, such as
- QL: O-Ethyl O-2-diisopropylaminoethyl Methylphosphonite (57856-11-8)
- (11) Chlorosarin:  
O-Isopropyl methylphosphono-chloridate (1445-76-7)
- (12) Chlorosoman:  
O-Pinacolyl methylphosphono-chloridate (7040-57-5)

**ANNEXURE B****Schedule 2 of the Chemical Weapons Convention**(Chemical Abstracts Service  
Registry Number)**A. Toxic chemicals:**

- (1) Amiton:  
O,O-Diethyl S-[2-(diethylamino) ethyl] phosphorothiolate  
and corresponding alkylated or protonated salts (78-53-5)
- (2) PFIB:  
1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene (382-21-8)
- (3) BZ:  
3-Quinuclidinyl benzilate (6581-06-2)

**B. Precursors:**

- (4) Chemicals, except for those listed in Schedule 1,  
containing a phosphorus atom to which is bonded  
one methyl, ethyl or propyl (normal or iso) group  
but not further carbon atoms, such as
- Methylphosphonyl dichloride (676-97-1)
- Dimethyl methylphosphonate (756-79-6)
- Diethyl ethylphosphonate (78-38-6)
- Ethylphosphinyl dichloride (1498-40-4)
- Ethylphosphonyl dichloride (1066-50-8)
- Methylphosphinyl dichloride (676-83-5)
- Ethylphosphinyl difluoride (430-78-4)
- Methylphosphinyl difluoride (753-59-3)
- Methylphosphonic acid (993-13-5)
- Methylphosphonothioic dichloride (676-98-2)

	Diethyl methylphosphonite	(15715-41-0)
	Dimethyl ethylphosphonate	(6163-75-3)
	<b>Exemption:</b>	
	Fonofos:	
	O-Ethyl S-phenyl ethylphosphonothiolothionate	(944-22-9)
(5)	N,N-Dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphoramidic dihalides	
(6)	Dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl N,N-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl)-phosphoramidates, such as	
	Diethyl N,N-dimethylphosphoramidate	(2404-03-7)
(7)	Arsenic trichloride	(7784-34-1)
(8)	2,2-Diphenyl-2-hydroxyacetic acid (Benzilic acid)	(76-93-7)
(9)	Quinuclidin-3-ol	(1619-34-7)
(10)	N,N-Dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) aminoethyl-2-chlorides and corresponding protonated salts, such as	
	N,N-Diisopropyl-(beta)-aminoethyl chloride	(96-79-7)
	N,N-Diisopropyl-2-aminoethyl chloride hydrochloride	(4261-68-1)
	N,N-Dimethylaminophosphoryl dichloride	(676-98-2)
(11)	N,N-Dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) aminoethane-2-ols and corresponding protonated salts, such as	
	N,N-Diisopropyl-(beta)-aminoethanol	(96-80-0)

**Exemptions:**

- |      |   |             |
|------|---|-------------|
|      | N,N-Dimethylaminoethanol  | (108-01-0)  |
|      | and corresponding protonated salts  |             |
|      | Protonated salts of N,N-Diethylaminoethanol   | (100-37-8)  |
| (12) | N,N-Dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) aminoethane-2-thiols and corresponding protonated salts, such as |             |
|      | N,N-Diisopropyl-(beta)-aminoethane thiol  | (5842-07-9) |
| (13) | Thiodiglycol:   |             |
|      | Bis (2-hydroxyethyl) sulphide   | (111-48-8)  |
| (14) | Pinacolyl alcohol:  |             |
|      | 3,3-Dimethylbutan-2-ol  | (464-07-3)  |

**ANNEXURE C****Schedule 3 of the Chemical Weapons Convention**

(Chemical Abstracts Service  
Registry Number)

**A. Toxic chemicals:**

- |     |                                     |            |
|-----|-------------------------------------|------------|
| (1) | Phosgene: Carbonyl dichloride       | (75-44-5)  |
| (2) | Cyanogen chloride                   | (506-77-4) |
| (3) | Hydrogen cyanide                    | (74-90-8)  |
| (4) | Chloropicrin: Trichloronitromethane | (76-06-2)  |

**B. Precursors:**

- |      |                          |              |
|------|--------------------------|--------------|
| (5)  | Phosphorus oxychloride   | (10025-87-3) |
| (6)  | Phosphorus trichloride   | (7719-12-2)  |
| (7)  | Phosphorus pentachloride | (10026-13-8) |
| (8)  | Trimethyl phosphite      | (121-45-9)   |
| (9)  | Triethyl phosphite       | (122-52-1)   |
| (10) | Dimethyl phosphite       | (868-85-9)   |
| (11) | Diethyl phosphite        | (762-04-9)   |
| (12) | Sulphur monochloride     | (10025-67-9) |
| (13) | Sulphur dichloride       | (10545-99-0) |

- |      |                      |             |
|------|----------------------|-------------|
| (14) | Thionyl chloride     | (7719-09-7) |
| (15) | Ethyldiethanolamine  | (139-87-7)  |
| (16) | Methyldiethanolamine | (105-59-9)  |
| (17) | Triethanolamine      | (102-71-6)  |

**ANNEXURE D**

(Chemical Abstracts Service  
Registry Number)

**Toxic chemicals:**

- |      |                              |             |
|------|------------------------------|-------------|
| (1)  | 3-Hydroxy-1-methylpiperidine | (3554-74-3) |
| (2)  | Potassium fluoride           | (7789-23-3) |
| (3)  | 2-Chloroethanol              | (107-07-3)  |
| (4)  | Dimethylamine                | (124-40-3)  |
| (5)  | Dimethylamine hydrochloride  | (506-59-2)  |
| (6)  | Hydrogen fluoride            | (7664-39-3) |
| (7)  | Methyl benzilate             | (76-89-1)   |
| (8)  | 3-Quinuclidone               | (3731-38-2) |
| (9)  | Pinacolone                   | (75-97-8)   |
| (10) | Potassium cyanide            | (151-50-8)  |
| (11) | Potassium bifluoride         | (7789-29-9) |
| (12) | Ammonium bifluoride          | (1341-49-7) |
| (13) | Sodium bifluoride            | (1333-83-1) |
| (14) | Sodium fluoride              | (7681-49-4) |
| (15) | Sodium cyanide               | (143-33-9)  |

(16)	Phosphorus pentasulphide	(1314-80-3)
(17)	Di-isopropylamine	(108-18-9)
(18)	Diethylaminoethanol	(100-37-8)
(19)	Sodium sulphide	(1313-82-2)
(20)	Triethanolamine hydrochloride	(637-39-8)
(21)	Triisopropyl phosphite	(116-17-6)
(22)	O,O-Diethyl phosphorothioate	(2465-65-8)
(23)	O,O-Diethyl phosphorodithioate	(298-06-6)
(24)	Sodium hexafluorosilicate	(16893-85-9)



**ANNEXURE E**

(Chemical Abstracts Service  
Registry Number)

**Riot Control Agents**

Riot control agents as follows:

- (1)  $\alpha$ -Bromobenzeneacetonitrile,  
(Bromobenzyl cyanide), (CA) (5798-79-8)
- (2) 2-Chloro-1-phenyl-ethanone, (Phenylacetyl chloride),  
( $\omega$ -chloroacetophenone), (CN) (532-27-4)
- (3) [(2-chlorophenyl)-methylene] propanedinitrile,  
(*o*-Chlorobenzylidenemalonitrile), (CS) (2698-41-1)
- (4) Dibenz (b,f)-1,4-oxazepine, (CR) (257-07-8)
- (5) Diphenylaminochloroarsine, (10-Chloro-5,10-dihydrophen-  
arsazine), (Phenarsazine chloride), (Adamsite), (DM) (578-94-9)
- (6) N-nonanylmorpholine, (MPA) (5299-64-9)
- (7) trans-8-Methyl-N-vanillyl-6-nonenamide, (Capsaicin), (Pepper  
Spray), [N-(4-hydroxy-3-methoxy benzyl)-8-methyl-non-trans-6-enamide],  
(404-86-4)
- (8) Ethyl bromoacetate, (EBA) (105-36-2)
- (9) Pelargonic acid vanillylamide (2444-46-4)
- (10) Phenyl chloride (108-90-7)
- (11) Mixture of OC and CS

- 
- |      |  |              |
|------|--|--------------|
| (12) | Oleoresin capsicum (OC)  | (8023-77-6)  |
| (13) | 8-Methyl-N-vanillynonamide<br>(dihydrocapsaicin)                       | (19408-84-5) |
| (14) | N-Vanillyl-9-methyldec-7-(E)-enamide<br>(homocapsaicin)                | (58493-48-4) |
| (15) | N-Vanillyl-9-methyldecanamide<br>(homodihydrocapsaicin)                | (20279-06-5) |
| (16) | N-Vanillyl-7-methyloctanamide<br>(nordihydrocapsaicin)                 | (28789-35-7) |
| (17) | 2'-Chloroacetophenone  | (2142-68-9)  |
| (18) | 3'-Chloroacetophenone  | (99-02-5)    |
| (19) | $\alpha$ -Chlorobenzylidenemalononitrile                               | (18270-61-6) |
| (20) | Cis-4-acetylamino-dicyclohexylmethane                                  | (37794-87-9) |
| (21) | N,N'-Bis (isopropyl) ethylenediimine (E,E 28227-41-0; Z,Z 185245-09-4) |              |
| (22) | N,N'-Bis (tert-butyl) ethylenediimine (30834-74-3; E,E 28227-42-1)     |              |

**ANNEXURE F**

(Chemical Abstracts Service  
Registry Number)

**Anti-plant agents:**

Anti-plant agents as follows:

- |     |   |             |
|-----|---|-------------|
| (1) | Butyl 2-chloro-4-fluorophenoxyacetate (LNF)     | (1692-85-9) |
| (2) | Mixtures of 2,4,5-T and 2,4-D where:            |             |
|     | 2,4,5-T: 2,4,5-Trichlorophenoxyacetic acid      | (93-76-5)   |
|     | 2,4-D: 2,4-Dichlorophenoxyacetic acid           | (94-75-7)   |
| (3) | Mixtures of Picloram where:                     |             |
|     | Picloram: 4-Amino-3,5,6-trichloropicolinic acid | (1918-02-1) |
| (4) | Dimethylarsinic acid (Cacodylic acid)           | (75-60-5)   |

**TSEBISO YA MMUSO****LEFAPHA LA KGWEBISANO LE INDASTERI****NON-PROLIFERATION OF WEAPONS OF MASS DESTRUCTION ACT, 1993  
(ACT NO. 87 OF 1993)****PHATLALATSO YA THEPA E ITSENG YA KHEMIKHALE E LE THEPA E TLASA  
TAOLO LE METJHA YA TAOLO E SEBETSANG THEPENG E JWALO****Ditlhaloso**

1. Tsebisong ena lentswe kapa polelo e nehetsweng moelelo ka hare ho Molao kapa Tumellano ya Dibetsa tsa Khemikhale e tla sebedisa moelelo oo e o nehetsweng, ntle le ha sengolwa se ka hlalosa ka mokgwa o mong—

**"antiplant agent"** e hlalosa khemikhale e nngwe le e nngwe e hlahositsweng ho Sehlopho F tsebisong ena e ka nnang ya etsa dimela dilahlehelwe ke makala kapa e ka nnang ya senya dijalo kapa dimela kapa e ka hlwekisang mobu ho thibela kgolo ya dimela;

**"Kopano ya Dibetsa tsa Khemikhale "** e hlalosa Kopano Thibelong ya Ntshetsopele, Tlhahiso, Poloko le Tshebediso ya Dibetsa tsa Khemikhale le Tshenyoo ya tsona jwalo ka ha Mmuso wa Rephaboliki ya Afrika Borwa o nehelane ka tumello ka la 14 Lwetse 1995 mme ya phatlalatswa bakeng la lesedi la kakaretso Tsebisong ya Mmuso ya 754 kala 2 Motsheanong 1997;

**"ntshetsopele"** e hlalosa mehato yohle pele ho bohlahisi mme e kenyeletsa mehopolo, dipatlisiso, hlophollo, diteko, tlhophiso kapa sekimi sa bohlahisi;

**"Khemikhale e arotsweng e sa sebetswang"** e hlalosa khemikhale e welang ka tlasa sehlopha sa dikhemikhale tsenang le carbon, ntle le oxide ya teng, sulphides le carbides kapa carbonates, tse bontshitsweng ke moralo wa khemikhale, moralo wa

fomula e bang e tsejwa, le ka ngodiso ya palo ya Tshebetso ya Kgulo ya Khemikhale e bang e nehetswe, mme e sa kenyeletswa dikhemikhaleng tse hlahositsweng Sehlomathisong A, B kapa C Tsebisong ena;

**“kemedi ya taolo ya morusu”** e hlalosa khemikhale e nngwe le e nngwe ya tjhefo e seng ka hara dikhemikhale tsa tjhefo tse hlahositsweng Sehlomathisong A, B, C kapa D Tsebisong ena, e ka hlahisang ho tshwenya ditho tsa kutlo ya motho kapa ho qhwadisa ditho tsa mmele mme difole ka mora nakonyana ka mora hore motho a tloswe pela tsona;

**“tlhahiso”**, mabapi le khemikhale, e akga ntshetsopele le bohlahisi;

**“ketsahalo ya pele”** e hlalosa ketsahalo ya khemikhale e etsahalang bohatong bo bong le bo bong ba bohlahisi ka mokgwa o mong le o mong wa khemikhale ya tjhefo. Hona ho akga karolo e bohlokwa ya mokgwa wa khemikhale e habedi kapa e karolo dingata;

**“khemikhale e thotseng ya PSF”** e hlalosa khemikhale e nngwe le e nngwe e thotseng ya tlhaho e nang le phosphorus, sulphur kapa fluorine;

**“maikemisetso a sa thibelwang ka tlasa Kopano ya Dibetsa tsa Khemikhale”** e hlalosa -

- (a) (a) Tlhahisong, temong, dipatlisiso, bongaka, meriana kapa maikemisetso a amanang a kgotso;
- (b) (b) Maikemisetso a kgotso, maikemisetso a amanang ka ho otloloha le tshireletso kgahlano le dikhemikhale tsa tjhefo le tshireletso kgahlano le dibetsa tsa khemikhale;
- (c) (c) Maikemisetso a sesole a sa kopaneng le tshebediso ya dibetsa tsa khemikhale mme e sa itshetleha ho tshebediso ya dikhemikhale tsa tjhefu e le mokgwa wa ntwā; le
- (d) (d) Ho kenngwa tshebetsong ha molao ho akga ka hare taolo ya morusu wa selehae;

**“ditshebeletso”** e akga ka hare ho tlisa ha thepa, ho behwa, (e bang e se karolo ya bohlahisi le tsamaiso ya phethiso) tsamaiso, tlhokomelo (tokiso botjha, tokiso ka kakaretso), kgwebisano, kopano le thuso ya setekgeniki;

**"khemikhake ya tjhefo"** e hlalosa khemikhale e nngwe le e nngwe eo e reng ha e nka bohato tsamaong ya bophelo e ka baka lefu, ho se be le bokgoni nakwana kapa ho lemala ho phethahetseng bathong kapa diphoofoolong. Ho na ho kenyeletsa dikhemikhale tsohle ho sa natse moo ditswang kapa moggwa oo di entsweng ka teng, le ho se natse hore di entswe ditshebeletsong, matleng a sesole kapa sebakeng se seng;

**"Molao"** e hlalosa Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993);

**"phethiso"** e hlalosa phetoho ya monga thepa kapa mohlokomedi kapa phetoho ya sebaka sa thepa e tlasa taolo ho sa natse ho tshela moedi wa matjhaba; le

**"tshebediso"**, mabapi le khemikhale, e hlalosa phokotso ka ho eketsa khemikhale ketsong e le karolo ya motswako, ka hara dikhemikhale tse sa hlokeheng, e le qaleho ya tsamaiso, e le karolo ya ketsahalo kapa e le tsamaiso.

### **Tsebisiso**

2. Nna, Dr Rob Davies, Letona la kgwebisano le Indasteri, ka tlasa karolo 13(1) ya Non-Proliferation of Weapons of Mass Destruction Act, 1993 (Act No. 87 of 1993), le ka kgothaletso ya Khansele ya Afrika Borwa ya Thibelo ya Keketseho ya Dibetsa tsa Tshenyho e Kgolo, ke tsebisa ha thepa e hlalositse serapeng 4 le dihlomathiso tse tsebisong ena e le thepa e tlasa taolo..
3. Ke—
  - (a) latela karolo 13(2)(e) ya Molao le ho ntshetsapele ditlamo tsa Afrika Borwa ka tlasa Tumellano ya Dibetsa tsa Baeloji le tsa Tjhefo, ke tswelapele ka ho thibela —
    - (i) ntshetsopele, bohlahisi, phumaneho, peho, tshwaro ya dibetsa tsa khemikhale kapa phethiso ka ho otlooha kapa ka ho kwekwetla dibetsa tsa khemikhale ho motho e mong le e mong;

- (ii) tshebediso ya dibetsa tsa khemikhale;
  - (iii) ho ka ba le seabo boitokisong ba sesole ho ka sebedisa dibetsa tsa khemikhale;
  - (iv) thuso, kgothaletso kapa thupello ka tsela e nngwe le e nngwe ya motho e mong le e mong ho ka ba le seabo ketsahalong e thibetsweng ka tlasa Kopano ya Dibetsa tsa Khemikhale;
  - (v) tshebediso ya disebediswa tsa thibelo ya merusu e le mokgwa wa twantsho; le
  - (vi) thomelo ntle kapa diya ntle tsa dikhemikhale tsa tjhefo kapa tse tlileng pele tse ngodisitsweng sehloathisong A le B, ka mokgwa oo di leng ka teng kapa dikopantswe le tse ding, ho ya dinaheng tse seng mmoho le Mmuso Kopanong ya Dibetsa tsa Khemikhale.
- (b) ho latela karolo 13(2)(b) ya Molao, ho hlwaya hore ditswantle, thomelo ntle, diya ntle tse ding kapa tsamaiso (ho kenyeleditse le mekgwa e fapaneng ya dipalangwang tsa tsamaiso) ya thepa e tlasa taolo, jwalo ka ha ho hlalositse Sehloathisong A, B le C le E tsebisong ena, e tlabana ka tlasa tumello e nehetsweng ke Khansela: Tumello ha e hloka hahle bakeng la bongata ba 5 milligrams kapa ka tlase ho saxitoxin, e bang phethiso e etswa bakeng la bongaka, tsebisiso e tshwanetse e etswe Khanseleng pele ho phethiso;
- (c) ho latela karolo 13(2)(b) ya Molao, ho hlwaya hore tsamaiso (ho kenyeleditse mekgwa e fapaneng ya dipalangwang tsa tsamaiso), thomelo ntle le diya ntle tse ding tsa thepa e tlasa taolo, jwalo ka ha ho tsebisitswe Sehloathisong D le F tsebisong ena, e tlabana ka tlasa tumello e nehetsweng ke Khansela;
- (d) ho latela karolo 13(2)(b) ya Molao, ho hlwaya hore phethiso ya ka hare (ka hara setjhaba se le seng) ya dikhemikhale tse hlalositsweng Sehloathisong A tsebisong ena, e tlabana ka tlasa tumello e nehetsweng ke Khansela;
- (e) ho latela karolo 13(2)(c) ya Molao, ho hlwaya hore Khansela e ka hloka tiiseletso ya Puso ka Puso kapa basebedisi kapa lengolo la bosebedisi

bakeng la thomelo ntle kapa diya ntle tse ding tsa thepa e taolong e hlahellang Sehlomathisong se Tsebisong ena;

- (f) ho latela karolo 13(2)(c) ya Molao, ho hlwaya hore Khansele e ka hloka mosebedisi kapa lengolo la bosedisi bakeng la thomelo ntle kapa diya ntle tse ding tsa thepa e tlasa taolo e hlalositsweng Sehlomathisong C tsebisong ena, ka moo e leng ka teng kapa e kopantswe le tse ding ka boholo bo fetang kapa bo lekanang le boima ba diperesente tse 30 mebusong e seng mmoho Kopanong ya Dibetsa tsa Khemikhale;
- (g) ho latela karolo 13(2)(c) ya Molao, ho hlwaya hore Khansele e ka hloka mosebedisi kapa lengolo la bosedisi la thepa e thepa e tlasa taolo e hlalositsweng Sehlomathisong E tsebisong ena, ka moo e le ng ka teng kapa e kopantswe le tse ding, ntle le dihlahisweng tse bontshitsweng e le tsa basebedisi mme diphuthetswe bakeng la thekiso ho ka sebediswa ke batho;
- (h) ho latela karolo 13(2)(f) ya Molao, ho hlwaya hore tlhahiso le nehelano ya ditshebeletso ho thepeng e tlasa taolo e hlalositsweng Sehlomathisong A tsebisong ena e tla ba ka tlasa tumello e nehetsweng ke Khansele; le
- (i) ho latela karolo 13(3)(b) ya Molao, ho hlwaya hore Khansele e tshwanetse ho tsebiswa ka phithiso matsatsing a seng ka tlase ho a 60 pele ho phithiso ya thepa e tlasa taolo e hlalositsweng Sehlomathisong A ho kapa ho tswa Mokgeng wa Mmuso.

#### **Thepa e tlasa taolo**

4. Thepa e latelang ke thepa e tlasa taolo jwalo ka ha ho hlalositswe serapaneng 5 tsebisong ena:

- (a) Dikhemikhale tsa tjhefo le tse tllileng pele tse ngodisitsweng Sehlomathisong A, B le C tse ka sebedisetswang maikemisetso a sa thibelwang jwalo ka ha ho hlalositswe serapaneng 9 sa Sengolwa II sa Kopano ya Dibetsa tsa Tjhefo: ha feela mefuta le bongata ditsamaelana le maikemisetso a jwalo, ka bojwalo kapa ka ho tswakuwa. ka hara Sehlomathiso A le B, Nako e nngwe le e nngwe ha tebiswa e le ho



dihlopha tsa dikhemikhale tsa dialkylated e salwa morao ke lenane la dihlopha tsa alkyl tse bontshitsweng ka hara masakana, dikhemikhale tsohle dikgonahala ka ho kopanngwa ho kgonehang wa dihlopha tsa alkyl tse hlahositsweng ka hara masakana dinkuwa e le thepa e tlasa taolo, ntle le tse tlohellisitsweng tse hlahellang Sehlomathisong B;

- (b) dikhemikhale tsa tjhefo tse hlahellang Sehlomathisong D, di le jwalo kapa dikopantswe;
- (c) ditho tsa tshitiso tse hlahositsweng Sehlomathisong E, di le jwalo kapa ditswakuwe, ntle le ha e ba —
  - (i) thepa e nang le capsaicin e phuthetswe bakeng la thekiso ho motho ka mong; le
  - (ii) thepa e nang le ditho tsa tshitiso diphutetswe bakeng la tlhahiso ya dijo kapa maikemisetsong a bongaka;
- (d) ditho tsa antiplant tse hlahositsweng Sehlomathisong F di le jwalo kapa di kopantswe;
- (e) tshebeletso e nngwe le e nngwe ya khemikhale e hlahisang, fumanang, sebedisa kapa behang palo e nngwe le e nngwe ya dikhemikhale tsa tjhefu le tse entsweng pele tse hlahisitsweng Sehlomathisong A. Jwalo ka ha ho hlahositswe serapaneng 8 sa Karolo VI ya Netefatso ya ho ba tlasa taolo ya Kopano ya Dibetsa tsa Tjhefo, bohlahisi ba dikhemikhale tsa tjhefo le tse tlieng pele tse hlahositsweng Sehlomathisong A e tlantshwa feela ka tshebetso e lenngwe e tlase. Dikhemikhale tsa tjhefo le tse tlieng pele di tla sebediswa feela bakeng la dipatlisiso, bongaka kapa bakeng la tshireletso, le kakaretso ya palo ya dikhemikhale tse jwalo bakeng la maikemisetse ao nako e nngwe le e nngwe e tshwanetse e be ka tlase kapa e lekane le tone ya metric e le nngwe;
- (f) tshebeletso e nngwe le e nngwe ya khemikhale e hlahisitsweng, ya sebetswa kapa sebediswa ngwahola kapa tebello ya tlhahiso, ho sebetswa kapa sebediswa isao digeramo tse 10 kapa boholo ba

dikhemikhale tsa tjhefo BZ e hlahositsweng Sehlomathisong B, kilogeramo e le nngwe kapa ho feta ya Amiton kapa PFIB e hlahositsweng Sehlomathisong B kapa dikilogeramo tse 10 kapa boholo ba tse tlleng pele tse hlahositsweng Sehlomathisong B;

- (g) tshebeletso e nngwe le e nngwe ya khemikhale e hlahisitsweng ngwahola kapa e lebelletsweng ho ka hlahiswa isao dikilogeramo tse 100 kapa boholo ba dikhemikhale tsa tjhefo tse hlahositsweng Sehlomathisong C;
- (h) tshebeletso e nngwe le e nngwe e hlahisitsweng ka kakaretso ya boholo ba ditone tse 100 tsa metric kapa keketseho ya palo e nngwe le e nngwe ya dikhemikhale tsa tlhaho kapa matswai a teng kapa kakaretso ya boholo ba ditone tse 15 tsa metric kapa bongata ba bonngwe ba PSF ya khemikhale ya tlhaho kapa letswai la teng ngwahola. Bakeng la serapana sena, polymeric le oligomeric ha di nkuwe e le dikhemikhale tsa tlhaho. Bakeng la maikemisetso a serapana sena, ditshebeletso tsa dikhemikhale ke ho—
  - (i) hlahisa diqhomane kapa hydrocarbons ka ho otlooha di tlohellisitswe;
  - (ii) hlahisa polymeric le oligomeric ka ho otlooha ditlohellisitswe;
  - (iii) hlahisa dikhemikhale tsa tlhaho kapa dikhemikhale tsa tlhaho tsa PSF, ha mmoho le hydrocarbons, diqhomane kapa polymeric le oligomeric, ditlohellisitswe; le
  - (iv) tshebetso ya dikhemikhale kapa ho dikopanya kapa ho ditheha ho ba tjhefo ya dikokonyana, pente kapa bohlwekisi, moo ketsahalo ya dikhemikhale e senang ho bateng, ditlohellisitswe;
- (i) thekenoloji e hloka halang bakeng la tlhahiso ya thepa e tlasa taolo e hlahositsweng Sehlomathisong A le dikhemikhale tsa tjhefo tse hlahositsweng Sehlomathisong B; le

- (j) ditshebeletso mabapi le thepa e tlasa taolo e hlahositsweng Sehlomathisong A.

### **Taolo ya qaleho**

5. (1) Taolo ya qaleho ya thepa e tlasa taolo bakeng la maikemisetso a phatlalatso a tlabane ka ho latela:

- (a) Palo yohle ya dikhemikhale tsa tjhefo le tse tllileng pele tse hlahositsweng Sehlomathisong A, di le jwalo kapa ditswakuwe ka ho hong;
- (b) kakaretso ya boholo ka selemo ya—
- (i) khemikhale ya tjhefo BZ e hlahositsweng Sehlomathisong B e kgoloho kapa e lekana le digeramo tse 10, di le jwalo kapa di tswakuwe ka ho hong ho ka hodimo ho kapa ho lekana le boima ba peresente e lenngwe;
- (ii) dikhemikhale tsa tjhefo Amiton le PFIB tse hlahositsweng Sehlomathisong B di kgolo ho kapa di lekana le kilogeramo e le nngwe, di le jwalo kapa di kopantswe le ho hong ho ka hodimo ho kapa ho lekana le boima ba peresente e le nngwe; kapa
- (iii) tse tllileng pele tse hlahositsweng Sehlomathisong B e le kgolo ho kapa e lekana le dikilogeramo tse 10, di le jwalo kapa di kopantswe le ho hong ho ka hodimo ho kapa ho lekana le boima ba diperesente tse 30;
- (c) kakaretso ya boholo ba dikhemikhale tsa tjhefo selemo ka seng le tse tllileng pele tse hlahositsweng Sehlomathisong C dile kgolo ho kapa dilekana le boima ba 100 kilogeramo, di le jwalo kapa dikopantswe le ho hong ho ka hodimo ho kapa ho lekana le boima ba diperesente tse 30;
- (d) kakaretso ya boholo ba dikhemikhale tsa tlhaho selemong kapa matswai a tsona a hlaisitsweng sebakeng sa dikhemikhale tse kgolo ho kapa di lekana le ditone tse 100 tsa metric;

- (e) kakaretso ya boholo ba dikhemikhale tsohle tsa tlhaho tsa PSF selemong kapa matswai a hlahisitsweng ka hare ho tshebeletso ya khemikhale e fetang kapa e lekanang le ditone tsa metric tse 15;
  - (f) kakaretso ya boholo ba dikhemikhale tsa tjhefo selemong tse hlahositsweng Sehlomathisong D di le kgolo ho kapa di lekana le tone ya metric e le nngwe e le jwalo kapa e kopantswe le hohong ho ka hodimo ho kapa ho lekana le boima ba diperesente tse 30;
  - (g) kakaretso ya boholo ba taolo ya ditho tsa tshitiso tse hlahositsweng Sehlomathiso E tse kgolo ho kapa di lekana le dikilogeramo tse 100, di le jwalo kapa di kopantswe ka hohong, ntle le dihlahiswa tse sebediswang tse phuthetsweng bakeng la thekiso le tshebediso ya motho ka mong; le
  - (h) boholo bo bong le bo bong selemong ba antiplant bo hlahositsweng Sehlomathisong F, bo le jwalo kapa bo kopantswe le ho hong.
- (2) Bakeng la seratswana (1)(a), (b) le (c), qaleho ya boholo e tla kenyeletsa dikhemikhale tse tlasa taolo tse entsweng e le tsa bobedi kapa e le karolo ya tshenyeho tsamaisong ya ketso ya dikhemikhale.
- (3) Qaleho ya taolo ya thepa e tlasa taolo bakeng la maikemisetso a phethiso e tlabana ka mokgwa o latelang:
- (a) Palo kaofela ya dikhemikhale tsa tjhefo le tse tllileng pele tse hlahositsweng Sehlomathisong A, dile jwalo kapa dikopantswe ka ho hong;
  - (b) Palo kaofela ya dikhemikhale tsa tjhefo le tse tllileng pele tse hlahositsweng Sehlomathisong B.

Elellwa:

- (i) Khemikhale ya tjhefo BZ e hlahositsweng Sehlomathisong B e le

- jwalo kapa e kopantswe le ho hong mme boholo bateng bo feta kapa bo lekana le boima ba peresente e le nngwe;
- (ii) Dikhemikhale tsa tjhefo Amiton le PFIB tse hlahositsweng Sehlomathisong B di le jwalo kapa dikopantswe ka ho hong ho ka hodimo kapa ka ho lekana le persente e le nngwe ka boima; kapa
  - (iii) Tse ngodisitsweng pele Sehlomathisong B di le jwalo kapa dikopantswe mme boholo bateng bofeta kapa bolekanana le boima ba diperesente tse 30;
- (c) kakaretso ya boholo ba dikhemikhale tsa tjhefo le tse tlileng pele tse hlahositsweng Sehlomathisong C e le kgolo ho kapa e lekana le dikilogeramo tse 25, di le jwalo kapa di kopantswe mme motswako wa tsona o feta kapa o lekana le boima ba diperesente tse 30;
- (d) kakaretso ya boholo ba dikhemikhale tse hlahositsweng Sehlomathisong D di le kgolo kapa di lekana le dikilogeramo tse 100, di le jwalo kapa dikopantswe mme motswako wa tsona o feta kapa o lekana le boima ba diperesente tse 30;
- (e) boholo bo bong le bo bong ba taolo ya tshitiso e hlahositsweng Sehlomathisong E e le jwalo kapa e kopantswe le ho hong, ntle ho dihlahiswa tse bontshitsweng e le tse sebediswang tse paketsweng bakeng la thekiso le bakeng la tshebediso ya mang kapa mang; le
- (f) bongata bo bong le bo bong ba antiplant bo hlahositsweng Sehlomathisong F bo le jwalo kapa bo kopantswe le ho hong.
- (4) thepa e nang le dikhemikhale e hlahositsweng Sehlomathisong B e ka romelwa dinaheng tse seng mmoho le Mmuso Kopanong ya Dibetsa tsa Khemikhale: ha feela thepa eo e na le —
- (a) peresente e le nngwe kapa ka tlase ya dikhemikhale tse hlahositsweng Sehlomathisong B; kapa

(b) diperesente tse 10 kapa ka tlase tsa tse tlleng pele tse hlahositsweng Sehlomathisong B; mme

dinkuwa e le thepa ya tshebediso e phuthetsweng bakeng la thekiso bakeng la tshebediso ya motho ka mong.

(5) Dihlahiswa tse nang le dikhemikhale tse hlahositsweng Sehlomathisong C di ka romelwa ntle ka ntle le tumello ya dinaha tseo di sa amaneng le Mmuso ho Kopano ya Dibetsa tsa Tjhefo: ntle le ha e ba dihlahiswa tseo dina le diperesente tse sa feteng 30 tsa khemikhale e hlahositsweng Sehlomathisong C mme dihlonngwe e le thepa e ka sebediswang ke motho ka mong.

**Diforomo tsa kopo**

6. Diforomo tsa kopo bakeng la tumello e hlahositsweng serapanng 3 tsebisong ena di ka fumaneha atereseng e nngwe le e nngwe e latelang:

(a) Aterese ya poso:

The Secretariat

South African Council for the Non-Proliferation of Weapons of Mass  
Destruction

Private Bag X84

PRETORIA

0001; kapa

(b) Aterese ya moaho:

The Secretariat

South African Council for the Non-Proliferation of Weapons of Mass  
Destruction

77 Meintjies Street

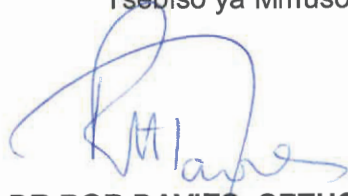
Sunnyside

PRETORIA; kapa

(c) Setsha sa inthanete sa Khansela ya Afrika Borwa ya Thibelo ya Keketseho ya Dibetsa tsa Tshenyo e Kgolo <http://www.thedti.gov.za/nonproliferation>

**Tlhakolo**

7. Tsebiso ya Mmuso ya 18 ya la 3 Hlakola 2010 jwalo ka ha e fetotswe ke Tsebiso ya Mmuso ya 74 ya la 18 Hlakola 2015 e hlakotswe.



**DR ROB DAVIES, SETHO SA PALAMENTE  
LETONA LA KGWEBISANO LE INDASTERI  
LETSATSI**

**SEHLOMATHISO A****Shejule 1 ya Kopano ya Dibetsa tsa Khemikhale**

(Palo ya Ngodiso ya  
Tshebeletso ya Kgulo  
Khemikhale)

**A. Dikhemikhale tsa tjhefu:**

- (1) O-Alkyl (e lekanang le kapa ka tlase ho C<sub>10</sub>, e akgang cycloalkyl) alkyl (Methyl, Ethyl, n-Propyl or Isopropyl) -phosphono-fluoridates, jwalo ka

Sarin: O-Isopropyl methylphosphono-fluoridate (107-44-8)

Soman: O-Pinacolyl methylphosphono-fluoridate (96-64-0)

- (2) O-Alkyl (e lekanang le kapa ka tlase ho C<sub>10</sub>, e akgang cycloalkyl) N,N-Dialkyl (Methyl, Ethyl, n-Propyl kapa Isopropyl) phosphor-amidocyanidates, jwalo ka

Tabun: O-Ethyl N,N-dimethylphosphor-amidocyanidate (77-81-6)

- (3) O-Alkyl (H kapa e lekanang le kapa ka tlase ho C<sub>10</sub>, e akgang cycloalkyl) S-2-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl)-aminoethyl alkyl (Methyl, Ethyl, n-Propyl kapa Isopropyl) phosphonothiolates le e tsamaisanang le alkylated kapa protonated salts, jwalo ka

VX: O-Ethyl S-2-diisopropylaminoethyl methyl phosphonothiolate (50782-69-9)



- (4) Sulphur mustards:
- |  |               |
|--|---------------|
| 2-Chloroethylchloromethylsulphide                  | (2625-76-5)   |
| Mustard gas: Bis (2-chloroethyl) sulphide          | (505-60-2)    |
| Bis (2-chloroethylthio) methane                    | (63869-13-6)  |
| Sesquimustard: 1, 2-Bis (2-chloroethylthio) ethane | (3563-36-8)   |
| 1,3-Bis (2-chloroethylthio) -n-propane             | (63905-10-2)  |
| 1,4-Bis (2-chloroethylthio) -n-butane              | (142868-93-7) |
| 1,5-Bis (2-chloroethylthio) -n-pentane             | (142868-94-8) |
| Bis (2-chloroethylthiomethyl) ether                | (63918-90-1)  |
| O-Mustard: Bis (2-chloroethylthioethyl) ether      | (63918-89-8)  |
- (5) Lewisites:
- |  |              |
|--|--------------|
| Lewisite 1: 2-Chlorovinylchloroarsine        | (541-25-3)   |
| Lewisite 2: Bis (2-chlorovinyl) chloroarsine | (40334-69-8) |
| Lewisite 3: Tris (2-chlorovinyl) arsine      | (40334-70-1) |
- (6) Nitrogen mustards:
- |                                      |            |
|--------------------------------------|------------|
| HN1: Bis (2-chloroethyl) ethylamine  | (538-07-8) |
| HN2: Bis (2-chloroethyl) methylamine | (51-75-2)  |
| HN3: Tris (2-chloroethyl) amine      | (555-77-1) |
- (7) Saxitoxin (35523-89-8)
- (8) Ricin (9009-86-3)

**B. Diketsahalo tsa pele:**

- (9) Alkyl (Methyl, Ethyl, n-Propyl kapa Isopropyl) phosphonyl-difluorides, jwalo ka
- |                                |            |
|--------------------------------|------------|
| DF: Methylphosphonyldifluoride | (676-99-3) |
| Ethylphosphonyl difluoride     | (753-98-0) |

- (10) O-Alkyl (H kapa e lekanang le kapa ka tlase ho C<sub>10</sub>, e akgang cycloalkyl) O-2-dialkyl (Methyl, Ethyl, n-Propyl kapa Isopropyl) -aminoethyl alkyl (Methyl, Ethyl, n-Propyl kapa Isopropyl) phosphonites le e tsamaisanang le alkylated kapa protonated salts, jwalo ka
- QL: O-Ethyl O-2-diisopropylaminoethyl Methylphosphonite (57856-11-8)
- (11) Chlorosarin:  
O-Isopropyl methylphosphono-chloridate (1445-76-7)
- (12) Chlorosoman:  
O-Pinacolyl methylphosphono-chloridate (7040-57-5)

**SEHLOMATHISO B****Shejule 2 ya Kopano ya Dibetsa tsa Khemikhale**

(Palo ya Ngodiso ya  
Tshebeletso ya Kgulo  
Khemikhale)

**A. Dikhemikhale tsa tjhefu:**

- (1) Amiton:  
O,O-Diethyl S-[2-(diethylamino) ethyl] phosphorothiolate  
le e tsamaisanang le alkylated or protonated salts (78-53-5)
- (2) PFIB:  
1,1,3,3,3-Pentafluoro-2-(trifluoromethyl)-1-propene (382-21-8)
- (3) BZ:  
3-Quinuclidinyl benzilate (6581-06-2)

**B. Diketsahalo tsa pele:**

- (4) Dikhemikhale, ntle le tse hlahositsweng Shejuleng 1, tse akgang phosphorus atom tse manamisitsweng ho sehlopha sa methyl, ethyl kapa propyl (normal or iso) empa e seng ho feta carbon atoms, jwalo ka

Methylphosphonyl dichloride	(676-97-1)
Dimethyl methylphosphonate	(756-79-6)
Diethyl ethylphosphonate	(78-38-6)
Ethylphosphinyl dichloride	(1498-40-4)
Ethylphosphonyl dichloride	(1066-50-8)
Methylphosphinyl dichloride	(676-83-5)
Ethylphosphinyl difluoride	(430-78-4)
Methylphosphinyl difluoride	(753-59-3)
Methylphosphonic acid	(993-13-5)

	Methylphosphonothioic dichloride	(676-98-2)
	Diethyl methylphosphonite	(15715-41-0)
	Dimethyl ethylphosphonate	(6163-75-3)
	<b>Tlohelliso:</b>	
	Fonofos:	
	O-Ethyl S-phenyl ethylphosphonothiolothionate	(944-22-9)
(5)	N,N-Dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) phosphoramidic dihalides	
(6)	Dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) N,N-dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl)-phosphoramidates, jwalo ka	
	Diethyl N,N-dimethylphosphoramidate	(2404-03-7)
(7)	Arsenic trichloride	(7784-34-1)
(8)	2,2-Diphenyl-2-hydroxyacetic acid (Benzilic acid)	(76-93-7)
(9)	Quinuclidin-3-ol	(1619-34-7)
(10)	N,N-Dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) aminoethyl-2-chlorides le e tsamaisanang le protonated salts, jwalo ka	
	N,N-Diisopropyl-(beta)-aminoethyl chloride	(96-79-7)
	N,N-Diisopropyl-2-aminoethyl chloride hydrochloride	(4261-68-1)
	N,N-Dimethylaminophosphoryl dichloride	(676-98-2)
(11)	N,N-Dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) aminoethane-2-ols le e tsamaisanang le protonated salts, jwalo ka	
	N,N-Diisopropyl-(beta)-aminoethanol	(96-80-0)

**Tlohelliso:**

- |      |   |             |
|------|---|-------------|
|      | N,N-Dimethylaminoethanol  | (108-01-0)  |
|      | le e tsamaisanang le protonated salts   |             |
|      | Protonated salts of N,N-Diethylaminoethanol   | (100-37-8)  |
| (12) | N,N-Dialkyl (Methyl, Ethyl, n-Propyl or Isopropyl) aminoethane-2-thiols le e tsamaisanang le protonated salts, jwalo ka |             |
|      | N,N-Diisopropyl-(beta)-aminoethane thiol  | (5842-07-9) |
| (13) | Thiodiglycol:   |             |
|      | Bis (2-hydroxyethyl) sulphide   | (111-48-8)  |
| (14) | Pinacolyl alcohol:  |             |
|      | 3,3-Dimethylbutan-2-ol  | (464-07-3)  |

**SEHLOMATHISO C****Shejule 3 ya Kopano ya Dibetsa tsa Khemikhale**

(Palo ya Ngodiso ya  
Tshebeletso ya Kgulo  
Khemikhale)

**A. Dikhemikhale tsa tjhefu:**

- |     |                                     |            |
|-----|-------------------------------------|------------|
| (1) | Phosgene: Carbonyl dichloride       | (75-44-5)  |
| (2) | Cyanogen chloride                   | (506-77-4) |
| (3) | Hydrogen cyanide                    | (74-90-8)  |
| (4) | Chloropicrin: Trichloronitromethane | (76-06-2)  |

**B. Diketsahalo tsa pele:**

- |      |                          |              |
|------|--------------------------|--------------|
| (5)  | Phosphorus oxychloride   | (10025-87-3) |
| (6)  | Phosphorus trichloride   | (7719-12-2)  |
| (7)  | Phosphorus pentachloride | (10026-13-8) |
| (8)  | Trimethyl phosphite      | (121-45-9)   |
| (9)  | Triethyl phosphite       | (122-52-1)   |
| (10) | Dimethyl phosphite       | (868-85-9)   |
| (11) | Diethyl phosphite        | (762-04-9)   |
| (12) | Sulphur monochloride     | (10025-67-9) |

- |      |                      |              |
|------|----------------------|--------------|
| (13) | Sulphur dichloride   | (10545-99-0) |
| (14) | Thionyl chloride     | (7719-09-7)  |
| (15) | Ethyldiethanolamine  | (139-87-7)   |
| (16) | Methyldiethanolamine | (105-59-9)   |
| (17) | Triethanolamine      | (102-71-6)   |

**SEHLOMATHISO D**

(Palo ya Ngodiso ya  
Tshebeletso ya Kgulo  
Khemikhale)

**Dikhemikhale tsa tjhefu:**

- |      |                              |             |
|------|------------------------------|-------------|
| (1)  | 3-Hydroxy-1-methylpiperidine | (3554-74-3) |
| (2)  | Potassium fluoride           | (7789-23-3) |
| (3)  | 2-Chloroethanol              | (107-07-3)  |
| (4)  | Dimethylamine                | (124-40-3)  |
| (5)  | Dimethylamine hydrochloride  | (506-59-2)  |
| (6)  | Hydrogen fluoride            | (7664-39-3) |
| (7)  | Methyl benzilate             | (76-89-1)   |
| (8)  | 3-Quinuclidone               | (3731-38-2) |
| (9)  | Pinacolone                   | (75-97-8)   |
| (10) | Potassium cyanide            | (151-50-8)  |
| (11) | Potassium bifluoride         | (7789-29-9) |
| (12) | Ammonium bifluoride          | (1341-49-7) |
| (13) | Sodium bifluoride            | (1333-83-1) |
| (14) | Sodium fluoride              | (7681-49-4) |



---

(15)	Sodium cyanide	(143-33-9)
(16)	Phosphorus pentasulphide	(1314-80-3)
(17)	Di-isopropylamine	(108-18-9)
(18)	Diethylaminoethanol	(100-37-8)
(19)	Sodium sulphide	(1313-82-2)
(20)	Triethanolamine hydrochloride	(637-39-8)
(21)	Triisopropyl phosphite	(116-17-6)
(22)	O,O-Diethyl phosphorothioate	(2465-65-8)
(23)	O,O-Diethyl phosphorodithioate	(298-06-6)
(24)	Sodium hexafluorosilicate	(16893-85-9)

## SEHLOMATHISO E

(Palo ya Ngodiso ya  
Tshebeletso ya Kgulo  
Khemikhale)

## Kemedi ya taolo ya morusu

Kemedi ya taolo ya morusu e ka mokgwa o latelang:

- |      |  |             |
|------|--|-------------|
| (1)  | $\alpha$ -Bromobenzeneacetonitrile,<br>(Bromobenzyl cyanide), (CA)   | (5798-79-8) |
| (2)  | 2-Chloro-1-phenyl-ethanone, (Phenylacyl chloride),<br>( $\omega$ -chloroacetophenone), (CN)  | (532-27-4)  |
| (3)  | [(2-chlorophenyl)-methylene] propanedinitrile,<br>( <i>o</i> -Chlorobenzylidenemalonitrile), (CS)                                      | (2698-41-1) |
| (4)  | Dibenz (b,f)-1,4-oxazepine, (CR)   | (257-07-8)  |
| (5)  | Diphenylaminochloroarsine, (10-Chloro-5,10-dihydrophen-<br>arsazine), (Phenarsazine chloride), (Adamsite), (DM)                        | (578-94-9)  |
| (6)  | N-nonanylmorpholine, (MPA)   | (5299-64-9) |
| (7)  | trans-8-Methyl-N-vanillyl-6-nonenamide, (Capsaicin), (Pepper<br>Spray), [N-(4-hydroxy-3-methoxy benzyl)-8-methyl-non-trans-6-enamide], | (404-86-4)  |
| (8)  | Ethyl bromoacetate, (EBA)  | (105-36-2)  |
| (9)  | Pelargonic acid vanillylamide  | (2444-46-4) |
| (10) | Phenyl chloride  | (108-90-7)  |

- 
- (11) Mixture of OC and CS
- (12) Oleoresin capsicum (OC) (8023-77-6)
- (13) 8-Methyl-N-vanillynonamide  
(dihydrocapsaicin) (19408-84-5)
- (14) N-Vanillyl-9-methyldec-7-(E)-enamide  
(homocapsaicin) (58493-48-4)
- (15) N-Vanillyl-9-methyldecanamide  
(homodihydrocapsaicin) (20279-06-5)
- (16) N-Vanillyl-7-methyloctanamide  
(nordihydrocapsaicin) (28789-35-7)
- (17) 2'-Chloroacetophenone (2142-68-9)
- (18) 3'-Chloroacetophenone (99-02-5)
- (19)  $\alpha$ -Chlorobenzylidenemalononitrile (18270-61-6)
- (20) Cis-4-acetylamino-dicyclohexylmethane (37794-87-9)
- (21) N,N'-Bis (isopropyl) ethylenediimine (E,E 28227-41-0; Z,Z 185245-09-4)
- (22) N,N'-Bis (tert-butyl) ethylenediimine (30834-74-3; E,E 28227-42-1)

**SEHLOMATHISO F**

(Palo ya Ngodiso ya  
Tshebeletso ya Kgulo  
Khemikhale)

***Antiplant agents:***

Antiplant agents di ka mokgwa o latelang:

- |     |   |             |
|-----|---|-------------|
| (1) | Butyl 2-chloro-4-fluorophenoxyacetate (LNF)     | (1692-85-9) |
| (2) | Mixtures of 2,4,5-T and 2,4-D where:            |             |
|     | 2,4,5-T: 2,4,5-Trichlorophenoxyacetic acid      | (93-76-5)   |
|     | 2,4-D: 2,4-Dichlorophenoxyacetic acid           | (94-75-7)   |
| (3) | Mixtures of Picloram where:                     |             |
|     | Picloram: 4-Amino-3,5,6-trichloropicolinic acid | (1918-02-1) |
| (4) | Dimethylarsinic acid (Cacodylic acid)           | (75-60-5)   |

## DEPARTMENT OF TRADE AND INDUSTRY

NO. 496

29 MARCH 2019

**AMENDMENT OF THE REGULATIONS FOR MATTERS RELATING TO THE FUNCTIONS OF THE NATIONAL CONSUMER TRIBUNAL AND RULES FOR THE CONDUCT OF MATTERS BEFORE THE NATIONAL CONSUMER TRIBUNAL**

I, Dr Rob Davies, Minister of Trade and Industry, in consultation with the Chairperson of the National Consumer Tribunal, in terms of section 171(1)(c) of the National Credit Act, 2005 and section 120(1)(c) of the Consumer Protection Act, 2008, do hereby amend the Regulations for matters relating to the functions of the Tribunal and Rules for the Conduct of Matters before the Tribunal published under Government Notice No. 789, in Government Gazette 30225 of 28 August 2007, as amended by Government Notice No.428, in Government Gazette 34405 of 29 June 2011, and as further amended by Government Notice No. R. 203, in Government Gazette 38557 of 13 March 2015, as set out in the Schedule hereto.



**Dr Rob Davies, MP**  
**Minister of Trade and Industry**

13 February 2019

## SCHEDULE

### Amendment of Table 2 of Schedule 1 of the Rules

1. In the Schedule thereto, in Table 2, Part1A, in Column “f” of the row wherein the expression “Section 138(1)” appears in the corresponding Column “a”, the words and figures “Two hundred rand (R200.00)” are hereby substituted with the words and figures “Three hundred rand (R300.00) for the period 1 April 2019 to 31 March 2020, Four hundred rand (R400.00) for the period 1 April 2020 to 31 March 2021, Five hundred rand (R500.00) for the period 1 April 2021 to 31 March 2022, thereafter the fee will increase 7.5% annually from the 1 April 2022”.

## DEPARTMENT OF TRANSPORT

NO. 497

29 MARCH 2019

**RAILWAY SAFETY REGULATOR****COMMENTS**

I, Tshepo Kgare, acting Chief Executive Officer of the Railway Safety Regulator (RSR), hereby in terms of the Railway Safety Regulator Act No. 16 of 2002, as amended ("the Act"), publish for comments the Determination on the Verbal Safety Critical Communication Protocol ("Protocol").

Interested and affected Railway Stakeholders are hereby invited to submit their written comments within 30 days from the date of publication of this Protocol in the Government Gazette, for consideration by the RSR in the development and finalisation of this Protocol.

After finalisation this Protocol will apply to all Operators as defined, when the Protocol comes into operation in terms of section 28 of the Act.

The RSR is confident that that this Protocol will contribute towards achieving the objectives of the Act, namely safe railway operations.

Written comments are to be addressed to: Mrs. M Makwela, E-mail: [matselanyanem@rsr.org.za](mailto:matselanyanem@rsr.org.za), Tel: (012) 848 3056 OR Mr. R Ntshingila, E-Mail: [reginald.ntshingila@rsr.org.za](mailto:reginald.ntshingila@rsr.org.za), Tel: (012) 848 3167.

Signed at Centurion on this 22<sup>nd</sup> day of March 2019

 Digitally signed by  
Tshepo Kgare  
Date: 2019.03.22  
12:41:46 +02'00'

Tshepo Kgare

Acting Chief Executive Officer: Railway Safety Regulator



**PROTOCOL  
FOR  
VERBAL SAFETY-CRITICAL  
COMMUNICATION**

DRAFT



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Regulatory Standards and related regulatory tools are updated by amendment or revision. Users of the RSR Regulatory Tools should ensure that they possess and are using the latest amendments or editions. The Railway Safety Regulator (RSR) continuously strives to improve the quality of its products and services and would therefore be grateful that anyone who finds an error, omission, inaccuracy or ambiguity in this standard informs the Railway Safety Regulator of such error, omission, inaccuracy or ambiguity.

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Edition 1: VSCC Protocol 2018

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### Table of changes

Edition and version number	Date	Scope

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IMPALA Platinum  
ALSTOM  
TRAXTION SHEL TAM

### Foreword

## Introduction

This document has been developed primarily with a view to achieving uniform and seamless verbal safety critical communication (VSCC) within the railway operations in South Africa. The railway industry in South Africa has seen itself conducting operational activities including verbal communication under normal, abnormal, and degraded modes of working, and during emergency situations. Non adherence to VSCC has contributed to numerous railway occurrences, including collisions and signals passed at danger (SPADS).

VSCC therefore is a crucial component of safe railway operations, and consequently non adherence to it may contribute to occurrences.

This protocol outlines the minimum requirements for the management of VSCC, including the framework to be implemented for safety related personnel in the execution of their operational activities. It seeks to explain the level of VSCCs required for safety related personnel within the railway industry in South Africa.

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## 1. Purpose

- 1.1 To provide a communication framework for effective VSCCs during railway operations.
- 1.2 To clarify what safety critical communication is, the procedure for using it and to ensure safe and seamless railway operations.
- 1.3 To contribute to the reduction of railway occurrences attributable to communication errors
- 1.4 To provide a standardised approach to VSCC within the railway operations in South Africa.

## 2. Scope

- 2.1 This protocol describes the VSCC requirements and approach applicable to safe railway operations
- 2.2 The protocol is applicable to all railway operations, applicable technologies, processes, procedures, rules , systems, sub-systems, or components that form part of a railway system.
- 2.3 It is designed for use by safety related personnel ( safety critical personnel included) when they communicate verbally during the execution of their operational duties regardless of the technology that is being used.

## 3. Definition of Terms & Abbreviations

### 3.1 Definitions

#### 3.1.1 abnormal working

deviation from the train's normal working on a portion of the network that may or may not impact on the service capacity

#### 3.1.2 accountability

obligation or willingness, which cannot be shared, to accept ultimate responsibility or to account for one's actions

#### 3.1.3 authorization

official permission or approval granted for the movement of rolling stock, i.e. train or shunt movement

**3.1.4 competent**

having the qualification, knowledge, skills, attitudes and capabilities required to function successfully, effectively and efficiently in a given job

**3.1.5 communication**

the act or process of using words, sounds, signs, or behaviours to express or exchange information or to express your ideas, thoughts, feelings, etc., to someone else. : a message that is given to someone : a letter, telephone call, etc. communications : the ways of sending information to people by using technology.

**3.1.6 communication barriers**

obstacles in a workplace that prevent effective exchange of ideas or thoughts. Such barriers include, Status differences, gender differences, cultural differences, prejudices, the organizational environment and linguistic barriers

**3.1.7 degraded mode**

any deviation from the primary mode of train movement on a portion of the network, including the condition of the rolling stock and railway infrastructure elements, which impact on service capacity, but which are still safe

**3.1.8 digital Migration**

migrating services from analogue to digital technology

**3.1.9 emergency**

serious, unexpected and potentially dangerous situation that requires immediate action

**3.1.10 handshaking**

exchange of information between an individual, group or device (or any combination of these) such that the sender and receiver(s) are in agreement that the information received is identical to that sent and that the interpretation of the information by the receiver(s) is the same as that intended by the sender

**3.1.11 interoperability**

ability of network, train and station operators to allow the safe and uninterrupted movement of rolling stock (at interfaces and intrafaces), between and on different networks as defined in the relevant national legislation (see foreword) to accomplish the required levels of safety(passengers, freight, public and the environment) and performance for those operations

**3.1.12 interface**

area, point, or location, either physical or organizational, where the activities or assets of two (or both) or more railway operators or a railway operator and another organization meet, and where the activities or assets interact (or both) or have the potential to affect one another (or both)

**3.1.13 intraface**

area, point, or location, either physical or organizational, where the activities assets (or both) of two or more functional disciplines within a railway operator meet, and where the activities or assets or both interact or have the potential to affect one another

**3.1.14 responsibility**

ability to act or decide on one's own and to explain such actions or decisions when asked

**3.1.15 safety-critical work**

functions and activities directly related to the authorization and control of rolling stock movements, and to the execution of the movement of rolling stock, including the direct supervision of persons undertaking these functions and activities

**3.1.16 safety-related work**

functions and activities that have an impact on safe railway operations, either directly (safety-critical work) or indirectly, including the certification of systems, subsystems or components for introduction as new or modified technologies for a network, train or station operation (or a combination thereof), or the maintenance of systems, subsystems or components which constitute a network, train or station operation (or a combination thereof), including the direct supervision of persons undertaking these functions and activities

**CONTINUES ON PAGE 258 - PART 3**





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**AIDS HELPLINE: 0800-0123-22 Prevention is the cure**

**3.1.17 phonetic alphabet**

is a set of symbols or codes used to show what a speech sound or letter sounds like.

**3.1.18 risk**

exposure to the chance of injury or loss expressed in terms of likelihood (probability) and severity

**3.1.19 risk management**

process of identification of hazards, their quantification in terms of severity and likelihood (probability), the development of a plan/s to tolerate the risk, or transfer the risk, or treat the risk to reduce it to acceptable levels with the necessary controls (ALARP), or terminate the risk, and thereafter to monitor the residual risk to ensure it remains tolerable

**3.1.19 railway system**

integration of technologies, statutory, environmental and business requirements, and human factors, designed for the safe transportation of people and freight and which is commercially and environmentally sustainable and includes where relevant projects, products, policies, processes, procedures and assets

**3.1.20 technology**

created capability or capacity (or both) relating to systems (including subsystems and components), processes, and procedures applicable to network, train and station operators, as well as other interested and affected parties in the railway industry

**3.1.21 telecommunication system**

wired or wireless electronic communication system for either voice or data used directly or in support of a train authorization and control system, or for the provision of information related to train movements

**3.1.22 train authorization and control system**

system which provides a means to safely regulate the movement of trains on a railway through the use of appropriate technology and appropriate numbers of competent persons in safety related positions

### 3.1.23 verification

testing and evaluation of the system, subsystem or component to assure compliance with its specification or other requirements

## 3.2 Abbreviations

<b>ALARP:</b>	As low as reasonably practicable
<b>GOI:</b>	General operating instructions
<b>RSR:</b>	Railway safety regulator
<b>SOP:</b>	Standard operating procedures
<b>SPAD:</b>	Signal passed at danger
<b>TAC&amp;T:</b>	Train authorization and control, and telecommunication
<b>TWR:</b>	Train working rules
<b>VSCC:</b>	Verbal Safety Critical Communication
<b>WG:</b>	Working group

#### **4. Verbal Safety-Critical Communication Requirements**

##### **4.1 Risk Management**

- 4.1.1 Operators shall identify all activities that require VSCC under normal, degraded, abnormal and emergency situations.
- 4.1.2 The operators shall develop processes and procedures to ensure that risks related to VSCC are identified and effective control measures are developed and implemented.
- 4.1.3 The operator shall ensure that the implementation of control measures shall not result in additional risks which require further mitigation.
- 4.1.4 When VSCC is used under abnormal or degraded mode of train operations, the railway operators shall ensure that the risks associated with the equipments and tools used in VSCC are adequately identified and mitigated.
- 4.1.5 The functional tools used and method of working shall be appropriate for the mode of working.
- 4.1.6 When VSCC is used under abnormal or degraded mode, the operator shall develop processes and procedures to stipulate and manage reasonable time frames for the use of VSCC under abnormal or degraded mode of train operation.
- 4.1.7 Operators shall ensure VSCC risk assessments are effective and communicated to all relevant structures within the organization

##### **4.2 Regulatory and Compliance Review**

The operator shall develop processes and procedures to identify and ensure compliance with the published regulatory requirements related to VSCC rules and operating requirements.

##### **4.3 Interoperability, interfaces and intrafaces**

- 4.3.1 The operator shall develop processes and procedures to implement and manage VSCC at interfaces and intrafaces in accordance with the applicable requirements of SMS requirements, SANS 3000-2-6 and inline with this protocol, including:
  - 4.3.1.1 the implementation of proper VSCC handover processes where two or more operators are interfacing;

- 4.3.1.2 assurance that the equipment supporting or used for VSCC are aligned, interoperable and functional.

#### **4.4 Verbal Safety-Critical Communication Requirements for Safety-Related Personnel**

##### **4.4.1 Applicability**

4.4.1.1 Safety related personnel include but not limited to:

- i) persons involved with the execution of the movement of rolling stock, including the direct supervision of persons undertaking these functions and activities;
- ii) persons involved with the authorization and control of rolling stock movements, including the direct supervision of persons undertaking these functions and activities;
- iii) persons involved with the declaration of rolling stock as service worthy, including the direct supervision of persons undertaking these functions and activities; and
- iv) persons involved in the maintenance of railway infrastructure including the direct supervision of persons undertaking these functions and activities.

4.4.1.2 Effective VSCC shall take cognisance of the following:

- i) availability, functionality and/or effectiveness of the system, tool and/or equipment used;
- ii) Train Working Rules and/or General Operating Instructions;
- iii) Standard Operating Procedures;
- iv) description of the line and the relevant line-side equipment associated with route;
- v) timetables or scheduling; and
- vi) any other relevant documentation to be developed.

#### **4.5 Competencies requirements to support VSCC in railway operations**

##### **4.5.1 Competencies**

4.5.1.1 The operator shall establish, develop or adopt, document, implement and maintain policies, processes and procedures to ensure competencies of

employees undertaking safety related work in accordance with the applicable requirements of SANS 3000-4, including:

- i) education and training of employees undertaking safety related work that involve VSCC;
- ii) training and development shall be a dynamic and risk-driven process, focussing on specific communication requirements of a particular job/task/ activity;
- iii) requirements of applicable legislation and standards, including those specified in this document;
- iv) roles and responsibilities of employees involved in VSCC; and
- v) systems, tools and/or equipment used in VSCC.

#### **4.5.2 Supervision**

4.5.2.1 The operator shall develop processes and procedures for conducting VSCC supervision in accordance with the applicable requirements of SANS 3000-4, including:

- i) task observations with immediate feedback and corrective action in case of any transgressions related to VSCC;
- ii) realtime observation and/or listening of VSCC messages and provision of feedback to enhance safe railway performances. Playback of recorded VSCC conversations and corrective action where applicable to monitor compliance; and
- iii) provision of positive feedback where it is deserved, to motivate and promote safe railway operations;

Note: Safety briefings and symposiums shall also be utilised to discuss VSCC requirements,

#### **4.5.3 Language Policy**

4.5.3.1 The operator shall develop or adopt, document, implement and maintain a formal language policy which shall make provision for VSCC.

4.5.3.2 The language policy shall take into consideration the medium of communication, including written, electronic, verbal (oral), audible or physical (visible)

communication in accordance with the applicable requirements of SANS 3000-1 and SANS 3000-2-5.

#### **4.5.4 Communication requirements for safe railway operations**

- 4.5.4.1 All the information necessary to ensure VSCC amongst safety critical and safety related personnel shall be set out in appropriate documents, including:
- i) the assurance that safety critical messages are stated clearly, unambiguously, structured and in a formalized manner;
  - ii) the assurance that messages are repeated back and there is common understanding through a process of handshaking;
  - iii) the authorization, instruction or other information provided shall not be acted upon until the handshaking is complete;
  - iv) where handshaking cannot be completed, the instruction and/or authorization shall be terminated; and
  - v) for open system channels, information shall be communicated to all relevant and affected parties.

### **5. Verbal Safety-Critical Communication protocol outline**

#### **5.1 Structure and responsibility**

##### **5.1.1 The operator shall:**

- 5.1.1.1 Develop and implement processes and procedures to ensure compliance to applicable VSCC standards and processes.
- 5.1.1.2 Ensure that all safety related personnel take responsibility for how they communicate at work, taking into consideration the following:
  - i) compliance with the guidance provided in this protocol;
  - ii) adherence to communication protocols under normal, abnormal, emergency and any unusual scenarios;
  - iii) recognition that situations faced under pressure will still require clear and structured communications;

- iv) communicating properly under all situations;

Note: If good communication practice is well established, it is less likely to collapse under abnormal situations;

- v) allowing reasonable time to think what to say. This will save time even when tempted to speak fast. Slow the communication pace down, speak slowly and clearly to allow more thinking time and analysis;
- vi) staying calm and focused on the facts;
- vii) listening carefully to what is being communicated;
- viii) confirming understanding of the message received, by repeating what has been communicated;and

Note: This will clarify any actions that will aid decision-making and help to remember what is required to be done.

- ix) ensuring compliance to VSCC continuously for safe railway operations

5.1.1.3 The operator shall ensure that the VSCC has a four-part structure including opening, information, actions and confirmations (*refer to the Annexure A*). This practice enhances clear communication and aids memory of important elements of a safety-critical conversation.

## 5.2 Safety emphasis for communication in railway operations

5.2.1 The employees undertaking VSCC shall ensure the following:

- a) messages are clear and unambiguous;
- b) VSCC has a common structure and a professional tone;
- c) communication is relayed through short, well-structured messages which are easy to understand;
- d) communicating by speaking in natural rhythm, using normal tone, dividing message into phases and speaking at a rate slightly slower than used in normal conversation;
- e) the recipient repeats back the message to ensure it is clearly understood;
- f) give priority to emergency messages, safe working and other railway voice communications;



- g) use the correct identification when initiating or acknowledging safety related instruction; and
- h) no false, irrelevant messages or information shall be communicated; and
- i) standard radio terms are used when operating with radios or telephones;

### **5.3 Communication during Emergency Situations**

- 5.3.1 Reporting of emergency situations as detailed in the relevant railway operator processes and procedures shall be reported in accordance with this protocol,
- 5.3.2 An emergency call shall have absolute priority over all other transmissions. Employees using the channel must immediately cease any transmission, which may interfere with the emergency call unless they are also dealing with an emergency.
- 5.3.3 The employee initiating the call must say the word "EMERGENCY" three times. The call shall be repeated at intervals until an answer is received. The intervals between repetitions of an emergency call must be sufficiently long to allow time for the person, who has received the message, to reply.
- 5.3.4 As soon as the emergency call is responded to, the employee initiating the call shall identify himself/herself and state exactly where he or the train is, also the nature of distress and the kind of assistance required.

#### **5.3.5 Procedure to be followed in Emergency situations**

The following shall apply:

- a) To transmit an emergency message :
  - i) say "Emergency, Emergency, Emergency";
  - ii) Identify yourself;
  - iii) state identification and location;
  - iv) state nature of the emergency; then
  - v) state type of assistance required.
- b) Emergency messages shall:
  - i) be given priority over other transmissions; and

- ii) be answered immediately.

#### 5.4 Recording of safety critical conversations

5.4.1 All radio or telephonic conversations between safety-critical personnel shall be recorded.

These recordings assist in:-

- Supervision and monitoring adherence of personnel to communication protocols;
- Assessing the quality of conversations in terms of background noise etc;
- Assessing the audibility of conversations;
- Identifying communication training needs; and
- Occurrence investigations

#### 5.5 Principles

5.5.1 When issuing VSCC, the principle of ABC-P shall be adhered to as described below:

A - Accurate

B - Brief

C - Clear

P- Professional

5.5.2 The following shall be applied to achieve the principle of ABC-P:

- a. Speak at an acceptable pace, tone and pitch to ensure hearing and understanding by the intended receiver or receivers
- b. Not being interrupted by others
- c. Be precise in your descriptions (for example: locations, obstructions)
- d. Use acceptable language (Do not use slang or informal language)

- e. Plan what you are going to say before you say it – think about structure
- f. Repeat back what has been said

## 5.6 The phonetic alphabet

5.6.1 The phonetic alphabet shall be used when transmitting location or equipment identifiers such as the prefix of the signal, points (turnouts) locations, kilometre points, etc.. The key words have been carefully chosen so that they clearly represent each letter and don't sound at all like each other (**e.g. proceed to signal RSR 1234 – this should read as follows – proceed to signal Romeo Sierra Romeo 1234**).

5.6.2 Where required, the phonetic alphabet must be used to pronounce any letter to avoid possible confusion. The phonetic alphabet, word used and its pronunciation is as follows:

A	Alpha: AL-fah	N	November No VEM ber
B	Bravo: BRAH-voh	O	Oscar: OSS-cah
C	Charlie: CHAR-lee	P	Papa: pah PAH
D	Delta: DELL-tah	Q	Quebec: key-BECK
E	Echo: ECK-oh	R	Romeo: ROW-me-oh
F	Foxtrot: FOX-trot	S	Sierra: see-AIR-RAH
G	Golf: GOLF	T	Tango: TANG-go
H	:hoh-TELL	U	Uniform: YOU-nee-form
I	India: IN-DEE-ah	V	Victor: VIC-tah
J	Juliet: JEW-lee-ETT	W	Whiskey: WISS-key
K	Kilo: KEY-loh	X	X ray: ECHS-RAY
L	Lima: LEE-mah	Y	Yankee: YANK-key
M	Mike: MIKE	Z	Zulu: ZOO-loo

## 5.7 Numbers

5.7.1 Standard spoken figures shall be pronounced in individual digits when relaying VSCC messages as described in in clause 5.6.1 above, to avoid possible confusion. (for example, **proceed to signal RSR 01234 – should be relayed as follows – proceed to signal Zero, Romeo Sierra Romeo ONE, TWO, THREE, FOUR**).

### 5.7.2 Spoken figures shall be as follows:

0	ZERO
1	ONE
2	TWO
3	THREE
4	FOUR
5	FIVE
6	SIX
7	SEVEN
8	EIGHT
9	NINE
Decimal Point	POINT

Note: The number "0" shall always be pronounced as "Zero".

## 5.8 Standard Radio Terms

### 5.8.1 When using radios or other equipment provided for operational communications, standard radio terms shall be used as follows:

TERM	MEANING
Receiving	- I (called party) acknowledge your call, proceed with message
Message received	- I have received your message and I understand it.
Over	- I have finished speaking and I am waiting for your reply.
Out	- My transmission has been completed.
Correct	- You are correct or what you have transmitted is correct.
Negative	- No, or permission is not granted, or there is an error in your read back
Stand-by	Wait, I will be back soon
Please repeat	Repeat all, or the specified part, of this message exactly as you received it.
Repeat	- I repeat all, or the specified part, of your last transmission
Say again	Please repeat your last message
Loud and clear	- every word is understood.

### 5.8.2 Definitions for shunting movements when using SHUNT RADIOS/WALKIE-TALKIES

- |                      |   |   |
|----------------------|---|---|
| Pull forward         | - | to indicate that a hauling movement must be performed.                          |
| Push backward        |   | to indicate that a propelling movement must be performed.                       |
| Pull slowly forward  | - | to indicate that a hauling movement must be performed slowly.                   |
| Push slowly backward | - | to indicate that a propelling movement must be performed slowly.                |
| Hokaai               | - | to request a driver by means of a radio/walkie-talkie to stop.                  |
| Couple               | - | to indicate to the driver to move back cautiously to couple or uncouple wagons. |

(The word "stop" must not be used since it can be mistaken for the word "skop".)

### 5.9 Transmission technique

- 5.9.1 The efficient use of radios depends on the speech and articulation (the way words are pronounced) of the user. Speak all words plainly and clearly. Avoid any tendency to shout, to accent syllables artificially (in an unnatural way), or talk too rapidly (fast). Keep the rate constant neither fast nor slow. Remember in many cases the person receiving the message must write it down. Preserve the rhythm of ordinary conversation. Separate words that they do not run together.

**The following words and phrases shall be used:**

- |                     |   |  |
|---------------------|---|--|
| <b>REPEAT</b>       | - | Let me know that you have received and understood the message. |
| <b>CORRECT</b>      | - | Your version is correct.                                       |
| <b>OVER</b>         | - | My transmission is ended and I expect a response from you.     |
| <b>CONTINUE</b>     | - | Proceed with your message.                                     |
| <b>OVER AND OUT</b> | - | The transmission is ended and no response is expected.         |

**Note:** *Slang expressions shall not be used.*

## **6. General Communication Requirements**

### **6.1 General**

It shall always be remembered that safety critical communication is formal communication and shall not fall into a chatty conversational style. Personnel shall know how to use the communication equipment provided.

### **6.2 Cell Phones and other wireless (radio) train authorisation systems**

6.2.1 The use of cellphones or any wireless (radio) train authorisation systems including open channel radio authorities, shall only be considered, on condition that such systems are safe, taking into account the following:

- (i) The use of cell phone shall not be used as the primary means of VSCC and shall be restricted to be a secondary form of communication.
- (ii) The cell phones shall be used when the primary mode of mission critical communication has failed.
- (iii) The use of conventional cell phones for safety critical communication introduces significant operational risks and shall be avoided or prohibited. Embedded cell phone technology on the other hand may be used where applicable (e.g. train control systems)

6.2.2 Risks associated with use of permitted cellphones shall be considered adequately and mitigated, taking into account the disadvantages of full duplex (FD) audio transmission (e.g. cell phones) as compared to half duplex (HD) audio transmission (e.g. two-way radios / walkie-talkies), namely;

- (i) Concurrent transmission in a single time/frequency channel in the case of FD;
- (ii) Use of different time slots and/or frequency subbands in the case of HD;
- (iii) Cancellation of possible Self Interference (SI) in the case of FD;
- (iv) Minimisation and risk mitigation of End-to-End (E-to-E) delays, especially in the case of HD;
- (v) Minimisation and risk mitigation of Link Reliability (LR) in both cases.

6.2.3 the risk factors listed in 6.2.2 above, amongst others, may have a negative impact on effective and seamless VSCC and therefore, VSCC rules shall also apply in the use of cellphones (where such use is permitted).

### **6.3 Communication skills**

6.3.1 Communication skills refers to the underpinning competencies necessary for good communications. These include but not limited to:

- a. Listening and questioning
- b. Working with people
- c. Assertiveness
- d. Challenging
- e. Considering others' needs

## **7. Communication barriers**

7.1.1 Operators shall ensure that barriers to effective VSCC in the workplace are eliminated and where elimination is not practical or possible, the barriers should be reduced to ALARP.

7.1.2 Where the barriers are reduced to ALARP, the resultant risks should be identified and adequately mitigated.

7.1.3 There are various barriers to effective VSCCs. Barriers arise from three main sources: environmental conditions; the nature and quality of the equipment you are using; and the way in which you speak.

### **7.2 Environmental barriers**

7.2.1 For communication, noise is the key environmental barrier, including the following:

- a. Noise from the weather or outdoor environment
- b. Background noise either from the interior or exterior

7.2.2 Noise not only makes it harder to hear what is being said, it can also lead to:

- a. Rushed speech
- b. Shouted messages

- c. Simply giving up on communicating altogether

7.2.3 Personnel shall If possible, find a dry, quiet location from which to communicate and always make sure they are in a position of safety to follow the communications structure and protocols

### **7.3 Equipment barriers**

7.3.1 Analog and digital communication equipment have a potential to cause barriers due to the gaps in the overall coverage. This can be due to design , theft or vandalism. Both technologies are susccpible to the following:

- a. Transmission noise
- b. Interference
- c. Drop-out
- d. Theft and vandalism leading to high outage time.
- e. Obsolescence leading to a shortage of spare equipment

7.3.2 Digital Migration might lead to operators utilising different communication systems while sharing the same network which would impact safe interoperability at interfaces.

7.3.3 Operators sharing the same network shall ensure interoperability between the various communication networks which they use. This will mitigate any barriers that might arise from incompatable communications systems being used by different operators sharing the same network.





### **7.4 Linguistic barriers**

7.4.1 'Linguistic' refers to the way we speak and the language that we use. To communicate clearly, personnel undertaking safety related and safety critical work shall avoid using:

- (i) Vague language
- (ii) Jargon



**ANNEXURE A: VSCC Four-Part Structure**

	<b>Opening</b>	<p>The opening of a safety critical message should contain the following two pieces of information:</p> <p>This is who I am This is where I am</p> <p><b>Who I am</b></p> <ul style="list-style-type: none"> <li>• State your role</li> <li>• It may also be necessary to state your name</li> <li>• This is to ensure the person who you are talking to knows exactly who you are</li> </ul> <p><b>Where I am</b></p> <ul style="list-style-type: none"> <li>• This should be a simple description of where you are</li> <li>• Identify your exact location that is recognisable to both parties, for example access points, level crossing, station, or platform.</li> <li>• If discussing overhead line equipment, you will need to give the structure number found on the stanchion.</li> </ul>
	<b>Information</b>	<p><b>Information</b> should always come before any actions are given. This:</p> <ul style="list-style-type: none"> <li>• provides context</li> <li>• ensures the actions are fresh in everyone's mind</li> <li>• allows the actions to be agreed and then repeated back.</li> </ul> <p>The information we provide must be concise and relevant. Where long messages or instructions are being given, it is better to break them down into manageable chunks.</p>
	<b>Actions</b>	<p><b>Actions</b> are an essential part of the communication contract. Note:</p> <ul style="list-style-type: none"> <li>• They can be passed in both directions.</li> <li>• They should be definitive, for example. "You must..." Definitive language in unambiguous and helps event misunderstanding.</li> <li>• The instruction 'Do nothing until...' is a valid action. People are often tempted to 'jump in' before it is safe to do so. This instruction makes it clear that an action should not take place until a certain condition is met, for example: remain at a stand until a Signaller instructs you to move.</li> </ul>
	<b>Confirmation</b>	<p>To confirm that all parties have the same understanding of the communication, the person with <b>Lead Responsibility</b> must ask for a 'repeat back'.</p> <p>This is a crucial step in making sure the arrangements have been fully understood by both parties. It provides the opportunity to identify any misinformation, misunderstandings, or omissions.</p> <p>The process of repeating back a message (saying it out loud and in our own words) also helps us to process the information more deeply. And makes it more likely that we will remember what has been said when the communication has ended.</p> <p>A repeat back means:</p> <ul style="list-style-type: none"> <li>• Repeating back the message we have been given and our understanding of what is required of us, so that any misunderstandings can be corrected.</li> <li>• Asking for a 'repeat back' at the end of a safety critical message if we are the person with Lead Responsibility, and if the other party has not already repeated their understanding of the message back to us.</li> </ul>

**GENERAL NOTICES • ALGEMENE KENNISGEWINGS****INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA****NOTICE 164 OF 2019****ELECTRONIC COMMUNICATIONS ACT, 2005 (ACT NO. 36 OF 2005)****FINDINGS DOCUMENT AND POSITION PAPER ON THE USE OF DIGITAL  
SOUND BROADCASTING IN SOUTH AFRICA**

1. The Independent Communications Authority of South Africa ("the Authority") gave notice of its intention to conduct an inquiry into the use of Digital Sound Broadcasting in South Africa in terms of section 4B of the Independent Communications Authority of South Africa Act no. 13 of 2000 ("ICASA Act"), as indicated in a Discussion Document on Digital Sound Broadcasting ("Discussion Document") published in Government Gazette No. 41534 of 29 March 2018.
2. The Authority has since received responses to the said Discussion Document on 29 March 2018 and has held public hearings from 11 to 13 July 2018.
3. The Authority hereby publish the attached notice regarding the conclusion of the inquiry into the use of Digital Sound Broadcasting in South Africa in terms of sections 4C(6) of the ICASA Act.

A handwritten signature in black ink, appearing to read 'RUBBEN MOHLALOGA', written over a horizontal line.

**RUBBEN MOHLALOGA**  
**CHAIRPERSON**

**DATE:** 12/03/2019

**GENERAL NOTICE****NOTICE \_\_\_ OF 2018****INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA****FINDINGS DOCUMENT AND POSITION PAPER ON THE USE OF DIGITAL  
SOUND BROADCASTING IN SOUTH AFRICA**

1. On 29 March 2018, the Independent Communications Authority of South Africa (“the Authority”) published a notice in the Gazette<sup>1</sup> of its intention to conduct an inquiry into the use of Digital Sound Broadcasting (“DSB”) in South Africa in terms of section 4B of the Independent Communications Authority of South Africa Act no. 13 of 2000 (“ICASA Act”).
2. The purpose of the Inquiry was:
  - 2.1 To examine the prospects of implementation of DSB services in South Africa; and
  - 2.2 To examine the manner in which the implementation of DSB services can improve spectrum efficiency and management.
3. The Authority published a Discussion Document in the Gazette<sup>2</sup> inviting interested parties to make written representation within forty-five (45) working days.

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<sup>1</sup> Government Gazette No. 41534 of 29 March 2018.

<sup>2</sup> *ibid.*

4. The Authority received twenty-three (23) written submissions by the closing date of 06 June 2018 from the following stakeholders:

- Association of Christian Media ("ACM");
- Capricorn Concepts\*<sup>3</sup>;
- DRM Consortium;
- Gareth Kneale;
- iGagasi 99.5 (Pty) Ltd and Radio Heart 104.9 (Pty) Ltd ("iGagasi and Heart");
- JetCon;
- National Community Radio Forum ("NCRF");
- Primedia (Pty) Ltd ("Primedia");
- Pulpit Media Group ("PMG");
- Radio Telecommunication Services (Pty) Ltd ("RTS") and LS of South Africa
- Radio ("LSoSA");
- South African Broadcasting Corporation ("SABC");
- South African Radio Astronomy Observatory ("SARAO");
- Sentech;
- Vamna Media and Production ("VMP");
- Victory FM\*;
- WECODEC;
- WorldDAB;
- Classic FM;
- Kagiso Media;
- Professor Potgieter and Dr Bronwyn E Howell;
- eMedia Investment;
- Commercial Radio Australia\* ("CRA"); and
- National Association of Broadcasters\* ("NAB")

4.1 The Authority held public hearings on the Discussion Document from 11 to 13 July 2018 where the only nineteen (19) of the

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<sup>3</sup> (\*) These stakeholders did not make oral representations.

abovementioned stakeholders made oral representations to the Authority. Digital Multimedia Broadcasting ("DMB") did not submit written representations but was however given an opportunity to participate in oral hearings. The Authority allowed DMB to make a presentation as they offered more information on a DMB technology which was mentioned in the Discussion Document.

5. The Authority requested additional information from various stakeholders during the public hearings, and subsequently received the same from ACM, Classic FM, iGagasi and Heart, Primedia, Professor Potgieter, PMG, Sentech, and VMP in July and November 2018. Such additional information contributed towards this findings document and position paper.
6. Furthermore, by virtue of not having received written and oral responses to questions addressed to manufactures posed in the Discussion Document, the Authority solicited further inputs from PMG representing the DRM Consortium as well as from WorldDAB. On 20 September 2018 inputs were received from Big 9 ICT on behalf of PMG and also from Association of Representatives for the Electronic Industry ("AREI") on 28 September 2018, while no inputs were received from WolrdDAB.
7. The Authority has concluded the inquiry into the use of DSB in South Africa.
8. In summary, the Authority's findings are that:
  - 8.1 There is a need for DSB in South Africa.
  - 8.2 The list of technical standards prescribed for DSB equipment set out in the Discussion Document is not exhaustive.
  - 8.3 The Authority notes that the Department of Communications ("DoC") is in the process of finalising the Policy Directive. It is anticipated that the Policy Directive will enable the Authority to license standards for DSB.

- 8.4 The majority of stakeholders agree that SFN is essential for spectrum efficiency and coverage of vast areas, however SFN would cause harmful interference if not synchronised properly.
  - 8.5 Most stakeholders are in support of multiple MUX operators.
  - 8.6 Stakeholders are of the view that it will not be necessary for a total analogue switch off.
  - 8.7 The majority of stakeholders agreed with the initial licensing of DSB services in primary markets, however, there was a dissenting view that advocated for nationwide implementation instead.
  - 8.8 The Authority finds that the market can take further players as DSB is meant to make spectrum more efficient allowing more players in the market.
9. A copy of the Authority's Findings Document on the use of DSB in South Africa, (which includes the reasons for the findings and the Authority's position on this matter) is available on the Authority's website ([www.icasa.org.za](http://www.icasa.org.za)) and at the Authority's head office library (Block C, 350 Witch-Hazel Avenue, Eco Point Office Park Eco Park, Centurion) during office hours (Mon-Fri from 09:00 to 16:30).

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## 1. Introduction

- 1.1 Section 4B of the Independent Communications Authority of South Africa, Act 13 of 2000 ("ICASA Act") empowers the Independent Communications Authority of South Africa ("the Authority") to conduct enquiries into any matter with regards to the achievement of the ICASA Act and any underlying statutes. Furthermore, section 4 (3) (c) of the ICASA Act states that the Authority "must control, plan, administer and manage the use and licensing of the radio frequency spectrum in accordance with bilateral agreements or international treaties entered into by the Republic." In addition, section 34(6) (c) and (e) of the Electronic Communications Act 36 of 2005 ("ECA") dictates that the national frequency plan must be "aimed at reducing congestion in the use of radio frequency spectrum" and "provide for flexibility and rapid and efficient introduction of new technologies."
- 1.2 South Africa is a member of regional, continental and international organisations and is bound by the Regional Radiocommunication Conference 2006 agreement ("RRC-06"). On 16 June 2006, it was resolved at the RRC-06 conference that the switch-off from analogue to digital broadcasting services must happen by 17 June 2015. This agreement, among others, prompted the Broadcasting Digital Migration Policy of 2008 ("Policy"), which sets out South Africa's parameters in migrating the country's television and radio broadcasting formats from an analogue to a digital platform.<sup>4</sup>
- 1.3 The current terrestrial digital migration process for television will allow the freed-up spectrum to be utilised for Digital Sound Broadcasting ("DSB"), amongst other uses. The policy, however, does not make provision for digital sound broadcasting services, leaving the Frequency Modulation ("FM") and Medium Wave ("MW") bands to cater for this service. The Geneva 2006 ("GE06") plan, to which South Africa is a signatory, has made provision for 2 x 1.5 MHz of national terrestrial DSB for the Republic within the VHF Band III (174-230 MHz).

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<sup>4</sup> Digital Migration Policy, 2008 (as amended), page 2.



1.4 The Authority established the DSB committee in terms of section 17 of the ICASA Act. The DSB committee's responsibilities are to act in the best interest of the public and to consider the following:

1.4.1 Any prior research conducted;

1.4.2 International best practice; and

1.4.3 Any regulatory impact assessments conducted;

1.5 The purpose of the DSB committee is to develop a findings document on the use of DSB, make recommendations to Council and perform any other function incidental thereto.

1.6 Therefore, the Authority embarked on an inquiry to determine the prospects of implementing DSB services in South Africa as well as to improve radio frequency spectrum efficiency and management.

## **2. Purpose of the Findings Document**

2.1 The purpose of this Findings Document and Position Paper is to provide the Authority's findings and position on its inquiry on the use of digital sound broadcasting in South Africa emanating from the information gathered from:

2.1.1 Desktop research conducted by the DSB committee on the proposed DAB+ and DRM;

2.1.2 DSB trials conducted by sound broadcasting licensees;

2.1.3 International study visits conducted by members of the DSB committee. A report is attached herewith and marked as Annexure A;

2.1.4 Written submissions received in response to the Discussion Document<sup>5</sup> and;

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<sup>5</sup> Published in Government Gazette No. 41534 (Notice 670) of 29 March 2018.

2.1.5 Oral representations made at the public hearings and additional information requested by the Authority after the public hearings.

### 3. Outline of the process followed

3.1 At the inception of this inquiry, the Authority conducted desktop research of a number of countries<sup>6</sup>, on the use of DSB technologies. Furthermore, the Authority embarked on international study visits to five countries to verify and identify developments in DSB and ascertain whether any of these countries are using DSB technologies. Countries that were visited include:

3.1.1 Germany;

3.1.2 Norway;

3.1.3 United Kingdom;

3.1.4 United States of America; and

3.1.5 Australia.

3.2 These countries were selected based on the following criteria:

3.2.1 The size of market, countries with large markets were preferred over those with smaller market;

3.2.2 Whether the identified countries have sector specific Regulators: in this case it was relevant if the country had a broadcasting and Manufacturing Regulators; and

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<sup>6</sup> Singapore, United Kingdom, United States of America and Australia.

3.2.3 Countries were selected for already introduced digital sound broadcasting and whether relevant information could be gained to allow the Authority to learn how this technology was introduced, implemented and regulated.

3.3 The outcomes of these study visits have been taken into account in the Discussion Document.

3.4 Furthermore, the Authority has considered Digital Radio Mondial 30 ("DRM30"), Digital Radio Mondial plus ("DRM+") and Digital Audio Broadcasting plus ("DAB+") industry-led trials<sup>7</sup>, which were successful.

#### **4. Legislative framework**

4.1 The Authority is empowered, under section 4B and 4C of the ICASA Act, to conduct an inquiry into any matter to achieve the objectives of the ICASA Act or the underlying statutes.

#### **5. Approach to the analysis of submissions on specific comments with regard to the Discussion Document**

5.1 The views expressed by the various stakeholders in response to the questions raised by the Authority in the Discussion Document are summarised below, followed by the Authority's findings and positions.

#### **6. Analysis of submissions on specific comments on the Discussion Document**

##### **6.1 Question 1: Is there a need for the introduction of DSB technologies in South Africa? Motivate your answer?**

<sup>7</sup>

[https://sadiba.org/images/PDFfiles/SEN\\_RFN\\_REP\\_MEASM\\_DRM30\\_RADIO\\_PULPIT\\_FINAL\\_REPORT\\_V1\\_04.pdf](https://sadiba.org/images/PDFfiles/SEN_RFN_REP_MEASM_DRM30_RADIO_PULPIT_FINAL_REPORT_V1_04.pdf);  
[http://www.drm.org/wp-content/uploads/2017/08/Interim\\_Report\\_for\\_DRM\\_Mode\\_E\\_Trial\\_in\\_South\\_Africa\\_draft\\_1.46.pdf](http://www.drm.org/wp-content/uploads/2017/08/Interim_Report_for_DRM_Mode_E_Trial_in_South_Africa_draft_1.46.pdf);  
[https://sadiba.org/images/PDFfiles/DAB\\_Plus\\_Field\\_Measurement\\_Report\\_-\\_SENTECH\\_-\\_29Aug2015.pdf](https://sadiba.org/images/PDFfiles/DAB_Plus_Field_Measurement_Report_-_SENTECH_-_29Aug2015.pdf)

6.1.1 Apart from one submission, the view from most stakeholders<sup>8</sup> was that DSB technologies should be introduced in South Africa.

6.1.1.1 **Professor Potgieter and Dr Bronwyn E. Howell** had an alternative point of view. They made the following comments:

6.1.1.1.1 Gains to DSB technologies are minimal and would be realised only many years into the future;

6.1.1.1.2 South Africa has ample, unused medium-wave spectrum that can be used, as well as the vibrant, emerging, online, digital audio businesses that offer real competition to the established broadcasters;

6.1.1.1.3 If consumers are already switching to online media, an expensive digital radio migration would be a fruitless exercise;

6.1.1.1.4 There are many technical difficulties with DSB technologies, including quality that is not necessarily better than FM;

6.1.1.1.5 Digital radio sets are more expensive than analogue sets and even with a subsidy, a forced migration to digital broadcasting would be very challenging for the historically-disadvantaged;

6.1.1.1.6 The migration process for DSB technologies is complex in other countries;

6.1.1.1.7 To concentrate the market in the hands of a small number of broadcasters, who have the technical ability to execute it, does not promote competition;

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<sup>8</sup> CRA, ACM, Vamna Media and Production (VMP), Gareth Kneale, WorldDAB, JetCon, Victory FM, Capricorn concepts, NCRF, WECODEC, SABC, Classic FM, DRM Consortium, SENTECH, Kagiso Media, NAB, Pulpit Media Group (PMG)

- 6.1.1.1.8 International experience shows that even the most advanced and wealthy nations have had mixed results in terms of the implementation of DSB; and
- 6.1.1.1.9 Sentech is under-resourced and unlikely to be able to carry DSB. Also the licensees are unlikely to carry DSB services.
- 6.1.1.2 **RTS and LSoSA** stated that DSB technologies (DAB+ and DRM30) can provide suitable supplementary capacity for analogue FM (where spectrum resources are depleted in primary markets) and can ensure the future longevity of Medium Frequency and High Frequency spectrum through migration to DRM30. These digital technologies are spectrum-efficient and have the potential to significantly assist the cause of universal sound radio broadcasting access to the diverse population of South Africa.
- 6.1.1.3 **Primedia** stated that the introduction of DSB technologies will not only open new opportunities for current sound broadcasting licensees, but it will also facilitate the introduction of new players in the industry, by freeing up much-needed frequency spectrum in the sound broadcasting space.
- 6.1.1.3.1 It stated that the introduction of DSB technologies will further aid in ensuring that those classified under the Historically Disadvantaged Groups (“HDGs”) and Black people will have access to ownership opportunities in the sector by being able to apply for broadcasting licenses.
- 6.1.1.3.2 However, Primedia believes the Authority should also be cognisant of the following challenges when introducing DSB:
- 6.1.1.3.2.1 DAB+ and DRM technologies have already been superseded by broadcast over Internet Protocol (“IP”);
- 6.1.1.3.2.2 The increase in broadband ubiquity and the gradual decline of data costs has resulted in broadcasters seeing an increase in the number of

audiences using digital platforms for radio consumption. According to Primedia, this trend will continue to grow significantly, even more so as we see a broader access to smart devices, car infotainment systems and satellite television;

6.1.1.3.2.3 **Primedia** does not see the value of investing in DSB technologies considering that the success and benefits of DSB is dependent on the uptake of DSB receivers by the public. Primedia cautioned that the cost of DAB+ and DRM receivers, which currently retail from a minimum of R750 to over R3000 per unit, is an inhibitor to the successful uptake;

6.1.1.3.2.4 The European Broadcasting Union ("EBU")<sup>9</sup> conducted a study into the digital radio rollout in many European countries. The study highlights the key success factors for radio digitisation and points out both its strengths and areas that require action; and

6.1.1.3.2.5 **Primedia** is of the view that a viable way to ensure the successful uptake of DSB technologies without it being rendered obsolete by over-the-top ("OTT") services, is by ensuring widespread access to receivers. This can be achieved by ensuring that smart devices include an integrated DAB+ and DRM receiver as standard, and that car manufacturers sell vehicles equipped with DAB and DRM receivers as standard. This will in turn ensure that most South African citizens will have access to DSB services, without having to use data bundles to access OTT services.

6.1.1.4 In relation to potential legislative implications **Primedia** proposed that the Authority assess the limitations in section 65 of the ECA and evaluate whether they would still be valid during the DSB implementation. Primedia is of the view that those limitations were placed to inter alia ensure that:

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<sup>9</sup> Market Insights for Digital Radio 2017

- 6.1.1.4.1 there is a multiplicity of views in sound broadcasting;
- 6.1.1.4.2 Historically Disadvantaged Individuals (“HDI”) have ownership and control of sound broadcasting services;
- 6.1.1.4.3 there is no monopolisation of sound broadcasting, and
- 6.1.1.4.4 there is efficient use and equitable distribution of the radio frequency spectrum.
- 6.1.1.5 **Primedia** was of the view that the above factors would still be relevant, and that the legislation is still required to protect the sound broadcasting environment. Therefore, Primedia wonders whether the limitations, as per the current clause 65 subsections (2) to (5) of the ECA, would still be relevant, or could be placed in guarding against the above four factors.
- 6.1.1.6 **Primedia** advocated for a more liberalised approach to ownership and control. Primedia supported the view by the NAB, that the adoption of DSB will require a shift in the regulatory regime, particularly for ownership and control. They strongly believe that the current numerical restrictions to the number of FM and AM services a person may own and control, should be abolished. The restrictions, to some extent, have stifled growth, especially for black-owned broadcasting services.
- 6.1.1.7 Furthermore, the current limitations have not encouraged current license incumbents to invest in new services, particularly in secondary markets. Primedia argued that the limitations have mitigated against the intended purpose of ensuring that there is investment in the sector and the creation of new players, which in turn will create a multiplicity of views.
- 6.1.1.8 **Primedia** proposed that the findings made by the Authority in the Position Paper be adopted if DSB is adopted in South Africa, namely:
- 6.1.1.8.1 legislation should refer only to the control of licensed commercial sound broadcasting services and not distinguish between AM and FM, for the purposes of ensuring diversity of ownership;

6.1.1.8.2 legislation dispense with a finite numerical limit on the number of commercial licenses;

6.1.1.8.3 A structural, percentage-based limitation is favoured; and

6.1.1.8.4 that no person should control more than 35% of the number of commercial sound broadcasting services.

6.1.1.9 **Primedia** proposed an exclusivity period of 18 to 24 months to allow current incumbents to adopt the technology and turn it into an investment, and to allow enough time for the creation of new content to be disseminated in the aforesaid technology.

6.1.1.10 **eMedia** in principle supported the introduction of DSB technologies in South Africa as radio is the only communications network that is still analogue. The use of DSB technologies will result in the efficient use of the scarce and finite radio frequency spectrum.

6.1.1.11 **WorldDAB** viewed DAB+ technology as having much lower transmission costs than analogue or other digital radio technologies, particularly in areas where multiple services are required, for example, nine (9) or more.

## 6.1.2 The Authority's finding and position

6.1.1.1 **The Authority's findings** is that most stakeholders view the introduction of DSB technologies would impact South Africa positively, as there is a universal move to digital platforms, and radio is no different.

6.1.1.2 The submissions indicated that there is a growing demand for radio services and formats as well as more spectrum. The Authority acknowledged that introducing more players will bring innovation and creativity. The Authority further took cognisance of a move from analogue sound broadcasting to DSB worldwide.



6.1.1.1 The Authority noted the contrary view by Professor Potgieter and Dr Bronwyn E. Howell, who state that there is no legitimate need for the introduction of DSB.

6.1.2 **The Authority's position** is that having embarked on international study visits and research, there is evidence that DSB technologies are beneficial and have proven to be successful in other countries such as Norway and Australia. The Authority notes that even though analogue frequencies are ample, the sound quality is generally poor, with higher transmission costs. Furthermore, DSB is necessary to keep up with technological developments and to encourage spectrum efficiency.

6.1.3 In addition, the objectives of the ECA<sup>10</sup> encourage the Authority to move forward in the development of the ICT sector and this can be achieved in this instance through DSB technologies. Therefore, the Authority's position is that the introduction of DSB is necessary in South Africa. The Authority will in the financial year 2019/20 develop draft DSB regulations.

**6.2 Question 2: Do you think the list of technical standards to which the DSB equipment must conform are exhaustive? Motivate your response and suggest other equipment technical standards?**

6.2.1 Most of the submissions received did not respond to the question posed in the Discussion Document<sup>11</sup>, as such those submissions are not captured below. However, below are responses relevant to this question.

6.2.1.1 **WECODEC** stated that the standards, as outlined in the Authority's discussion document in relation to DSB equipment, do not include the receiver specifications for DRM30 and DRM+ compatible receivers.

6.2.1.2 **Classic FM** and **DRM Consortium** submitted an updated version of the South African National Standard ("SANS") and European

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<sup>10</sup> Section 2(e) (i) (r) (x).

<sup>11</sup> Page 11 and 12.

Telecommunications Standards Institute ("ETSI") standard and suggested that these standards be added for DAB+ and DRM30/DAB+ to make the list exhaustive and current. DRM consortium further submitted that the DRM technology is the only technology that can be used across all the bands and they submitted an updated list for this standard.

**6.2.1.3 Sentech** advocated for the *status quo* to remain, considering the mandate and the relationship between the South African Bureau of Standards ("SABS") and the Authority.

**6.2.1.4 Kagiso Media** further stated that whilst receivers that are DAB+ enabled can receive a DAB signal, those that are DAB enabled cannot receive a DAB+ signal. Countries that were early adopters of the DAB standard might incur the costs of having to switch technologies all over again.

**6.2.1.5 PMG's** view was that the standards listed in paragraph 3.2.6, are the relevant standards applicable to DRM (ETSI ES 201 980 "DRM System Specification" as well as ETSI TS 102 349 "DRM Receiver Status and Control Interface (RSCI)"). They advocate that these must be considered for adoption and be included in the National Standards.

**6.2.1.6 PMG** further stated that consideration must be given to ensure that multi-standard, receiver technology is mandated to enable consumers to receive both the analogue and DSB formats. ICASA should proceed to license DRM-based services to encourage receiver take-up. Receivers should be multi-standard and capable of receiving both DAB and DRM services.

**6.2.1.7 WorldDAB** stated that SANS 301 489-11 is equivalent to ETSI TS 301 489-11 and applies to AM, FM, Terrestrial-DAB and DRM30 transmissions. SANS 213 is equivalent to CISPR 13. These standards apply to EMC of multimedia equipment. CISPR 13 was withdrawn on 5 March 2017 and was replaced with CISPR 32.

**6.2.1.8 WorldDAB** also stated the technical standards below:

- 6.2.1.8.1 SANS 62104:2003 (IEC 62104) – Characteristics of DAB receivers; This standard was updated in 2015 to IEC 62104:2015;
- 6.2.1.8.2 SANS 62105:1999 (IEC 62105) – Digital audio broadcast system – Specification of the receiver data interface (RDI); This standard is current SANS 300 401:2005 (ETSI EN 300 401) – Radio Broadcasting Systems; Digital Audio Broadcasting (DAB) to mobile, portable and fixed receivers. This standard was updated in 2017 to ETSI EN 300 401 v2.1.1 (2017-01);
- 6.2.1.8.3 As there have been some significant changes in some documents, it is suggested that the above South African standards are updated to refer to the latest versions of the equivalent documents; and
- 6.2.1.8.4 Further, it is recommended that the following ETSI standards be added for DAB+:
- 6.2.1.8.4.1 TS 101 756 v2.2.1 (2017-08). This covers important codes and identifiers to ensure correct operation in both in-country and international operations for terrestrial broadcasting and hybrid radio operation TS 102 563 v1.2.1 (2010-05): Transport of Advanced Audio Coding ("AAC") audio;
- 6.2.1.8.4.2 For DRM: ES 201 980 v4.1.2 (2017-04): Digital Radio Mondiale (DRM); System specification. This is the DRM core standard;
- 6.2.1.8.4.3 For DAB+ and DRM30/DRM+: TS 102818v3.1.1 is for Hybrid Digital Radio for XML specifications for service and programme information (SPI);
- 6.2.1.8.4.4 TS101 499 v3.1.1 is for Hybrid Digital Radio, Slideshow for User Application Specification. This covers MOT slideshow and hybrid delivery; and
- 6.2.1.8.4.5 TS 102 818 v3.1.1 (2015-01): Hybrid Digital Radio (DAB, DRM, RadioDNS); XML Specification for Service and Programme Information

(SPI). This covers service and programme information delivery by broadcast and IP mechanisms.

6.2.1.9 **RTS and LSoSA** stated that the list of standards meets the minimum requirements and no further improvement is necessary. The applicable ETSI standards should be the terms of reference for any DSB standard.

## 6.2.2 **The Authority's finding and position**

6.2.2.1 **The Authority's finding** is that some of the stakeholders identified other technical standards that were not included in the Discussion Document such as the South African National Standards ("SANS") and the European Telecommunications Standards Institute ("ETSI") standards, while others advocated for the *status quo* to remain. Thus the Authority found that the list is not exhaustive.

6.2.2.2 None of the participants had proposed in its submission a standard that deals with the performance requirements.

6.2.3 **The Authority's Position** is that it will adopt the regulated National technical standards and those approved by the SABS. The Authority will further consider the updated versions of these standards in line with developments noted.

6.2.4 The SABS catalogue of the SANS does not contain within its publication a technical standard that is prescribed for DSB equipment performance conformity assessment. The technical standard must contain requirements to demonstrate that the DSB equipment effectively uses and supports the efficient use of radio spectrum in order to avoid causing harmful interference.

6.2.5 European Technical Standards Institute (ETSI) has developed a standard that specifies technical characteristics and methods of measurements for

devices that receive broadcast sound services, irrespective of the modulation used whether analogue or digital<sup>12</sup>.

The following broadcast radio modulation methods are considered feasible within the current authorization regime in Europe:

- 6.2.5.1 Amplitude modulation, with or without AMSS (AM);
  - 6.2.5.2 Frequency modulation, with or without RDS (FM);
  - 6.2.5.3 Digital Audio Broadcasting (DAB); and
  - 6.2.5.4 Digital Radio Mondiale (DRM).
- 6.2.6 Furthermore, conformance is required for each of the modulation methods included in the sound broadcasting receiver.

**Relationship between the present document and the essential requirements of Directive 2014/53/EU**

<b>Harmonised Standard ETSI EN 303 345</b>				
<b>Requirement</b>			<b>Requirement Conditionality</b>	
<b>No</b>	<b>Description</b>	<b>Reference Clause No:</b>	<b>U/C</b>	<b>Condition</b>
1	Sensitivity	4.2.4	U	
2	Receiver adjacent channel selectivity and blocking	4.2.5	U	
3	Unwanted emissions in the spurious domain	4.2.6	U	

- 6.2.7 Requirements No. 1, 2 and 3 are unconditionally tested upon the sound broadcasting receiver conformity assessment.

<sup>12</sup> ETSI EN 303 345 V1.1.7 (2017-03)

6.2.8 The Authority will consider proposing the ETSI EN 303 345 standard onto SABS Technical Committees for adoption for the South African marketplace.

**6.3 Question 3: In the absence of a policy directive for providing a standard for DSB, should the Authority provide licenses for other DSB technologies? Please motivate your answer.**

6.3.1 Most of the submissions supported the licensing of DRM/DRM+ and DAB/DAB+, as trials had been conducted based on these standards, and have been agreed to by the SADC region. However, some submissions<sup>13</sup> required the presence of a policy directive prior to the consideration of licensing, whilst some submissions supported licensing of other technologies<sup>14</sup>.

6.3.1.1 **CRA** stated that in Australia broadcasters made recommendations to the Minister and the regulator to adopt DAB+ and once rollout was complete, a review of the most suitable platform for remote coverage would be undertaken.

6.3.1.2 **Gareth Kneale** stated that DRM might be a possible additional Technology, however, there is no other DSB Technology that should be considered, and that there is no need to provide a license for same.

6.3.1.3 **eMedia** stated that because South Africa has adopted a technology neutral policy, then there must be one DSB standard adopted. The adoption of one standard will enable the country to benefit from the economies of scale, which will result in affordable radio equipment.

6.3.1.4 **eMedia** was of the considered view that further introduction of other standards is unnecessary and has the potential to destabilise and result in confusion of the migration process. They further pointed out that introducing new standards will cause unnecessary delays.

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<sup>13</sup> Jetcon.

<sup>14</sup> Victory FM.

6.3.1.5 **WorldDAB** stated that South Africa currently has standards for the operation of DAB+ and DRM and that several trials have been undertaken or are ongoing for both standards. WorldDAB provided that the Southern African Digital Broadcasting Association ("SADIBA") encouraged the Authority to officially adopt the DAB+ and DRM30 standards as soon as possible to provide a clear indication to the South African broadcasting industry of the technologies to be used for DSB. It also encouraged the Authority to adopt an approach like the European Union recommendation R138 v2.08 (2017-11) which makes the following recommendation amongst others:

6.3.1.5.1 The needs of all radio services in a country be considered when making plans for the digitisation of radio, including future linear and non-linear service expansion and the available spectrum;

6.3.1.5.2 It further encouraged that digital radio broadcasting in VHF Band III, where it is available, be established and DAB+ (ETSI TS 102 563) audio services be used for new services;

6.3.1.5.3 For countries wishing to deploy digital radio broadcasting in other frequency bands, such as those currently used for analogue radio broadcasting, DRM (ETSI ES 201 980) can also be considered; and

6.3.1.5.4 Conditions for digital switchover be defined, agreed and publicly communicated within each European country to expedite the process.

6.3.1.6 **JetCon** stated that the Authority must not provide licenses for the DSB technologies in the absence of a policy directive. South Africa needs certainty on the policy and standards which will attract foreign direct investment on the manufacturing of Receivers.

6.3.1.7 **Victory FM** agreed that the country cannot diversify media without allowing other DSB technologies to exist.

6.3.1.8 **WECODEC** stated that licenses could be provided for DRM and DAB+ preferably to community radio stations as there is no spectrum available in this regard, as indicated by the implementation of the moratorium. The commercial rollout may require additional consideration before implementation.

6.3.1.9 **Sentech** stated that the purpose of the policy directive requirement with respect to DSB is different as opposed to the requirement to have a policy directive for Digital Terrestrial Television ("DTT") migration. With the latter, the policy directive related to the State-funded network, infrastructure requirements and the subsidisation of Set-Top-Boxes ("STB") for certain households.

6.3.1.10 **Sentech** stated that section 3(1) (d) of the ECA implied that the Minister has discretion to make policies on the general application of terrestrial DSB services but not in issuing a policy advancing a technology. Sentech also advanced the opinion that, by ratifying the Final Acts of RRC-06, South Africa has subsequently adopted the DAB frequency plan in the VHF band III. Sentech believed that the outcome of RRC-06 should be interpreted in the same context as the proceedings of the World Radiocommunication Conference because of the active involvement of the industry in supporting country positions. Therefore, the ratification of the Final Acts of RRC-06 was done after the participation of the broadcasting industry.

6.3.1.11 **Sentech** acknowledged that the ECA is a technology-neutral legislation and therefore empowers the Authority to "provide licenses for other DSB technologies" in the radio frequency bands where currently-terrestrial analogue audio services are deployed.

6.3.1.12 Sentech advised the Authority to address the following:

6.3.1.12.1 Linking requirements for new services;

6.3.1.12.2 Licensing of DSB for existing services (i.e. obligations, duplication of services, etc.);



- 6.3.1.12.3 The role and accommodation of OTT services;
  - 6.3.1.12.4 The impact of deploying different technologies within each band;
  - 6.3.1.12.5 Whether the Authority intends to introduce a switch-off date for analogue services;
  - 6.3.1.12.6 Whether DSB will incur the consequence of impacting the current;
  - 6.3.1.12.7 Licensing regime (Individual Electronic Communications Network Services ("IECNS") (multiplex operators) and content providers);
  - 6.3.1.12.8 Licensing criteria (analogue vs digital, public tender process for IECNS (multiplex operators);
  - 6.3.1.12.9 The extent of DSB impact on existing standards and terms regulations (e.g. content, validity, etc.);
  - 6.3.1.12.10 Exemption to Free-To-Air ("FTA") services from paying spectrum fees;
  - 6.3.1.12.11 The introduction of subscription audio services and the need for must-carry principles;
  - 6.3.1.12.13 Whether current licensees will be protected when introducing new entrants;
  - 6.3.1.12.14 Accessibility of services and devices for people with disabilities; and
  - 6.3.1.12.15 The impact of introducing DSB (Short Wave ("SW"), AM, VHF, FM and VHF band III) on content regulations.
- 6.3.1.13 **Kagiso Media** stated that flowing from Government's policy framework, the Authority needed to establish a clear regulatory framework that will govern the licensing, incentivising and general oversight of the digital radio broadcasting sector.

- 6.3.1.13 **NCRF** stated that in the absence of a policy, one of the current relevant policies should be utilised. As South Africa is a signatory to the ITU, the ITU policy framework should be able to guide the licensing of DSB, however, the NCRF wished to put forward a much faster process of publishing of the policy which engages contributions from other departments such as the DoC and Government Communications Information Systems.
- 6.3.1.14 **PMG's** view is that technological neutrality has been, and is, a key objective of the ECA. The Authority should proceed with providing licenses for DAB and DRM technologies even in the absence of a formal DSB policy directive from the DoC. It does, however, caution against other technologies being licensed in South Africa as these would not be appropriate for Region 1 of the ITU.
- 6.3.1.15 **PMG** noted the provisions of paragraph 3.3.8 of the Discussion Document and queried why the Third Trial License Report had not been made public and was of the view that an update of this section be included to provide for the incorporation of the findings of the Third Trial License Report in the Authority's Position Paper that resulted from the Discussion Document.
- 6.3.1.16 **PMG** further stated that South Africa as part of region 1 should adopt the same DSB technology as the rest of the region to unlock benefits of economies of scale in terms of numbers of receivers. Further, when travelling within the region (e.g. harmonisation within the Southern African Development Community), the technologies should extend beyond physical borders as limited by network planning and coverage parameters.
- 6.3.1.17 **PMG** stated that its research showed that there is a demand for local receiver manufacturing capability and for the adoption of common DSB standards within the region, to stimulate demand and uptake of DSB services to unlock additional socio-economic benefits through local receiver manufacture/assembly and related activities.
- 6.3.1.18 **RTS and LSoSA** stated that the Authority should only consider providing licenses for DRM30 and DAB+ respectively. License conditions should

include the applicant measurable commitment to the promotion of the technology down to user level. This could include receiver subsidisation, sponsored areas of development of receivers, marketing campaigns, etc.

- 6.3.1.19 **RTS and LSoSA** stated that the concept of a trade-off between the DSB and the very successful existing FM services should be avoided at all costs as this could be construed as unnecessary and wasteful and create an artificial resistance towards the new technologies. In all cases, DSB should be considered as complementary to existing FM services. The “weight” and social value of FM broadcasts as a universal sound broadcast access medium in South Africa is significantly more compelling than in Europe, for example.
- 6.3.1.20 **Classic FM** submitted that South Africa has standards for the operation of DAB+ and DRM emanating from the numerous trials using these two standards. The submission considered the introduction of more DSB technologies as unnecessary and potentially destabilising. Classic FM noted that the addition of further standards will confuse the broadcasting sector and supporting industries and slow the introduction of digital radio in South Africa.
- 6.3.1.21 **DRM Consortium** submitted that the Authority should provide licenses for both standards of DRM (DRM for wide coverage, below 30 MHz or DRM30 and DRM for local coverage, above 30 MHz or DRM+). This, according to their submission, is because DRM is the most technologically-advanced and newest global digital radio standard able to broadcast in all frequency bands (both AM and FM). Furthermore, their experience in India has been such that the regulatory body has recommended digitising using the DRM technology for the country in the FM band.
- 6.3.1.22 **SARAO** provided the Authority with additional information on frequency bands that the Authority should be mindful not to interfere with the Square Kilometre Array (“SKA”) project, the frequency bands are tabled as follows:

RAS Allocation (MHz)	RAS Status	Comments
13.36 – 13.41	PRIMARY	No adjacent BS allocation.
25.55 – 25.67	PRIMARY	Any Broadcasting Services in the adjacent band (25.67-26.1 MHz) should consider 5.149 of the RR and ensure that RAS services are protected.
37.5 – 38.25	SECONDARY	No adjacent BS allocation.

### 6.3.2 The Authority's finding and position

6.3.2.1 **The Authority's findings** is that while most stakeholders are of the view that the Authority must confine its licensing to those standards that have gone through trials, and have been agreed to at a regional level, other stakeholders are of the view that there is room to consider other standards. They are further of the view that there is no need for a Policy Directive to pronounce on standards for the Authority to license these standards. The Authority's finding is that despite there not being a final Policy Directive on standards that can be licensed for DSB, the Authority may adopt standards for DSB in the absence of such Policy Directive. This finding is based on submissions received and the fact that in terms of section 3(4) of the ECA, the Authority is required to consider Policy Directives from the Minister. Be that as it may, the DoC consulted the Authority on the draft Policy Directive.

6.3.2.2 The DoC has since published a draft Policy Directive on the introduction of DSB in South Africa on 28 September 2018, inviting public comments. In such a draft Policy Directive, the DoC proposed the following standards:

- 6.3.2.2.1 DRM 30 to complement MW;
- 6.3.2.2.2 DRM+ to complement FM; and
- 6.3.2.2.3 DAB+ for VHF Band III.

6.3.3 **The Authority's position** is that it supports the introduction of these standards based on the trials conducted by industry stakeholders as the trials verified that DRM 30, DRM+ and DAB+ are suitable standards.

6.4 **Question 4: South Africa, through its international agreements at ITU and SADC level, agreed on DAB+ and DRM systems. Please indicate which other digital sound broadcasting technology (ies), if any, should be considered for South Africa? Please motivate.**

6.4.1 Most submissions stated that no other standards should be considered for the sake of synchronisation in the SADC region. Differing views expressed that the Authority should be flexible in its approach to the introduction of new technologies, as the ECA supports technological neutrality<sup>15</sup>.

6.4.1.1 **Victory FM** stated that the RAVIS system should be utilised as it is an advanced technology and is of a high quality and would boost Small, Medium and Micro-Sized Enterprises which are in the manufacturing industry and can reduce unemployment and boost the economy. Further, DSB should simulcast with analogue FM and AM to reach rural listeners.

6.4.1.2 Although the **NCRF** indicated its support for the synchronisation of standards within the SADC region, it also advocated for the consideration of the ISDB-T, which is an integrated technology and can expand systems to other broadcasting mechanisms like mobile technology broadcasting services.

6.4.1.3 **Kagiso Media** shared the same view and stated that South Africa has already agreed to adopt the DAB+ and DRM systems for digital sound broadcasting, however, there is nothing preventing the adoption of other complementary technologies should they become available.

6.3.1.4 Additionally, Kagiso Media provided that because internet radio is fast growing as well as access through satellite systems, and that band 1452 –

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<sup>15</sup>

1492 MHz will be further assessed for future use, South Africa should adopt a flexible approach to technology.

#### 6.4.2 The Authority's finding and position

6.4.2.1 **The Authority's finding** is that there were differing views regarding whether or not the Authority should consider other technologies outside of its commitments at the regional and international level

6.4.2.2 **The Authority's position** is that although other technologies were proposed, it will only consider the proposed technologies in line with SADC for harmonisation purposes.

**6.5 Question 5: To use the spectrum efficiently, the digital sound broadcasting network can be planned on a Single Frequency Network ("SFN"). Do you think that it would be applicable for purposes of digital sound broadcasting? Please motivate.**

6.5.1 Submissions on this question were split between those that supported the use of SFN<sup>16</sup> only, and those that supported the use of both SFN for the metropolis and Multiple Frequency Network ("MFN") for provincial coverage<sup>17</sup> or the adoption of MFN<sup>18</sup>

6.5.1.1 **CRA** stated that the use of SFNs is common in DAB+ for both local and national services.

6.5.1.2 **Gareth Kneale** stated that MFN should be considered when it comes to Regional Broadcasters and this includes community radio stations, and the different requirements for suburban as opposed to rural areas, and different terrains such as flatter regions compared with mountainous regions such as the Western Cape.

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<sup>16</sup> CRA, WorldDAB, JetCon, Kagiso Media, WECODEC, eMedia, Victory FM, NCRF, DRM Consortium, and the RTS and LSoSA.

<sup>17</sup> Sentech, The SABC, NAB and PMG.

<sup>18</sup> Gareth Kneale.

- 6.5.1.3 **WorldDAB** agreed that SFN operation was essential for spectrum efficiency and robust transmission network area coverage. According to WorldDAB, SFN allows repeaters / gap fillers to operate in blackspot /dead spot areas on the same frequency without the need for alternative frequencies as required for FM. SFNs can also be used to provide wide area coverage. However, it was cautioned that care was needed in the design of the transmission network to ensure appropriate transmitter power, antenna site spacing and timing synchronisation to avoid self-interference. According to WorldDAB, MFNs are necessary when coverage areas carry different content, for example, different local area services. The number of multiplexes required for an area is dependent on the demand for services.
- 6.5.1.4 **eMedia** stated that the introduction of SFN will lead to efficiencies in the usage of spectrum in the metropolitan areas of South Africa. During the trial, an SFN was trialled between Pretoria and Johannesburg, and it was successful.
- 6.5.1.5 **JetCon** agreed that it would be applicable for purposes of DSB. It stated that analogue AM and FM radio broadcast networks as well as digital broadcast networks can operate through SFN. SFNs are not generally compatible with analogue television transmission.
- 6.5.1.6 **JetCon** also stated that a simplified form of SFN can be achieved by a low power co-channel repeater, booster or broadcast translator, which is utilised as gap-filler transmitter.
- 6.5.1.7 **Victory FM** stated that DSB trials by the SABC using SFN configuration covered most of the Gauteng province with end-to-end technical functionality and other successes being achieved. As such, provincial radio coverage was possible.
- 6.5.1.8 **NCRF** stated that as per the Discussion Document by ICASA, and the ITU framework, DAB+ and DRM systems can function on both SFN and MFN. Although both systems have been trialled in South Africa, only the DAB+ system was trialled on SFN. With its potential ability to cover a wider area,

it will be very important to ensure monitoring and compliance in ensuring that the community radio sector remains focused in its geographic communities.

6.5.1.9 **WECODEC** stated that DRM had been implemented over thousands of kilometres using shortwave SFN. There were different spectrum requirements for different applications, thus there should be a combination. If DSB is deployed over large SFN, local coverage for community radio will be compromised.

6.5.1.10 The **SABC** stated that DAB+ can be operated on SFN as demonstrated by NAB's DAB+ trial, of which SABC is the license holder. SFN has network instability disadvantages especially when implemented over a large, province-wide or nationwide basis. SABC recommended that SFN be planned in metropolis areas and MFN in other parts of the country to ensure stable and reliable networks for radio services in the country.

6.5.1.11 **Classic FM** submitted that DSB could be planned on SFN operation and is essential for spectrum efficiency and robust transmission network area coverage. It further noted that SFN would benefit cases relating to coverage and better penetration as opposed to FM. According to Classic FM, a proper, long-term plan for densely-populated areas such as a metropolis should be considered in terms of frequency allotment, as opposed to other areas in the country. It must further be considered whether there might be a requirement for an additional VHF Band III television channel that could be allocated to DAB+;

6.5.1.12 **Classic FM** is of the view that DAB+ can be implemented immediately on channel 13F (239 MHz), considering that 7 metropolises are waiting for analogue switch-off, and that there are up to 13 channels allocation with the MNET ad hoc switch-off. In addition, they considered that the services which were never actually switched on were possibly 13 in total. To have the same coverage on FM, for instance, will require 24 separate transmitters and 24 separate frequencies to be utilised, whilst with the SFN,



one transmitter is needed for all 24 services and will lower the costs for broadcasters.

6.5.1.13 **DRM Consortium** submitted that SFN is one of the great advantages of digital radio as compared with analogue radio. In DRM, SFN can be used successfully whether below or above 30 MHz, making the reuse of the same frequency one of its great advantages. The way it works is that two or more transmitters can transmit the same content (same bit) at the same time on the same frequency (which would lead to interference on analogue). SFN networks further helps in the case of gap fillers.

6.5.1.14 **Sentech** pointed out that:

6.5.1.14.1 With lessons learned from the DTT migration process, requirements of terrestrial community audio broadcasters must be dealt with differently from those of individual licensees;

6.5.1.14.2 Although use of SFN is more spectrum-efficient with the added benefit of network gain in digital systems, all content in an SFN must be identical to the different transmitter sites and be synchronised in time. In a multi-channel and radio frequency sharing conditions, large area SFNs limit the flexibility of individual broadcasters to determine their footprints. Provincial-sized SFNs will force all broadcasters sharing a multiplex to have the same coverage footprint. Large SFNs do not empower the adoption of the three tiers (public, commercial and community) of sound broadcasters' license conditions and business models. It is therefore proposed that a combination of SFNs for the main metropolitan areas and MFNs for rural areas be adopted; and

6.5.1.14.3 It supports a regulatory framework catering for all categories of broadcasting.

6.5.1.15 **Kagiso Media** stated that SFN is currently the best option for digital sound broadcasting networks. However, the question of who will operate the SFN is pertinent for the Authority to consider. It seems logical that if the SFN

frequency licenses are licensed in geographical terms then the transmission service provider/s (e.g. Sentech or other independent service providers) would have to bid to be the operators of the SFN and the multiplex. When the transmission service provider wins the bid, then it would be responsible to put infrastructure in place for broadcasters. Broadcasters would then lease a channel from the SFN license holder. However, this might negatively impact the broadcasters as this creates a monopoly, that is, the SFN license holder will be able to unilaterally raise lease prices which could be too high for broadcasters. The Authority will need to consider measures to safeguard against this risk by awarding the multiplex licenses to broadcasters directly. This enables the management of the multiplex on commercial terms rather than on monopolistic activity. In addition, this will stimulate investment by enabling more service providers to enter the market to manage technical broadcasting infrastructure.

**6.5.1.16 Kagiso Media** further stated that the Authority will have to set guidelines on channel composition on the SFN frequency, for example, if a single SFN is licensed to carry 18 channels. These channels would need to be allocated as follows:

6.5.1.16.1 40% commercial content distributors;

6.5.1.16.2 40% public content distributors; and

6.5.1.16.3 20% community content distributors.

**6.5.1.17** The NAB stated that DAB+ and DRM systems can function on both single frequency and multi-frequency networks. It, however, noted that in South Africa only the DAB+ was tried on SFN. The findings on DAB+ trials indicated that SFN has network instability disadvantages especially when implemented over a large geographic area. NAB recommends that SFN be used in larger metropolitan areas and multi-frequency networks be used in other parts of the country.

6.5.1.18 **PMG** was of the view that it is senseless to restrict a DSB network to SFN or MFN. Both DSB technologies (DAB+ and DRM) can operate in a single or MFN configuration. Consequently, both ought to be allowed and licensed.

6.5.1.19 **RTS and LSoSA** stated as follows:

6.5.1.19.1 The use of SFN techniques has been well considered for DSB and applied as part of the trials in Johannesburg and Pretoria respectively. It is an essential component of any digital transmission system and must be applicable for any commercial rollout.

6.5.1.19.2 The current, published ICASA DAB+ frequency allotment plan in the VHF Band III includes SFN frequencies per province. RTS and LSoSA also noted that should this plan be implemented per province there will be a good chance of interference between the Free State and Eastern Cape SFN networks.

## 6.5.2 **The Authority's finding and position**

6.5.2.1 **The Authority's finding** is that the majority of stakeholders agree that SFN is essential for spectrum efficiency and coverage of vast areas. On the other hand, other stakeholders articulated that SFN would cause harmful interference if not synchronised properly.

6.5.2.2 **The Authority's position** is that although the use of SFN on its own would be applicable for DSB, it would however not be practical in the context of South Africa's tiered broadcasting structure. A hybrid model (SFN and MFN) that caters for all three tiers of broadcasting seem to be more applicable for DSB in South Africa. The Authority is also of the view that the commercial and public sound broadcasting services can be operated by one MUX operator on SFN, and different operators for MFN could be considered for community broadcasting services.

**6.6 Question 6 has two (2) sub questions and we have divided them same below:**

**6.6.1 Question 6.1: Should the Authority consider one or more multiplex ("MUX") operator(s) for DSB? Please motivate.**

6.6.1.1 All submissions except for the NAB recommended the use of multiple MUX operators.

6.6.1.1.1 **CRA** stated that in Australia, it was the broadcasters' view that to control costs, the broadcasters in any given license area were given the first opportunity to form a joint venture company to own and operate the MUX.

6.6.1.1.2 **VMP** states that more operators should be introduced into the provision of DSB. Providing the rationale that introducing competition to Sentech will prove beneficial to the market.

6.6.1.1.3 **Gareth Kneale** agreed that the Authority should consider more MUX operators, simply because of free enterprise and for cases where in rural regions it may not be viable for Sentech to provide MUXs and transmission equipment.

6.6.1.1.4 **WorldDAB** stated that there are numerous ways to provide multiplex and transmission services. All countries are slightly different but use a mixture of the basic separation of services and ownership models, each of which has its own advantages and disadvantages. The basic model is that the independent network operator provides multiplex and transmission services. In this model network operator:

6.6.1.1.4.1 does not generate any content; and

6.6.1.1.4.2 charges the broadcasters a fee for capacity on each multiplex that they have services.

6.6.1.1.5 **WorldDAB** also stated that broadcasters own and operate the multiplex and Transmission system. In this model:

- 6.6.1.1.5.1 when more than one broadcaster has services on a multiplex the multiplexer and transmission systems can be owned by a Joint Venture Company ("JVC") which in turn is owned by the broadcasters,
- 6.6.1.1.5.2 the JVC may sub-contract some transmission services to network operators, e.g. for antenna tower aperture, and
- 6.6.1.1.5.3 where the broadcasters own and operate the multiplex system and contract transmission services.
- 6.6.1.1.6 **eMedia** stated that the Authority must, in its final DSB regulations, make it possible for each broadcaster to choose its signal distributor to promote competition. It would be illegal for the Authority to prescribe regulations for the licensing of one MUX operator.
- 6.6.1.1.7 **JetCon** was of the view that the Authority should consider more MUX operators to be able to transform the sound broadcasting sector in South Africa.
- 6.6.1.1.8 **Victory FM** supported more than one MUX operator for economic reasons and for media diversification.
- 6.6.1.1.9 **NCRF** enquired whether the ECA has any provisions relating to a MUX operator license category. In the case that the ECA does not have such provisions, it proposed that ICASA consider developing a framework to determine who can be licensed as a MUX operator and determine the requirements. NCRF expressed that it is not opposed to a multi-operator system as this will assist community broadcasters to propagate to other different devices.
- 6.6.1.1.10 **WECODEC** stated that large multiplexes have led to DAB+ being the only broadcast standard in other countries. A combination of DAB+ and DRM multiplexes will allow versatility and/or individual small multiplexes.

6.6.1.1.11 **The SABC** stated that it is important for the Authority to consider many MUX operators as allowed by the frequency plan and broadcasters must have their own MUXs. The SABC proposes separate MUX operators for national, regional and local coverage to cater for broadcasters with a universal service mandate (e.g. the SABC) and small community players who need a local MUX operator.

6.6.1.1.12 **Classic FM** submitted that there are three models to deal with the matter and offered the following differing options:

6.6.1.1.12.1 A network operator such as Sentech as the Common Carrier which provides multiplex and transmission services;

6.6.1.1.12.2 Broadcasters own and operate the multiplex and transmission system; and

6.6.1.1.12.3 Mixed model where the broadcasters own and operate the multiplex system and contract transmission services.

6.6.1.1.13 **Classic FM** recommended that commercial broadcasters be allowed to select their model of choice.

6.6.1.1.14 **The DRM Consortium** submitted that their technology uses the existing channels, which leaves the broadcaster in charge of its own existing infrastructure without the need of a multiplex and/or operator. It supports a multiplex operator where broadcasters share the cost to be carried by an operator. Furthermore, a single antenna can be used to simulcast the two signals on the legacy network.

6.6.1.1.15 **Sentech** proposed that a public tender process like that which was envisioned in the Digital Migration Regulations, regulation 9, should be considered by the Authority. Additionally, in a multichannel and/or spectrum-sharing environment, Sentech recommends radio frequency spectrum for terrestrial broadcasting services be assigned to ECNS

licensees. ECNS licensees will be empowered to seek innovative ways to diversify revenue and consequently reduce dependency on traditional broadcasting.

- 6.6.1.1.16 The **NAB** stated that currently, broadcasters either choose to self-provide or enter into a commercial contract with a signal distributor (ECNS licensee). It therefore recommends that the *status quo* be maintained since any change in the licensing framework will bring about uncertainty to the detriment of the industry and will require amendments to the legislation. It noted that, currently, there is no broadcaster that has been licensed to be a MUX operator. Broadcasters are required to choose a MUX operator as there must be more than one broadcaster on a single MUX.
- 6.6.1.1.17 **PMG** was of the view that ICASA should not consider licensing only one DSB MUX operator. This would of course constitute a monopoly which would open the door to abuse of power and result in a lack of variety of service providers and customer-focused incentives.
- 6.6.1.1.18 **RTS and LSoSA** stated that it is extremely important that the Authority considers future (independent) MUX operators as well as Transmission Service Providers that could operate within the DSB landscape. There are several considerations for this view, however, where commercialisation is being established as a major driver of viable business cases for new technologies, these entities should be allowed to support the technologies in the interest of the users. An example might be where independent operators can provide low power MUX operators for community broadcasters covering some geographical areas instead of certain commercial market technology deployments. The current changes in the broadcast signal distribution environment and the convergence with telecommunication demands liberation of the signal distribution environment rather than isolation or monopoly.
- 6.6.1.1.19 The **DRM Consortium** submitted that their technology uses the existing channels, which leaves the broadcaster in charge of its own existing

infrastructure without the need of a multiplex and/or operator. It supported a multiplex operator whereby broadcasters share the cost to be carried by an operator. Furthermore, a single antenna can be used to simulcast the two signals on the legacy network.

**6.6.2 Question 6.2: Would you propose a total switch-from traditional analogue AM and FM sound broadcasting? Please motivate.**

**6.6.2.1 Victory FM** recommended total switch-off while PMG suggested a wait-and-see approach to determine whether a total switch-off would be necessary. The rest of the submissions did not support a total switch-off.

**6.6.2.2 CRA** stated that, at this early stage, South Africa should not propose a total analogue radio switch-off. It takes considerable time and coordination to transition audiences to a new, digital, audio platform and replace their existing radios in homes, vehicles and workplaces with new, digital radios.

**6.6.2.3 VMP** said it would not propose a total switch-off of analogue sound broadcasting, stating that certain members of the population would not be able to afford the new DSB receivers.

**6.6.2.4 Gareth Kneale** did not promote a digital switch-off. According to him, considering that the first country, Norway, only completed this at the end of 2017, and other well-established countries in favour of DAB+ are only in the planning stages, and therefore only take place within the next few years, it would be wise to wait on the implications and determine for what the analogue frequencies can be utilised.

**6.6.2.5 WorldDAB** stated that there is always a transition period from analogue to DSB. The transition period for DSB is longer than DTV due to the need to support analogue car receivers.



- 6.6.2.6 **eMedia** also stated that the decision to switch-off analogue must be made when most citizens are able to receive DSB services. The Authority will determine the optimum percentage of those citizens able to receive the DSB services and thus enable the switch-off of the analogue sound broadcasting services.
- 6.6.2.7 **Victory FM** agreed with the total switch-off, as technically there will not be any future clash of spectrum between the DSB technology and analogue or any complications. Moreover, this will assist with facilitating global change.
- 6.6.2.8 **NCRF** proposed a co-existence of DAB and traditional FM for a specified period. As indicated previously, community radio has not featured heavily in the talks about DAB. It is important to allow the process to unfold seamlessly with no station being off air because of a switch-over. However, the regulator must set the schedule to facilitate the rollout process in community radio to move faster.
- 6.6.2.9 **WECODEC** stated that the switch-off from analogue to digital should be considered after many years of preparation and when most of the population is using digital radios. Setting a date for the launch of digital radio would encourage stakeholders.
- 6.6.2.10 **The SABC** discouraged the switch-off of traditional analogue transmitters due to the unaffordability of a typical DSB receiver estimated at R1000.00. Switch-off of analogue should be determined by the adoption of digital services by consumers. The cost of receivers and the cost of signal distribution should underpin the switch-off date of analogue services.
- 6.6.2.11 **Classic FM** recommended that commercial broadcasters be allowed to select their model of choice. Classic FM did not support a switch-off of traditional analogue broadcasters and viewed the introduction of terrestrial DSB services as an added delivery medium. It noted that it will become an unnecessary expense in time, with possibly the SABC and commercial

broadcasters being the some of the first to close their analogue services due to the costs of dual illumination. However, it submitted that switching off analogue services will help promote the switch to digital and encourage the take-up of new, digital radio-capable receivers.

6.6.2.12 **DRM Consortium** submitted that although radio does not have the advantage of being able to deliver a big digital dividend like digital television, a transition period will always be necessary to introduce the advantages of DSB, migrate the existing listeners and gain new listeners to the new digital platform. This transition period should be as short as possible since the cost of maintaining both analogue and digital on air can be relatively high.

6.6.2.13 **DRM Consortium** further stated that a switch-off date needed to be set as this focuses the minds and efforts of both the listeners and broadcasters and does not stretch the project into uncertain times.

6.6.2.14 **Sentech** pointed out that since digital and analogue sound broadcasting can be operated successfully simultaneously, it proposed an annual measure of DSB take-up. Through a public participation process, the Authority can determine the percentage take-up required to commence analogue switch-off.

6.6.2.15 **Kagiso Media** stated that in the Terrestrial Broadcasting Frequency Plan, 2013, the Authority indicated that a switch-off date for AM and FM transmission in South Africa would not be set. It further stated that digital audio broadcasting would be an additional audio service available.

6.6.2.16 **Kagiso Media** further stated that a complete switch-off of analogue transmission is not necessary for the following reasons:

6.6.2.16.1 The ITU has not prescribed a mandatory switch-off;

6.6.2.16.2 Digital radio can co-exist with analogue radio that operates in the AM/FM frequency bands because there is no sharing of frequencies;

6.6.2.16.3 The spectrum that may be released through migration is not required or other services; and

6.6.2.16.4 Most countries have not set a switch-off date and are rather adopting a gradual approach to digital.

6.6.2.17 Kagiso Media stated that a complete switch-off is not feasible in the short to medium term. South Africa should consider a total switch-off only when a critical mass of consumers has access to digital receivers and the incumbents have recouped their investment in digital equipment. The Authority should set the benchmark (e.g. 60% population uptake) as the point at which it can then set the date for the digital radio switchover.

6.6.2.18 The **NAB** recommended that analogue sound broadcasting services must continue to be available. Unlike DTT, DSB is meant to serve as an alternative distribution platform. Currently, the DAB+ receivers may not be affordable and therefore it is important for the market for DSB services to be allowed time to grow and establish itself before there can a total switch-off.

6.6.2.19 **PMG** further stated that there may well be socio-economic trade-offs given that sound broadcasting, which is one of the primary means of accessing information in the rural areas, and the cost of DSB receivers, will be a factor. While initially affordability may be an issue, this can be addressed through some subsidy or marketing process to reduce receiver cost and stimulate take-up. According to PMG, only a few international countries have achieved a total switch-off of analogue sound broadcasting services.

6.6.2.20 PMG also stated that ICASA should adopt a 'wait and see' approach to this issue because if digital sound receiver sets become generally affordable and

there is no listener backlash to a proposed total switch-off, there would be no reason not to have such a total switch-off.

6.6.2.21 **RTS and LSoSA** further stated that the commercialisation of DSB should not signal shutdown of traditional analogue sound broadcasting in South Africa. However, the present AM/SW broadcast landscape should be encouraged to migrate to DRM (dependent on market forces with receivers and availability or readiness of transmission infrastructure).

6.6.2.22 **Primedia** disagreed with total switch-off as most South Africans will not have access to DAB receivers and the prices of receivers currently available on the market are still relatively high for a South African household to purchase. This phenomenon is not unique to South Africa alone. The Market Insights for Digital Radio 2017 Report shows that even in European markets with a larger and wealthier middle class, access to receivers is still relatively low. The slow uptake has also resulted in many European countries pushing back the analogue switch-off date due to the slow uptake of DSB technology. In the South African context, Primedia believes that there should not be a switch-off of the analogue signals until access to receivers to South African Households is over 90%.

6.6.2.23 **Primedia** stated that it is aware, as indicated in the Discussion Document, that with the advent of digital terrestrial television, households will be able to use their set top boxes to receive sound broadcasting services. This will ensure that there is a widespread uptake of DSB. However, the analogue signal should still be used until there is widespread access to affordable DAB receivers. Furthermore, Primedia was encouraged that the Authority recognised that "ideally, digital audio broadcasting should augment and not replace AM and FM".

6.6.2.24 **Igagasi and Heart FM** stated that converting to DSB will require listeners to buy a digital receiver. This will come at a cost which, at present, is undetermined. While no doubt the cost of such receivers will decrease over

time, once more receivers are manufactured and purchased, it will clearly be out of reach of a substantial portion of the population due to, *inter alia*, the disparity in income levels and demographics existing in South Africa.

**6.6.2.25 Igagasi and Heart FM** further stated that, as a benchmark, the current cost of an FM/AM receiver should not be less than R400.00 (see the Hi Fi Corporation website). Given that the introduction of DSB will require a new technology, it is submitted that a DSB receiver will be most costly. The aforesaid position is not a novel one. When discussions took place in the United Kingdom regarding the switchover to DSB, the Shadow Culture Minister at the time, Helen Goodman, stated that UK has had the same experience.

**6.6.2.26 Igagasi and Heart FM** also stated that, while recognising the additional costs which broadcasters will need to incur if there is not a total switch-off in the initial phase after the introduction of DSB, it submitted that there should not be a total switch-off in the short or medium term.

### **6.6.3 The Authority's finding and position**

**6.6.3.1 The Authority's finding** in relation to question 6.1 is that most stakeholders are in support of multiple MUX operators. Other stakeholders go further to advise the Authority of the various models available, ranging from a network operator owned multiplex such as Sentech, a broadcaster owned and operated multiplex, a mixed model where the broadcaster owns and operate the multiplex system and contract transmission services and lastly a multiplex that is partly owned by a broadcaster.

**6.6.3.2 The Authority's position** will use the similar licensing framework for DTT, which assigns MUX operators or part thereof to the broadcaster. This licensing framework further allows for signal distributors to be licensed. The Authority's position is therefore that it will consider more than one MUX operator in line with its existing framework.

6.6.3.3 With respect to question 6.2, **the Authority's finding** is that based on submissions received from stakeholders, it will not be necessary for a total analogue switch off for various reasons such as, the availability of digital receivers and costs thereof. Further, international trends reveal that analogue can co-exist with digital services until there is enough up-take of receivers. Also, the submissions received did not advocate for a total switch-off, but rather suggested a moratorium be imposed wherein current existing players who transmit through analogue systems would be allowed to establish themselves and the market for DSB and only then would new players be introduced in this regard.

6.6.3.4 **The Authority's position** is that it agrees that DSB is a complementary service to analogue AM and FM services, and that there will not be a switch-off of same, the Authority notes that the decision to switch off analogue sound broadcasting vests with the policy maker by way of publication in a government gazette. This decision is therefore not within the remit of the Authority.

**6.7 Question 7: Should the Authority adopt the strategy used in other international markets of licensing DSB services in the primary markets<sup>19</sup> first and then action a nationwide rollout? Please motivate.**

6.7.1 The CRA, VMP, Gareth Kneale, Word DAB, eMedia, WECODEC, Classic FM, Kagiso Media and Primedia supported commencing with DSB rollout in the primary markets. While, JetCon, the SABC, Sentech and DRM Consortium support a nationwide rollout. The NCRF believed that consideration should be taken regarding the local environment instead of simply applying any method. Lastly, the NAB and PMG suggested that ICASA reviews spectrum availability and conducts a market readiness study. PMG was the only stakeholder which supported an immediate nationwide rollout of DSB services.

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<sup>19</sup> Primary Markets shall mean geographical markets of Gauteng and the metropolitan areas of and around Cape Town and Durban, as outlined in the Position Paper on Ownership and Control published on 13 January 2004, page 40.

- 6.7.1.1 **CRA** stated that it makes sense to, where possible, issue licenses in the largest population centres initially, providing more people with the ability to access digital radio services. Once rollout in these markets is underway, a second and potentially third phase of planning can occur for the next tier of markets where channel allotments can be made. Frequency and channel coordination with neighbouring countries can also be done in these secondary phases.
- 6.7.1.2 **VMP** agreed with licensing in the primary markets first and stated that the Authority should look at key findings that are relevant to the South African market. VMP used Australia as an illustration in that its audiences wanted new content on the DAB+ platform. The new formats drove the take-up of digital receivers. VMP advocated for a nationwide rollout and for more licensees to be given a nationwide footprint to compete with the SABC.
- 6.7.1.3 **Gareth Kneale** stated that the Authority should license the primary market of Gauteng where multiple test phases have been completed. Then the other major regions should be planned, tested and then licensed once testing has been completed and is successful.
- 6.7.1.4 **World DAB** stated that the approach of rolling out DSB to larger population centres first followed by the next largest set of population areas can be tackled over time in all areas suitable for the technology.
- 6.7.1.5 **eMedia** supported the licensing of DSB services in the primary markets first followed by a nationwide rollout, as had been done in many other countries around the world.
- 6.7.1.6 **JetCon** was of the view that an immediate nationwide rollout strategy will be the best to fast track the transformation of the sector as the technology has the flexibility to satisfy any coverage need in Band II ranging from national and regional networks to community stations.

- 6.7.1.7 **Victory FM** agreed on primary markets rollout first because there is still a huge demand for new allocations of frequencies. If the Authority does not adopt strategies used by other international markets, it might not have active regulations to accommodate new frequencies and may have many challenges in implementing and sustaining the DSB services.
- 6.7.1.8 **NCRF** stated that with the ITU being the hallmark of this process, it moved for a licensing procedure that is not necessarily like any international market but rather is conducive to the broadcasting environment in South Africa. The important factor will be to ensure the alignment of the regulatory specifications with the ITU framework.
- 6.7.1.9 **WECODEC** was of the view that deployment varies from country to country.
- 6.7.1.10 **The SABC** stated that the issue of primary and secondary markets falls completely away in digital dispensation. In the digital age, the signal can be distributed over internet, DTT/DTH and DSTV platforms. What needs to be considered is the readiness of the market, through market research and the availability of spectrum. The SABC further recommended that DSB be licensed first to existing broadcasters and then, after market research has been concluded and sustainability of the market and new entrants have been confirmed, then licenses can be made available for new entrants.
- 6.7.1.11 **Classic FM** submitted that the rolling out of the new DSB network will need to be phased in as was done in the rollout of the original analogue FM network.
- 6.7.1.12 **Classic FM** recommended that DAB+ be rolled out in the primary markets first, followed by a phased approach to the secondary markets leading to an eventual countrywide rollout. Further submission was that the current frequency plan or draft planning has two allotments throughout the whole country but for the major metropolis, it is not enough, and they anticipate that Gauteng will need a lot more.



- 6.7.1.13 **DRM Consortium** submitted that the proposal for a phased market rollout is in danger of concentrating first on those who have access to a wealth of information, live in rich enclaves with IP, satellite, digital TV access. They proposed a nationwide rollout from the start, then a commitment by stakeholders to a launch-date of DSB and to a switch-off date of analogue. It further proposed a national rollout plan that included the stakeholders, a national working group, together with a consolidated campaign informing the listeners of the proposed switch-over.
- 6.7.1.14 **Sentech** did not support the strategy to introduce DSB initially for primary markets. It stated that the introduction of DSB must follow the objectives of the ECA, section 2(g), (h), (k), (s) (i) and (t). DSB services should enable the Authority to leapfrog to address national, regional and local inequalities that analogue services were unable to address. The Authority also needs to address the issue of digital divide through the introduction of DSB services.
- 6.7.1.15 **Kagiso Media** stated that the strategy of licensing DSB services in primary markets first may be prudent owing to the saturation of frequencies for analogue broadcasting in these areas.
- 6.7.1.16 The **NAB** submitted that it was not necessary to consider licensing in terms of primary or secondary markets. The Authority should be guided by the availability of spectrum, the readiness of the market and the uptake of DSB services by the consumers. The NAB is, however, of the view that (for DSB licensing) the Authority should prioritise broadcasters who are already bearing onerous transmission costs for analogue broadcasting. It further submits that currently only channel 13F is available for DSB and that this spectrum could be used for a small-scale commercial DSB launch ahead of the earmarked DAB+ spectrum becoming available.
- 6.7.1.17 **PMG** did not agree with the proposal to rollout in the primary markets first in South Africa as the primary markets are where there is most FM. PMG

respectfully submitted that the critical issue is not to focus on primary versus other markets but to rollout DSB wherever possible. From a spectrum point of view, it has long been recognised by South African policymakers that the needs of rural people have been marginalised. Dual illumination should be allowed so that broadcasters can provide both an analogue and a DSB service. In the case of DRM, it would be immediately possible given the amount of spectrum available in the AM bands and this would bring immediate benefits to the needs of the currently marginalised rural population.

6.7.1.18 **PMG** respectfully took issue with the International Benchmark exercise reported in section 5 of the Discussion Document instead of focussing on developing countries. PMG questioned focussing on countries that are essentially mono-lingual (as is the case with all countries bench-marked), as South Africa has eleven (11) official spoken languages. According to PMG, this ignored one of the fundamental rationales for introducing DSB as soon as possible in South Africa.

6.7.1.19 PMG queried the inclusion of Singapore in any International Benchmarking exercise on DSB, given that it is an extremely small territory that is almost entirely urbanised. The rollout of DSB services should not be held back and not be dependent on full DTT migration for DAB+ which requires spectrum to become free. However, DRM fits into the current frequency plan and should be allowed to rollout DSB services immediately.

6.7.1.20 **RTS and LSoSA** stated that the strategy of creating additional capacity in the primary markets by way of DSB is appropriate. However, South Africa's rural demographic profile is somewhat different to the run-of-the-mill international markets and needs a specific strategy to best protect its interests during the deployment and promotion of DSB.

6.7.1.21 **Primedia** agreed with the phased approach. If the Authority adopts a principle of dual illumination, it believed that licensees in the primary markets will be better placed to adopt DSB technology. Access to DAB

receivers is more prevalent in primary markets than it is in secondary markets.

6.7.1.22 **Primedia** also proposed that, if licensees in the primary markets are licensed first, the Authority implement an exclusivity period whereby no new licensee will be licensed on DAB in the primary markets for a set period. Primedia believed that this approach will encourage investment in the technology by current licensees and it would serve as a commercial incentive for current licensees to take up the technology and invest in new content for the platform.

6.7.1.23 **Primedia** was of the view that the Authority should conduct a Regulatory Impact Assessment (“RIA”) to assess the viability of the introduction of DSB technologies from a commercial point of view. The Authority should also bear in mind the current state of the South African economy, which has seen a significant reduction in advertising spend due to the tough economic climate experienced by many companies. Sound broadcasters have lost their share of advertising to platforms such as Google, Facebook and other online publishers. Any further fragmentation of the sector will see further declines in advertising spend as more advertisers move to advertising on digital platforms, which affords them a better opportunity to reach out to their target markets better than that which radio can offer. Therefore, investment into DSB technology by sound broadcasters may never see a return on investment.

## 6.7.2 The Authority’s finding and position

6.7.2.1 **The Authority’s finding** is that most stakeholders agreed with the initial licensing of DSB services in primary markets. A dissenting view was also noted that advocated for nationwide implementation instead. The Authority further notes the view that the issue of markets is mute in the digital dispensation as digital services can be accessed on a variety of platforms. The findings also indicated that there should be a consideration of the South African landscape and market readiness prior to deciding on where it should

initially be implemented and the conduction of a market review as well as the availability of spectrum.

**6.7.2.2 The Authority's position** is that there should be licensing of DSB services firstly in the primary markets than implementing a nationwide roll-out. Implementing a nationwide rollout will not be prudent from a cost perspective. The Authority is of the view that the initial implementation of DSB services in primary markets will promote a sustainable environment for DSB services. Moreover, spectrum constraints and/or congestions is primarily being experienced in the primary markets.

**6.8 Question 8: Can the current sound broadcasting market afford new DSB licensees in community, commercial and public service? In your answer, explain your reasons and/or choice for any of your submission.**

**6.8.1** CRA, eMedia, World DAB, the SABC, Classic FM and Kagiso Media supported the introduction of a moratorium. ACM, NCRF and the NAB recommended that the Authority conduct prior market research. VMP, Gareth Kneale, Victory FM, PMG, RTS and LSoS proposed the introduction of new licenses immediately.

**6.8.1.1 CRA** stated that in Australia, the incumbent broadcasters were given a modest allocation of free spectrum and there was a six year "no new entrants" clause to incentivise them to invest in digital radio services. They were also allowed to bid for any spare spectrum up to a cap and to use that spectrum without format restriction.

**6.8.1.2** CRA stated that the key to the affordability is to ensure:

**6.8.1.2.1** free/low cost access to digital spectrum for eligible broadcaster,

**6.8.1.2.2** costs are shared amongst as many broadcasters as are in the local area,

- 6.8.1.2.3 that there is an access agreement sanctioned by the competition regulator that prevents profiteering by the transmission service provider or MUX license holder,
- 6.8.1.2.4 that there is shared capital investment in digital infrastructure (transmitters, antennas, combiners),
- 6.8.1.2.5 there are shared transmission costs and other opex; and
- 6.8.1.2.6 there are fair access fees for community broadcasters who are entitled to them.
- 6.8.1.3 **ACM** stated that there is overwhelming consumer demand driven by content and features.
- 6.8.1.4 **VMP** was of the view that the market can afford new DSB licensees. The introduction of DSB will introduce competition into the sector and bring about innovation, investment and create employment. VMP takes a free market approach in that the market alone should determine who survives.
- 6.8.1.5 **Gareth Kneale** stated that new Radio Channels would attract new listeners who do not currently listen to what is currently broadcast. With Sentech or other broadcast transmission providers providing the broadcast side, the commercial broadcasters and independent radio stations could lease equipment on the studio and studio link side and terminate the leases on the new equipment needed if the return on investment is not realised. Many of these stations may currently be broadcasting via Internet Radio or analogue and their existing listeners would now be able to receive via DAB+ and/or DRM with no data costs. This may also attract listeners who now stream services back to Live Radio because of the advantages of radio for broadcasts such as news updates, weather forecasts, advanced traffic information, competitions, real time interactions with the radio presenters, etc.

6.8.1.5 **eMedia** stated that one of the benefits for the adoption of DSB is to provide more choice for consumers. The use of digital transmission technologies requires less spectrum to carry the same amount of information than the existing analogue broadcasting system.

6.8.1.6 Thus, according to eMedia, more capacity could be made available for launching new services or allowing more operators to provide audio services. They recommend a moratorium on new licenses initially, as the incumbent licensees will have to carry the burden of dual illumination costs. eMedia further stated that given the number of the current community, commercial and public analogue licensees in the market, it is of the view that the Authority must conduct a market study to determine the optimum number of DSB services which can be carried and sustained.

6.8.1.7 **WorldDAB** stated that this additional capacity provides the opportunity to deliver more public, commercial and community radio services. In general, the broadcasters who are already established are best placed to provide the initial simulcast services and to develop new, digital-only services. WorldDAB also stated that public service broadcasters reap a benefit from the introduction of additional services through being able to offer the public more variation in content and higher quality content.

6.8.1.8 **WorldDAB** further stated that commercial and community broadcasters need to justify the cost of establishing DAB+ and the provision of additional services, which is a very challenging market due to increased competition from international sources. It said that it would be useful to provide an incentive package to ensure that the existing broadcasters participate.

6.8.1.9 **JetCon** was of the view that there is a market in South Africa for DSB licensees due to the past skewed policies of Apartheid. South Africans need more local relevant content which will be sufficient for the South African environment.

6.8.1.10 **Victory FM** stated that it agrees that if the government can subsidise community stations and support them through advertising. The community

broadcaster can benefit and sustain itself through subscribers, but the prices must be reasonable because most of the population are still dealing with unemployment, low salaries, debts, and businesses are struggling to pay for adverts on radios.

- 6.8.1.11 **NCRF** stated that its members rely largely on grants from the government and Media Development and Diversity Agency (MDDA). It will be important for the regulator to conduct a feasibility study which will consider various socio-economic factors which the stations are faced with daily. With stations situated in various sectors of society, a blanket approach of affordability will not be feasible. This can already be seen in relation to signal distribution, whereby some stations are able to service their monthly instalments regularly while others, without government intervention, will severely suffer.
- 6.8.1.12 **WECODEC** agreed that the market ensure that it can afford new DSB licenses that will lead to innovation, job creation and a new opportunity to address challenges.
- 6.8.1.13 **The SABC** proposed that broadcasters will have to bear the cost of dual illumination and the cost of new content for DSB services. As a public broadcaster with 18 radio stations, the cost will be high. There is therefore a need to refrain from licensing new entrants until existing broadcasters have overcome this financial hurdle.
- 6.8.1.14 **Classic FM** was of the view that despite the recent popularity of IP audio services, for example Apple Music and Spotify amongst others, which are encroaching into radios' listening share, terrestrial radio still has a place in the market and can still thrive. Hence, DAB+'s ability to offer more services in that area than can be achieved by using traditional analogue makes it an obvious choice to deliver more public, commercial and community radio services.
- 6.8.1.15 **Kagiso Media** recommended a moratorium on new licenses during the transitional period as an incentive to incumbent broadcasters to invest in

new equipment and assets to be able to earn a return and recoup such investment. This will allow time to move listeners to digital radio. Both Australia and Canada adopted this approach of first licensing current broadcasters on a transitional basis before opening it up to new players.

6.8.1.16 The **NAB** recommended that the Authority must conduct a socio-economic impact assessment which will highlight the financial implications of implementing DSB and provide some guidance on the most feasible and cost-effective manner to make DSB services available. NAB stated that DSB has the potential to enable greater diversity of content, language and formats. However, a market study is required to assess the feasibility of licensing new DSB services.

6.8.1.17 **PMG** was of the view that licensing new DSB licensees is essential to bridge the digital divide that exists in the country, particularly in respect of community and public broadcasting services.

6.8.1.18 **RTS and LSoSA** stated that the Authority should encourage the emergence of new licensees for the DSB landscape for several reasons including the diversification of content providers (both community and commercial sound broadcasters). This would be done by allowing the participation of smaller MUX and signal distribution providers; it may be possible to allow for MUXs that serve geographic areas (same analogy as per existing FM radio services). RTS and LSoSA also stated that there should be subsidisation across all tiers on the user level as a licensing condition.

## 6.8.2 **The Authority's finding and position**

6.8.2.1 **The Authority's findings** is that a number of stakeholders' advocate for a national roll out, while others believe the market is not ready to allow new players and are therefore advocating for a market study and a moratorium to this effect, to allow current analogue players to establish themselves prior to introducing new players for DSB. The Authority has observed that the participation in DSB trial by commercial sound broadcasters has created a level of expectation for a licensing new players.



6.8.2.2 **The Authority's position** is that a market study may have to be conducted prior to the introduction of new broadcasting market entrants.

## 7. Additional questions for Consumers

7.1 The questions directed at consumers were not responded to by consumers but were rather addressed by WECODEC and Classic FM, whose views are already addressed above.

7.2 The Authority further tried to solicit comments on the Discussion Document from consumers through the assistance of Consumer Activation Programs and liaised with the Authority's Consumer Advisory Panel, no comments were received by the Authority in this regard.

## 8. Additional questions for Broadcasters

8.1 **What is your understanding, expectations and concerns as broadcasters with respect to DSB?**

8.1.1 **Classic FM's** concern is whether government will be able to subsidise or offer other incentives in the form of free spectrum and/or a license fee rebate to broadcasters for a certain period.

8.1.2 **PMG** stated that broadcasters are concerned about being unable to promote the adoption of digital radio receiver sets because no DSB licenses are currently being granted by ICASA. Such licenses are essential to begin the rollout of receiver sets and the take-up thereof by the public.

8.2 **How will DSB impact your sound broadcasting services business?**

8.2.1 **WECODEC** stated that DSB will allow the radio station to broadcast English and Afrikaans simultaneously. The trials have shown that there is great interest in innovation by the community.

8.2.2 **Classic FM** stated that there will be a cost impact. There could be listenership increases especially if niche broadcasters are able to expand their existing coverage. If incentives allow a station to start another service, this will have cost implications regarding the setup, amongst other things. There will also be a need for a coordinated marketing plan to inform the radio industry and listeners of the introduction of DSB and encourage the take-up thereof. This will increase costs, but these will be recovered over time.

**8.3 What are the projected financial implications associated with DSB, considering that Digital Terrestrial Television (DTT) is to be implemented prior to DSB?**

8.3.1 **PMG** submitted that the implementation of DTT will not have cost implications for DSB other than the costs of listener or audience education to promote the take-up of digital sound receiver sets.

**8.4 What issues of concern should the Authority be wary of when implementing and planning for the regulation of DSB, with respect to competition, spectrum concerns, financial considerations, etc.?**

8.4.1 **WECODEC** proposed that market entry should be low to allow innovative initiatives and opportunities.

8.4.2 **Classic FM** stated that broadcasters will need to justify the cost of establishing DAB+ and providing additional services, which can be very challenging in this market due to increased competition from international sources.

8.4.3 **PMG** was of the view that the most important issue is the possibility of Authority inadvertently creating monopolies and holding back the rollout of DSB, when spectrum is in fact available.

**8.5 Do you believe DSB will encourage growth in your business or will it create unnecessary financial pressure on your business?**

8.5.1 **WECODEC** stated that it will provide growth in the business.

8.5.2 **Classic FM** stated that it will encourage growth as it will provide another terrestrial platform to provide listeners with coverage that they do not currently enjoy where there is poor signal. Advertisers will be encouraged to spend on a station that can be heard clearly and easily.

**8.6 Have you conducted research on DSB and the implementation and regulation of same that you can share with the Authority?**

8.6.1 **WECODEC** stated that it has submitted its final trial report to the Authority.

8.6.2 **Classic FM** had participated in the Joint SADIBA/NAB DAB+ Trial in Gauteng and through this process has gained enormous technical knowledge.

8.6.3 **PMG** stated that it has been extremely involved in the testing of DRM and its detailed tests results report has been submitted to the Authority.

**8.7 Please provide the Authority with any further information you deem necessary and asked for herein?**

8.7.1 **Classic FM** stated that currently there is no provision in the ECA for a MUX operator license category. The Authority may want to consider developing a framework to determine who can be licensed as a MUX operator and set out the requirements should it deem it necessary to license MUX operators separately.

8.7.2 **Igagasi and Heart FM** stated that DSB will create greater opportunities for existing sound broadcasters by increasing the capacity in broadcasting transmission networks. However, the cost of transitioning to digital

broadcasting will be substantial. Thus 'bigger' or 'more profitable' players in the industry will have a greater opportunity to build an income or advertising base as opposed to smaller players and they are concerned about the impact on competition with the introduction of DSB.

8.7.3 **Primedia** recommended that the Authority conducts a Regulatory Impact Assessment which will, amongst other things, consider the costs of DAB+ and DRM receivers, to ensure that they are accessible to the public.

8.7.4 **Primedia** further stated that once issues relating to the cost of receivers are addressed, the introduction of DSB technologies will aid in achieving the objects set out in section 2(d), (e), (g) and (i) of the Broadcasting Act (Act 4 of 1999) which includes ensuring that there are new players in the sector, ensure a plurality of views, a broad range of services, investment in the sector and the efficient use of spectrum.

#### 8.8 **How would the introduction of digital sound broadcasting benefit the service providers?**

8.8.1 **WECODEC** stated that it will benefit all interested parties, Sentech and alternative stakeholders.

8.8.2 **Classic FM** stated that Sentech will be well placed to start an initial nationwide rollout thereby allowing it to join and benefit financially from DAB+. Independent "licensed" MUX operators could provide transmission facilities to commercial and community broadcasters. Smaller "licensed", independent, MUX operators could provide low power DAB+ services for community broadcasters in smaller geographic areas. All of this would lead to additional job creation in the broadcasting sector.

8.8.3 **PMG** was of the view that additional sound broadcasting services, through the licensing of DSB, would stimulate a variety of economic activity such as additional programme production.

**8.9 What is your understanding of DSB and the impact it will have on your business model and financial projections in South Africa once implemented?**

8.9.1 **WECODEC** stated that they had designed and manufactured their own DRM receiver. The implementation of DSB will allow WECODEC to start their own community-based digital radio manufacturing plan that will create sustainable jobs.

8.9.2 **AREI** stated that the DSB receiver manufacturer will have a significant impact on AREI Member Companies. Such companies, some of whom are currently manufacturing Terrestrial Set-Top Boxes, have struggled in the current economic climate due to the large proportion of imported consumer electronics.

**8.10 What financial, competition, manufacturing etc. challenges do you anticipate having with respect to DSB?**

8.10.1 **WECODEC** stated that the market potential and competition will be helpful rather than challenging.

8.10.2 **AREI** stated that mistakes made with the Terrestrial Set-Top Boxes, such as corruption and nepotism, are to be avoided. The second challenge is to regulate the importation of receivers to ensure that local manufacturers are given an opportunity to compete in producing receivers. The cost of the receivers may also be a challenge as the current technology is expensive, whilst the royalties and licenses are extensive.

**8.11 Do you plan on building and manufacturing equipment for DSB in South Africa in partnership with state or regulatory assigned Broad-based Black-Economic Empowerment and Historically-Disadvantaged Groups?**

8.11.1 **WECODEC** stated that it has plans to create manufacturing facilities and is willing to share its experience with Broad-based Black-Economic Empowerment and Historically-Disadvantaged Groups.

8.12 **What is your business plan, if any with respect to preparing yourselves for manufacturing and selling DBS equipment for South African consumers?**

8.12.1 WECODEC stated that it will have a lucrative business if DRM only or DRM/DAB is chosen.

8.13 **What pricing negotiations are you open to discussing with relevant bodies, including the Authority, to make the said DSB equipment affordable for consumers?**

8.13.1 WECODEC stated that entry level equipment should not exceed R500.00.

## 9 **Additional questions for manufacturers**

9.1 The Authority did not receive responses from manufactures by the closing date for submissions. The Authority did however seek same thereafter to solicit these views as it believes that the information provided herein is vital for purposes of gathering information for this inquiry. Below are the questions and responses received:

9.1.1 **Will the introduction of DSB create more jobs for South Africans in your sector? If not why, if yes, how will this impact the statistics on job levels in the South African economy?**

9.1.1.1. **BIG 9 ICT** stated that there will be job creation on a large scale, a boost in economic growth (building rental/security/support services, etc.) and skills and knowledge transfer. They further stated that DSB equipment

refers not just to digital radio receivers but also to infrastructure. It is incumbent upon the State to trigger investment that will result in the desired job creation and economic growth, by providing tangible incentives to foreign investors willing to invest in infrastructure, intellectual property, skills transfer, manufacturing plants, etc. Such incentives could be in the form of tax breaks, purchase preferences, contributions to establishment costs, etc.

**9.1.2 Do you plan on building and manufacturing equipment for DSB in South Africa in partnership with state or regulatory assigned Broad-Based Black-Economic Empowerment (B-BBEE) and Historically Disadvantaged Groups (HDG)?**

9.1.2.1 **BIG 9 ICT** stated that it has already identified suitable BBEE and HDG partners.

9.1.2.2 **AREI** stated that its member companies would consider this strategy.

**9.2 What is your business plan, if any, with respect to preparing yourselves for manufacturing and selling DSB equipment for South African consumers?**

9.2.1 **BIG 9 ICT** stated that its business plan for the TITUS II digital radio receiver involved the manufacturing of a range of digital receivers to serve the digital radio listener market in the whole of Africa. Its business plan includes manufacturing in South Africa, marketing, sales and distribution of digital radio receivers throughout Africa.

9.2.2 **AREI** stated that the manufacturing of DSB receivers would be very similar to STBs, therefore business for manufacturing of DSB equipment exists in principle as its member companies had previously prepared business plans for the STB Tender. AREI further suggested that its selling of DSB equipment

would be through existing retail structures that currently sell STBs. Further, AREI suggests that receivers could be exported into Africa.

**9.3 What pricing negotiations are you open to discussing with relevant bodies, including the Authority, to make the said DSB equipment affordable for consumers?**

9.3.1 According to **BIG 9 ICT**, affordability is relative. Its business plan caters for a range of digital receivers to be manufactured and sold. Affordability can best be addressed through providing a range of digital radio receivers (from a basic unit at very affordable price to a top-of-the-range unit at a higher, but still affordable price). The profit motive in business dictates that manufactured goods are not sold below cost. This implies that pricing is calculated at cost plus margin. All costs must be considered to ensure the sustainability of the business. Pricing negotiations may take place however, they must consider these basic principles.

9.3.2 The pricing negotiations will thus have a bearing on margins and mark-ups. One must also appreciate the fine balance between investment (to create jobs and grow the economy) and low prices (to ensure affordability). Investment may only be realistically expected if business sustainability can be guaranteed; and a reasonable return on investment must be possible as reward for the creation of jobs (and payment of salaries and other employee benefits).

9.3.3 **AREI** posed the question of what the relevant bodies would be offering and stated that pricing is also proportional to the volume. AREI further stated that if the Authority understood the potential of Proudly South African manufactured DSB receivers for export into Africa, and assisted with initial subsidy for local consumers, this would result in a competitive DSB receiver market.

**9.4 Will the introduction of DSB create more jobs for South Africans in your**



**sector? If not, why, if yes how will this impact the statistics on job levels in the South African economy?**

9.4.1 According to **BIG 9 ICT**, the introduction of DSB will create more jobs in the digital, receiver-manufacturing sector. Based on the manufacturing of 150,000 units per month, 340 jobs will be created directly by the manufacturing of the Titus II in South Africa. A multitude of indirect jobs will also be created through sales, marketing, technical and user support, security, cleaning, etc. This will impact positively on the job level statistics in South Africa.

9.4.2 **AREI** responded in the affirmative and commented that an estimate of the statistical increase of jobs is subjective.

**9.5 What projected impact do you believe that DSB will have on your business in terms of growing same and enhancing operations in South Africa?**

9.5.1 **BIG 9 ICT** indicated that the impact of DSB on its business will be substantial. It does not envisage large growth or any significant expansion of its business operations without the introduction of DSB.

9.5.2 **AREI** stated that DSB will have a significant impact on the growth of the electronics sector, and many businesses in the sector would benefit.

**9.6 Would you be prepared to partner with the Authority or the state in ensuring the success and uptake of DSB in South Africa?**

9.6.1 **BIG 9 ICT** indicated that it would be willing to, in principle, partner with the Authority and/or the state, however further information would need to be provided herein.

9.6.2 **AREI** stated that its member companies would consider this strategy, however cautioned that the Authority/State would have to ensure and guarantee that the errors made in the STB tender were not repeated.

**9.7 How would it impact the car and radio manufacturers business if the Authority had to develop regulations making it mandatory for radio receivers they manufacture to have at least one digital interface?**

9.7.1 Though **BIG 9 ICT** was of the view that the question was unclear, it did however indicate that the intention of such regulations is understood to encourage the transition to DSB and is thus supported. However, **BIG 9 ICT** was uncertain whether the mandate of ICASA extends to imposing regulations on industries that are not part of the ICT sector or are in foreign countries. It therefore suggested that ICASA encourages the inclusion of such a digital interface, which would be in the best interests of the manufacturers.

9.7.2 **AREI** would support regulation to encourage the growth of the local electronics sector.

9.7.3 **SARAO** provided the Authority with additional information on frequency bands that the Authority should be mindful not to interfere with the Square Kilometre Array ("SKA") project, the frequency bands are tabled as follows:

## 10 Conclusion and way forward

10.1 The Authority believes that this comprehensive Findings and Position Paper will allow the objectives of the ECA to be achieved to ensure a multi-channel environment. It is the country's developmental agenda in creating the digital economy towards the 4th Industrial Revolution.

10.2 A market review in terms of section 67 of the ECA may be a prerequisite prior to the introduction of new entrants in the DSB market and the introduction of new regulations if necessary.

10.3 The Authority will consider all these developments closely and will devise an implementation plan following further consultation with relevant stakeholders during its regulation-making process.

## **Annexure A**

### **11 International study visits findings**

11.1 International study visits were conducted to empower DSB committee with insights on DSB technologies that have been implemented in other jurisdictions. Furthermore, to gain insights on the challenges and lessons learned during implementation phase of the researched countries. Some of the insights gained empowered the DSB committee in formulating some of its positions.

#### **11.2 Germany**

11.2.1.1 ICASA's delegation met with the following entities:

11.2.1.1.1 Bundesnetzagentur für Elektrizität, Gas, Telekommunikation, Post and Eisenbahnen (BNetzA); Mr Klaus Michels (Head of Section Broadcasting);

11.2.1.1.2 DRM Consortium; namely Mr Stoll Mathias; and

11.2.1.1.3 Digitalradio Büro Deutschland; namely Mr Carsten Zorger (Head of Division).

#### **11.3 Status of DSB deployment:**

11.3.1 Second phase witch-over strategy; implemented after 2011; has led to a 97% population coverage for DAB+;

11.3.2 The take-up rate of new cars (German manufacturers) with DAB-radio (as standard and as an option) was at approximately 39.1% in 2017; and

11.3.3 Dual illumination of DAB+ and FM (FM switch-off is still to be determined).

#### **11.4 Lessons learnt from switch-over strategies I (1997 – 2003):**

11.4.1 Telecommunications Act in 2004 – 2010 was the tool used to drive analogue switch-off without an extensive consultation process with the relevant stakeholders;

11.4.2 Single Frequency Node (SFN) approach contributed to failure.

#### **11.5 Challenges with Switch-over Strategies II:**

11.5.1 Challenges include frequency coordination with neighbouring countries and spillages due to different technology adoption; and

11.5.2 Technology uptake on the consumer-end-user is still affected by the high cost of receivers.

#### **11.6 Norway**

##### **11.6.1 ICASA's delegation met with the following entities:**

11.6.1.1 Norwegian public broadcaster, NRK;

11.6.1.2 The incumbent telecommunications company for mobile phones and land lines, Norkring /Telenor;

11.6.1.3 Commercial radio broadcasters, P4;

11.6.1.4 The Norwegian Media Authority, which works collaboratively with Nkom by granting radio and television broadcasting content licenses, whilst Nkom grants spectrum licenses; and

11.6.1.5 Digital radio Norge, which was an organisation made up of different stakeholders with the intention of promoting and publicising the switch-over of digital radio in Norway.

**11.7 Status of DSB deployment:**

11.7.1 The switch process, started in January 2017, applied to all national radio stations and commercial, local, radio stations broadcasting in larger cities; and Community radio and smaller, local, radio stations are still broadcasting on FM.

**11.8 Norway adopted a DAB technology****11.8.1 Switch off criteria of FM:**

11.8.1.1 The commercial DAB MUX (12D) must have at least 90% coverage (by population); and

11.8.1.2 Public broadcaster NRKs must have similar coverage as NRK's FM coverage (P1).

**11.9 The challenges include:**

11.9.1 new technology brings its own challenge;

11.9.2 propagation calculations, correct models;

11.9.3 same coverage as FM (FM stereo/ mono);

11.9.4 two different agreements, GE06 and CO07;

11.9.5 experienced coverage vs theoretical coverage;

11.9.6 low quality car receivers (including adaptors), poor antenna;

11.9.7 installations and service following between multiplexes;

11.9.8 Adjacent channel interference; and

11.9.9 Community broadcasters and resistance to DAB.

## 11.10 United Kingdom

11.10.1 ICASA's delegation met with the following entities:

11.10.1.1 OFCOM;

11.10.1.2 DRM Consortium; and

11.10.1.3 Digital Radio UK.

11.10.2 The licensing framework has changed in that the regulator provides services licenses and then the applicant approaches the MUX operator to be carried on the network;

11.10.3 The licensing of multiplex operators is managed by a commercial company for the commercial licenses and one by the BBC for their licenses;

11.10.4 Originally, the Government assigned spectrum for use by DAB. Since 2003, Ofcom has been wholly responsible for managing spectrum;

11.10.5 Originally, the Government assigned spectrum for use by DAB. Since 2003, Ofcom has been wholly responsible for managing spectrum;

11.10.6 Originally, the Government assigned spectrum for use by DAB. Since 2003, Ofcom has been wholly responsible for managing spectrum;

11.10.7 Dispute between services licenses and multiplex operators are adjudicated by the competition commission;

11.10.8 According to the Digital Radio UK, which is a lobby group for DAB services, there is robust revenue, investment and listenership for DAB services.

11.10.9 The three CCCs for the success of DAB services are Coverage, Content and Cars. They have been able to partner with most manufacturers to include DAB receivers in the cars; and

11.10.10 There are adapters for old traditional receivers at home and in the cars.

## **11.11 United States of America**

11.11.1 The committee visited the United States of America (USA) to conduct a study on the implementation of DSB in that country. Four (4) entities were visited namely:

11.11.1.1 The US Federal Communications Commission ("FCC") and the National Association of Broadcasters (NAB);

11.11.1.2 National Public Radio (NPR);

11.11.1.3 Xperi; and

11.11.1.4 The DRM Consortium

### **11.11.2 Status of DSB in the USA**

11.11.2.1 The USA adopted In Band On Channel ("IBOC") technology in 2005 branded as HD radio as their only standard for digital radio owned and licensed exclusively by Ibiquity now known as Xperi.

11.11.2.2 The USA was interested in implementing DAB in the mid-90s but later opted to trial for what was then called band technology instead of a technology that required new spectrum.

11.11.2.3 The technology was first tested in early 2002 through the National Radio Systems Committee (NRSC) which is a structure made up of broadcasters and manufactures for research, study and making recommendations for technical standards relating to radio broadcasting and the reception of radio broadcast signals.

11.11.2.4 The adoption of IBOC started in 2002 with a period allowing for a hybrid model to enable radio stations to simulcast their broadcasts.



11.11.2.5 The IBOC model is used on analogue spectrum on both FM and AM offering better audio quality and data services without a need for new spectrum. The adoption of an in-band standard meant that there was no requirement for a sunset date for analogue radio switch-off.

## 11.12 Australia

### 11.12.1 Australian Communications and Media Authority (ACMA)

11.12.1.1 ACMA presented on the genesis of the Australian journey from 2005 when DAB was introduced in Australia and the industry, not satisfied with the limitations of DAB, later approached then WorldDMB now WorldDAB for a better standard; DAB+ was implemented in 2009 and the receivers were available to the market and cars. The following are the highlights of the ACMA presentation:

11.12.1.1.1 Digital radio is viewed to be supplementary to AM and FM and there are no plans to switch off analogue radio. Deployment is prioritised in the capital cities namely Sydney, Melbourne, Brisbane, Adelaide and Perth. The uptake is driven by news, morning and evening drive time shows.

11.12.1.1.2 The legislation does not specify the technology e.g. DAB/DAB+. The Digital Radio Planning Committee comprises of ACMA, commercial, public and community broadcasters. A Technical Sub-Committee was established under the Digital Radio planning committee jointly with all stakeholders to determine the overall approach (regional wide and area plans); allotment planning; no license area aggregation; transmitter site selection with minimum interference.

### 11.12.1.2 DAB+ Standard

11.12.1.2.1 Australian broadcasters drove the government to choose DAB+ without any other alternative Digital radio due to the investment made in to the

research, trials and infrastructure rolled out.

11.12.1.2.2 The Digital Radio network is a Single Frequency Network.

11.12.1.2.3 Trials were conducted in Canberra and Darwin further; plans are underway to implement Digital Radio in 2019.

11.12.1.2.4 Currently no monitoring is done for DAB due to extensive planning done prior to implementation and less chances of interference.

#### 11.12.1.3 **Legislation and licensing regime**

11.12.1.3.1 There are three tiers of broadcasting namely: Public, Commercial and Community broadcasting.

11.12.1.3.2 Licensing is divided in to content and transmission license whereby; the public broadcaster is licensed nationally and according to the public charter of Australia and the commercial broadcasters and community are licensed according to the ACMA licensing framework.

11.12.1.3.3 The commercial broadcasters are licensed in specific license area. community broadcasters are divided in to two, wide coverage area which covers the same area as commercial broadcasters, sub metropolitan area which covers the small geographic area. Currently Sydney has 9 community wide area and 6 commercials.

#### 11.12.1.4 **Multiplex ownership**

11.12.1.4.1 The multiplexes are owned by joint venture companies that consist of stakeholders and there's two categories of multiplex namely:

11.12.1.4.1.1 Category 1 owned by commercial and community.

11.12.1.4.1.2 Category 2 occupied by the National broadcasters i.e. ABC and Special Broadcasting Service (SBS).

11.12.1.4.1.3 The Multiplex operator are licensed in every licensed area whereby 2/9 of the multiplex capacity is occupied by the commercial and community broadcasters; 1/9 of the multiplex capacity is occupied by the national broadcasters.

#### 11.12.1.5 **Competition**

11.12.1.5.1 The incumbents invested and drove the implementation of Digital Radio in Australia thus a moratorium to halt new broadcasters in to the market was in place from 2009 to 2015.

#### 11.12.1.6 **Market**

11.12.1.6.1 Digital radio has 30% penetration in five (5) metropolitans whereby it was driven by to the collaboration of CRA and ACMA along with the retailers. Governments contribution was through subsidies for community broadcasters. The Digital radio awareness was driven by:

11.12.1.6.1.1 CRA advertised and conducted workshops for public awareness.

11.12.1.6.1.2 Retailers made DAB receivers available.

11.12.1.6.1.3 Car manufacturers included DAB+ receivers in cars.

#### 11.12.2 **Australian Broadcasting Authority (ABC)**

##### 11.12.2.1 **Licensing**

11.12.2.1.1 ABC is licensed per transmitter whereby they approach ACMA, then provides coverage plans and transmitter parameters i.e. antenna

heights, transmitter power, GPS co-ordinates and infill gaps fillers or repeaters. The service license is for a 15-year period.

#### **11.12.2.2 Multiplexes**

11.12.2.2.1 Sydney has three multiplexes, two community and commercial broadcasting, one for the Public broadcaster. For Public broadcaster's ABC has 11 channels and occupies 2/3 of the Multiplex, SBS occupies 1/3 of the Multiplex (the overall channels for public broadcasters are 18 of 84 kbps). Channel 9C and 8A are used for DAB. Channel 9A is for commercial broadcasters. ABC has 240 transmitters for local network. Local radio covers 98% of the population.

11.12.2.2.2 ABC is funded by the government as a result 5 DAB+ services were established, and 3 additional services were self-funded.

#### **11.12.2.3 Monitoring**

11.12.2.3.1 Outsource a service provider (Telstra) to conduct monitoring on their network in a form of national network operating centre.

#### **11.12.2.4 Viability**

11.12.2.4.1 Analogue covers more coverage area, but services are more expensive than DAB+. DAB+ is cheaper yet covers a small area and needs fillers.

#### **11.12.3 Commercial Radio Australia (CRA)**

11.12.3.1 CRA has 260 members consisting of small family run stations to big commercial radio stations. CRA has One Hundred and Three (103) licenses to operate within specific areas, five (5) out of 103 of the license areas currently operate on DAB+ namely: Sydney, Melbourne, Brisbane, Adeline and Perth. Canberra and Darwin will only operate on DAB+ from 2019. CRA has been the in the forefront of digital radio in Australia by participating in the establishment of DAB+ along with WorldDAB and

steering the regulator (ACMA) in to adopting digital radio as a form of audio broadcasting.

11.12.3.2 CRA promotes digital radio by education and training courses specific to radio with updated and current content. The participants are given opportunities whereby up to 95% are absorbed or employed with the 260 CRA members. Further, CRA initiates skills survey within their 260 members to realise what skills are of need and what necessary training is applicable to nature that skill. CRA in partnership with retailers give away gift vouchers to consumers. Further, advertisements are posted on billboards, taxi backs and aired on radio.

11.12.3.3 To date Australia has 65+ DAB+ population coverage with 4.49 million DAB enabled devices sold in Australia and 60% of new vehicles sold in the past 12 months were fitted with a DAB+ receivers, in total 1.98 million DAB+ fitted cars have been sold in Australia since 2011.

11.12.3.4 According to CRA to date 30.4% of people listen to digital radio via DAB+ with an average time spent listening time of 10 hrs 34 mins per week. Listenership surveys are also conducted through Share of Audio using GFK which is a comprehensive annual study of the Australians' audio consumption habits. According to the 2018 study 62.3% of Australians' listen to radio.

11.12.3.5 CRA under category 1 shares 2/9 of the multiplex with the wide area community radio whereby they occupy block 9A and 9B from the multiplex. Sydney has 8 channels of DAB+.

11.12.3.6 CRA along with other industry bodies established a technical committee to come up with the 5 planning principles for DAB+ to have a smooth transition to digital radio namely:

11.12.3.6.1 Principle 1 regional plan for 5 metros.

11.12.3.6.2 Principle 2 proposed frequency allotment.

11.12.3.6.3 Principle 3 Is not used as it recommends license area aggregation.

11.12.3.6.4 Principle 4 Transmitter site selection and co-location.

11.12.3.6.5 Principle 5 RF planning parameters.

**INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA  
NOTICE 165 OF 2019**



**PURSUANT TO SECTION 4 (1) OF THE ELECTRONIC COMMUNICATIONS ACT 2005,  
(ACT NO. 36 OF 2005)**

**HEREBY ISSUES A NOTICE REGARDING THE RADIO FREQUENCY SPECTRUM  
ASSIGNMENT PLAN FOR THE FREQUENCY BAND 825 TO 830 MHz AND 870 TO 875 MHz**

1. The Independent Communications Authority of South Africa ("the Authority"), hereby publishes the **Radio Frequency Spectrum Assignment Plan for the frequency band 825 to 830 MHz and 870 to 875 MHz** in terms of sections 2 (d), (e) and 4, read with sections 30, 31(4), and 33 of the Electronic Communications Act (Act No. 36 of 2005) and read with Regulation 3 of the Radio Frequency Spectrum Regulations 2015 and read with the IMT Roadmap 2014 as amended.
2. This Radio Frequency Spectrum Assignment Plan supersedes any previous spectrum assignment arrangements for the same spectrum allocation.

  
\_\_\_\_\_  
**RUBBEN MOHLALOGA**  
**CHAIRPERSON**



**Radio Frequency Spectrum Assignment Plan**

**Rules for Services operating in the Frequency Band  
from 825 to 830 MHz and 870 to 875 MHz**



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## 1 Glossary

In this Radio Frequency Spectrum Assignment Plan, terms used shall have the same meaning as in the Electronic Communications Act 2005 (no. 36 of 2005); unless the context indicates otherwise;

<b>“3GPP”</b>	means the 3rd Generation Partnership Project (3GPP) which consists of six telecommunications standard development organisations
<b>“Act”</b>	means the Electronic Communications Act, 2005 (Act No. 36 of 2005) as amended
<b>“DM RS”</b>	means Demodulation Reference Signal
<b>“ECC/REC(11)04”</b>	means ECC Recommendation (11)04
<b>“ECC”</b>	means Electronic Communications Committee within the European Conference of Postal and Telecommunications Administrations (CEPT)
<b>“FDD”</b>	means Frequency Division Duplex
<b>GSM-R</b>	Global System for Mobile communications for Railways
<b>“HCM”</b>	means harmonised calculation method
<b>“IMT”</b>	means International Mobile Telecommunications
<b>“ITA”</b>	means Invitation to Apply
<b>“ITU”</b>	means the International Telecommunication Union
<b>“ITU-R”</b>	means the International Telecommunication Union Radiocommunication Sector
<b>“LTE”</b>	means Long Term Evolution is a standard for wireless communication of high-speed data for mobile phones and data terminals. It is based on the GSM/EDGE and UMTS/HSPA network technologies
<b>“NRFP”</b>	means the National Radio Frequency Plan 2018 for South Africa
<b>“PCI”</b>	means Physical-Layer Cell Identities
<b>“PPDR”</b>	means Public Protection and Disaster Relief as defined in ITU-R Report M.2033.
<b>“PRACH”</b>	means Physical Random Access Channel
<b>“PSTN”</b>	means public switched telephone network
<b>“PUCCH”</b>	means Physical Uplink Control Channel

<b>“RFSAP”</b>	means Radio Frequency Spectrum Assignment Plan
<b>“TCA”</b>	means terrain clearance angle
<b>“TDD”</b>	means Time Division Duplex
<b>“WRC-12”</b>	means World Radiocommunication Conference 2012 held in Geneva
<b>“WRC-15”</b>	means the World Radiocommunication Conference 2015 held in Geneva

### 3 Purpose

- 3.1 A Radio Frequency Spectrum Assignment Plan (RFSAP) provides information on the requirements attached to the use of a frequency band in line with the allocation and other information in the National Radio Frequency Plan (NRFP). This information includes technical characteristics of radio systems, frequency channelling, coordination and details on required migration of existing users of the band and the expected method of assignment.
- 3.2 This RFSAP states the requirements for the utilization of the frequency band between 825-830 MHz paired with 870-875 MHz.
- 3.3 The ITU states that International Mobile Telecommunications (IMT) systems are mobile systems that provide access to a wide range of telecommunication services including advanced mobile services, supported by mobile and fixed networks, which are increasingly packet-based. The key features are as follows:
- 3.3.1 a high degree of commonality of functionality worldwide while retaining the flexibility to support a wide range of services and applications in a cost-efficient manner;
  - 3.3.2 compatibility of services within IMT and with fixed networks;
  - 3.3.3 capability of interworking with other radio access systems;
  - 3.3.4 high quality mobile services;
  - 3.3.5 user equipment suitable for worldwide use;
  - 3.3.6 user-friendly applications, services and equipment;
  - 3.3.7 worldwide roaming capability; and
  - 3.3.8 enhanced peak data rates to support advanced services and applications.

#### 4 General

- 4.1 Technical characteristics of equipment used in frequency band 825-830 and 870-875 MHz shall conform to all applicable South African standards, international standards, International Telecommunications Union (ITU) and its radio regulations as agreed and adopted by South Africa.
- 4.2 All installations must comply with safety rules as specified in applicable standards.
- 4.3 The equipment used shall be certified under South African law and regulations.
- 4.4 The allocation of this frequency band and the information in this Radio Frequency Spectrum Assignment Plan (RFSAP) are subject to review.
- 4.5 Frequency bands assigned include bands 825-830 MHz paired with 870-875 MHz.
- 4.6 Likely use of this band will be for Mobile voice and data communications.
- 4.7 Typical technical and operational characteristics of IMT systems as identified as by the ITU are described in the following documents:
  - 4.7.1 Recommendation ITU-R M.2012-2 (02/2014): Detailed specifications of the terrestrial radio interfaces of International Mobile Telecommunications-Advanced (IMT Advanced).
  - 4.7.2 Report ITU-R M2241-0 Compatibility studies in relation to Resolution 224 in the bands 698-806 MHz and 790-862 MHz.
  - 4.7.3 Report ITU-R M.2074: Report on Radio Aspects for the terrestrial component of IMT-2000 and systems beyond IMT-2000.
  - 4.7.4 Recommendation ITU-R M.1645 Framework and overall objectives of the future development of IMT-2000 and systems beyond IMT-2000.
  - 4.7.5 Recommendation ITU-R M.1036-5: Frequency arrangements for implementation of the terrestrial component of International Mobile Telecommunications (IMT) in the bands identified for IMT in the Radio Regulations (RR).

### 5 Channelling Plan

5.1 The frequency band 825-830 MHz paired with 870-875 MHz provides a total bandwidth of 2×5 MHz FDD as per Figure 1.

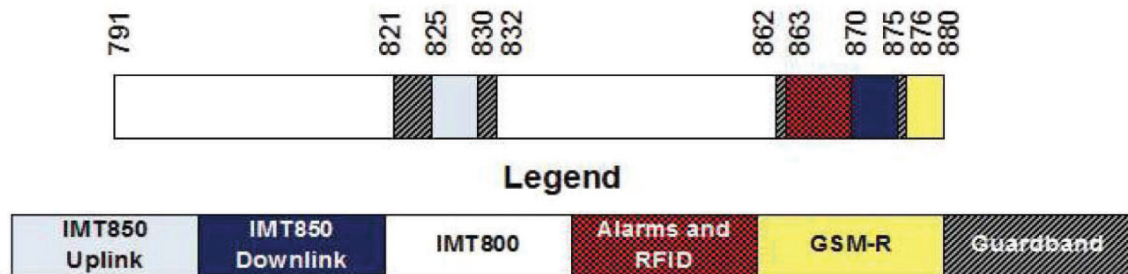
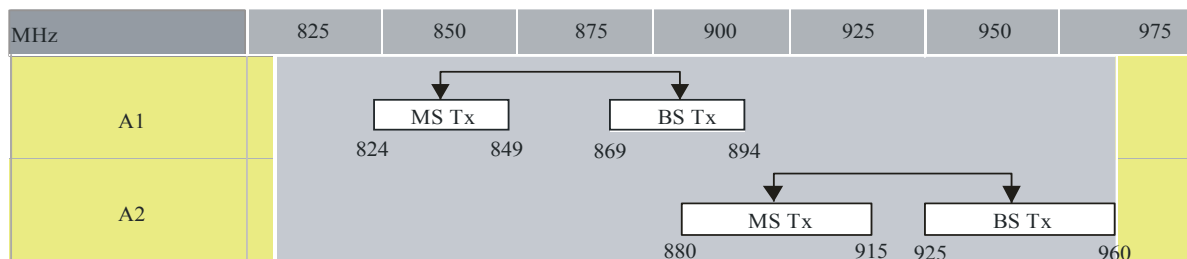


Figure 1: Channel Arrangement for frequency band 825-830 MHz paired with 870-875 MHz

5.2 The channel arrangement for IMT850 is a partial implementation of the A1 frequency arrangement in the band 694 – 960 MHz of the ITU recommendation ITU-R 1036-5 as illustrated in Figure 2.



M.1036-03-A1-2

Figure 2: Frequency Arrangement in the band 694 - 960 MHz

5.3 The CDMA systems is to provisionally migrate within 825-830 and 870-875 MHz until the end of the Analogue Television Migration.

## 6. Requirements for usage of radio frequency spectrum

- 6.1 This chapter covers the minimum key characteristics considered necessary in order to make the best use of the available frequencies.
- 6.2 The use of the band is limited for IMT-services.
- 6.3 Only systems using digital technologies that promote spectral efficiency will be issued with an assignment. Capacity enhancing digital techniques is being rapidly developed and such techniques that promote efficient use of spectrum, without reducing quality of service are encouraged.
- 6.4 In some cases, a radio system conforming to the requirements of this RFSAP may require modifications if harmful interference is caused to other radio stations or systems.
- 6.5 The allocation of spectrum and shared services within these bands are found in the National Radio Frequency Plan (NRFP) and an extract of NRFP is shown in Appendix A.
- 6.6 Maximum radiated power:
- 6.6.1 Base Station transmissions should not exceed 61dBm/5MHz EIRP.
- 6.6.2 Mobile Station transmissions should not exceed 23dBm EIRP.
- 6.6.3 On a case-to-case basis, higher EIRP may be permitted if acceptable technical justification is provided.
- 6.6.4 Where appropriate subscriber terminal station should comply with the technical specification outlined under “3GPP TS 36.521-1” or latest version.
- 6.6.5 In some cases, a radio system conforming to the requirements of this RFSAP may require modifications. If major interference is caused to other radio stations or systems.
- 6.6.6 Criteria and guidelines for interference mitigation are described in **Appendix C**.

## 7. Implementation

- 7.1 This RFSAP comes into effect upon publication in the Government Gazette.
- 7.2 No new assignment for frequency band 825-830 paired with 870-875 MHz shall be approved unless they comply with this RFSAP.

## 8. Co-ordination Requirements

- 8.1 Use of these frequency bands shall require coordination with the neighbouring countries within the coordination zones of 6 kilometres in case of LTE-to-LTE or 9 kilometres in case of LTE-to-other technologies from the neighbouring country. The coordination distance is continuously being reviewed and may be updated from time to time.
- 8.2 The following field strength thresholds have to be assured based on (ECC/REC (11)04 for 790-862 MHz. Operator-to-operator coordination may be necessary to avoid interference.
- 8.3 In general stations of FDD systems may be used without coordination with a neighbouring country if the mean field strength produced by the cell (all transmitters within the sector) does not exceed the value of 55dB $\mu$ V/m/5MHz at an antenna height of 3m above ground at the borderline between countries, and does not exceed a value of 29dB $\mu$ V/m/5MHz at an antenna height of 3m above ground at a distance of 9 km inside the neighbouring country.
- 8.4 In the case that LTE is deployed both sides of the border the field strength levels can be increased to 59 dB $\mu$ V/m/5MHz and 41 dB $\mu$ V/m/5MHz at 6 km.
- 8.5 Synchronisation should be achieved including that of the field strength levels if TDD is in operation across both sides of a border.
- 8.6 For field strength, predictions the calculations should be made according to **Appendix B**. In cases of other frequency block sizes  $10 \cdot \log(\text{frequency block size}/5\text{MHz})$  should be added to the field strength values e.g.:

BW (MHz)	Field strength level at 3 m height (general case)	Field strength level at 3 m height (LTE case)
5 MHz	55.0 dB $\mu$ V/m/5MHz @0km	59.0 dB $\mu$ V/m/5MHz @0km
	29.0 dB $\mu$ V/m/5MHz @9km	41.0 dB $\mu$ V/m/5MHz @6km
10 MHz	58.0 dB $\mu$ V/m/10MHz @0km	62.0 dB $\mu$ V/m/10MHz @0km
	32.0 dB $\mu$ V/m/10MHz @9km	44.0 dB $\mu$ V/m/10MHz @6km
15 MHz	59.8 dB $\mu$ V/m/15MHz @0km	63.8 dB $\mu$ V/m/15MHz @0km



	33.8 dB $\mu$ V/m/15MHz @9km	45.8 dB $\mu$ V/m/15MHz @6km
20 MHz	61.0 dB $\mu$ V/m/20MHz @0km	65.0 dB $\mu$ V/m/20MHz @0km
	35.0 dB $\mu$ V/m/20MHz @9km	47.0 dB $\mu$ V/m/20MHz @6km

8.7 If neighbouring administrations wish to agree on frequency coordination based on preferential frequencies, while ensuring a fair treatment of different operators within a country the Authority will add the following within mutual agreements:

8.7.1 Stations of IMT systems may be operated without coordination if the mean field strength produced by the cell (all transmitters within the sector) does not exceed the value of 15 dB $\mu$ V/m/5 MHz at 10% time, 50% of locations at 3 metres above ground level at the borderline.

8.7.2 Technical analysis may be conducted by the Authority before an assignment is issued according to **Appendix B** taken from ECC/REC (11) 05.

8.7.3 Specific information regarding coordination may be found in **Error! Reference source not found.**, taken from Cross-Border Frequency Coordination: Harmonised Calculation Method for Africa (HCM4A) Agreement.

8.7.4 In the event of any interference, the Authority will require affected parties to carry out coordination. If the interference continues to be unresolved after 24 hours, the affected parties may refer the matter to the Authority for a resolution. The Authority will decide the necessary modifications and schedule of modifications to resolve the dispute. The Authority will be guided by the interference resolution process as shown **Error! Reference source not found.**

8.7.5 Assignment holders shall take full advantage of interference mitigation techniques such as antenna discrimination, tilt, polarization, frequency discrimination, shielding/blocking (introduce diffraction loss), site selection, and/or power control to facilitate the coordination of systems.

**9. Assignment**

- 9.1 No new assignment shall be made on a frequency band 825-830 paired with 870-875 MHz unless it complies with this RFSAP.
- 9.2 An Invitation to Apply shall be published for new assignments in this band in line with regulations developed in terms of section 31(3) of the Act.

**10. Amendment**

- 10.1 The authority resolved the following transitional arrangements for the right of use of spectrum in this frequency band:
- 10.1.1 That Broadcasting Spectrum Assignments planned entries in Annexure E, G, H and in the band above 694 MHz, in the affected areas as stipulated in the Terrestrial Broadcasting Frequency Plan (Notice No. 298 of 2013 in Government Gazette No. 36321 and Notice No. 801 of 2014 in Government Gazette 38005 or the latest version), are to be used subject to meeting the conformance requirements in line with the GE06 Plan and are to be phased out during the dual illumination period.
- 10.1.2 That broadcast transmissions and services ancillary to broadcasting in the band above 694 MHz are to be systematically switched off.
- 10.1.3 That radio frequency spectrum assignment for CDMA system within the band 827.775 – 832.695 MHz paired with 872.775 – 877.695 MHz in the affected areas migrate systematically to the destination band 825-830 MHz paired with 870-875 MHz coordinated with adjacent and existing assignments during the dual illumination period.
- 10.1.4 The CDMA systems shall cease operation at the end of the dual illumination period in alignment of the TV Analogue switch off in alignment with Digital Migration Regulations published in Government Gazette No. 36000 (Notice:107 of 2012).
- 10.1.5 The Authority recognises that there may be issues with respect to interference that may be experienced by typical applications using apparatus in the 863-870MHz band which may operate on a licence exempt basis (in line with Radio Frequency Spectrum Regulations Government Gazette 38754 (Notice 386 of 2015) and Spectrum Re-allocation for RFID GG 31127), adjacent to the Mobile services.
- 10.1.6 That Joint Spectrum Advisory Group has been established to deal with minimising and/or prevent harmful interference during the transitional arrangement period. The Joint Spectrum Advisory Group is established by regulation 13 of Digital Migration Regulations published in Government Gazette No. 36000 (Notice:107 of 2012).

### 11. Radio Frequency Migration

11.1 The Radio Frequency Migration’s specific procedure shall be as follows:

11.1.1 As an immediate measure, the CDMA assignment of the Licensee is to be shifted by 2 MHz to 825-830 MHz // 870-875 MHz in accordance with Consideration 1b in Figure 3.

11.1.2 The coexistence solution of CDMA system to GSM-R is to introduce a guard band of ~4.05 MHz and to reduce the CDMA system band to 2×3.75 MHz in areas where there will be potential interference to GSM-R. In these areas, reduction to 2×3.75 MHz allows the partial usage of current CDMA system at least for voice and wideband packet services. In areas where there is no interference to GSM-R, the Licensee may use its existing CDMA system assignment.

11.1.3 Licensee must cease using this band for CDMA system by the end of dual illumination.

11.1.4 Considerations 2b and 3b in **Error! Reference source not found.** indicate a long-term solution when CDMA system has ceased and an (LTE) frequency band 825-830 paired with 870-875 MHz band is deployed.

11.1.5 With migration from deployed GSM-R to LTE-R, consideration needs to be made of an intermediate step of 2×3 MHz LTE first to ensure dual illumination and 2×5 MHz LTE in the final step. Further coexistence with GSM-R with about 4 MHz guard band still has to be investigated but is not expected here.

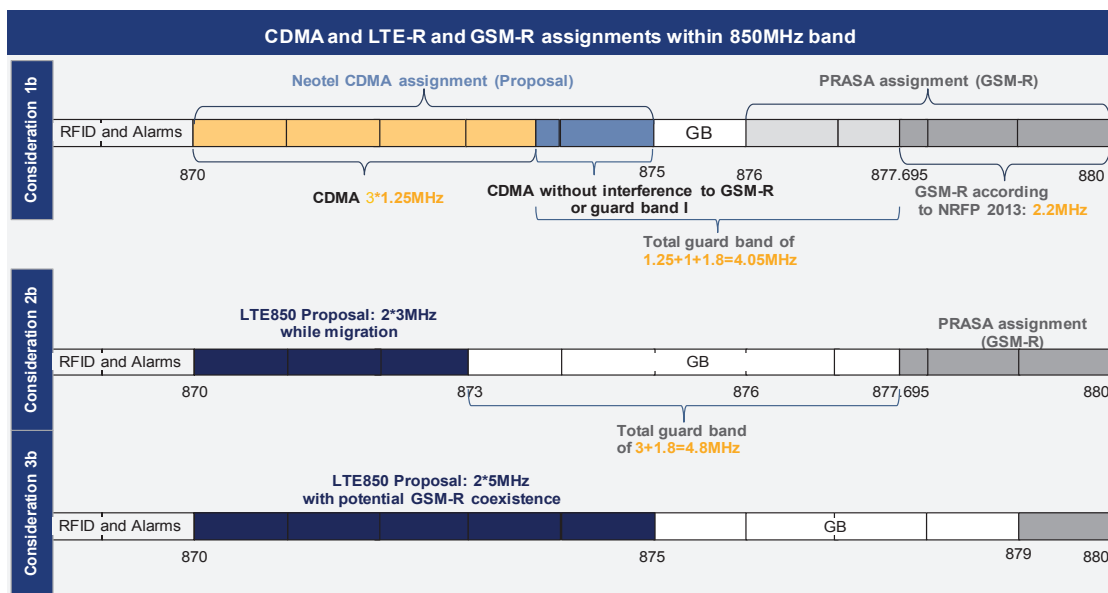


Figure 1: Migration of CDMA850 Band by 2 MHz

**Appendix A: National Radio Frequency Plan**

ITU Region 1 allocations and footnote	South African and footnotes	Typical Applications	Comments
<p><b>790-862 MHz</b></p> <p>FIXED</p> <p>MOBILE except aeronautical 5.317A mobile</p> <p>BROADCASTING</p> <p>5.312 5.314 5.315 5.316 5.316A 5.319</p>	<p><b>790-862 MHz</b></p> <p>FIXED</p> <p>MOBILE except aeronautical 5.316B 5.317A NF9 mobile</p> <p>BROADCASTING</p> <p>5.316A</p>	<p>Fixed Links (856 – 864.1 MHz)</p> <p>IMT800 BTX (791 – 821 MHz)</p> <p>Mobile Wireless Access (827.775 – 832.695 MHz)</p> <p>IMT800 MTX (832–862 MHz)</p> <p>Television Broadcasting (470 – 854 MHz)</p>	<p>The fixed links will be migrated along with the broadcasting service in line with Radio Frequency Migration Plan.</p> <p>Paired with 832 – 862 MHz</p> <p>Paired with Access (872.775 – 877.695 MHz)</p> <p>Paired with 791 – 821 MHz</p> <p>Broadcasting Allotments in accordance with GE89 plan in the process of conversion to GE06. Broadcast assignments in accordance with the latest version of the Terrestrial Broadcasting Frequency Plan.</p>

## **Appendix B: Interference Resolution Process**

The following methods are proposed for assessment of anticipated interference inside neighboring country based on established trigger values. Due to complexity of radio-wave propagation nature different methods are proposed to be considered by administrations and are included here for guidance purposes only. It should be noted that following methods provide theoretical predictions based on available terrain knowledge. It is practically impossible to recreate these methods with measurement procedures in the field. Therefore, only some approximation of measurements could be used to check compliance with those methods based on practical measurement procedures. The details of such approximation are not included in this recommendation and should be negotiated between countries based on their radio monitoring practices.

### **Path specific model**

Where appropriate detailed terrain data is available, the propagation model for interference field strength prediction is the latest version of ITU-R Rec. P.452, For the relevant transmitting terminal, predictions of path loss would be made at x km steps along radials of y km at z degree intervals<sup>1</sup>. The values for those receiver locations within the neighbouring country would be used to construct a histogram of path loss – and if more than 10% of predicted values exceed the threshold the station should be required to be coordinated.

### **Site General model**

If it is not desirable to utilise detailed terrain height data for the propagation modelling in the border area, the basic model to be used to trigger coordination between administrations and to decide, if co-ordination is necessary, is ITU-R Rec. P.1546, “Method for point to area predictions for terrestrial services in the frequency range 30 to 3000 MHz”. This model is to be employed for 50% locations, 10% time and using a receiver height of 3m. For specific reception areas where terrain roughness adjustments for improved accuracy of field strength prediction are needed, administrations may use correction factors according to terrain irregularity and/or an averaged value of the TCA parameter in order to describe the roughness of the area on and around the coordination line.

Administrations and/or operators concerned may agree to deviate from the aforementioned model by mutual consent.

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<sup>1</sup> . Values for x, y, z and path specific field strength levels are to be agreed between the administrations concerned

### Area calculations

In the case where greater accuracy is required, administrations and operators may use the area calculation below. For calculations, all the pixels of a given geographical area to be agreed between the Administrations concerned in a neighbouring country are taken into consideration. For the relevant base station, predictions of path loss should be made for all the pixels of a given geographical area from a base station and at a receiver antenna height of 3m above ground.

For evaluation,

- only 10 percent of the number of geographical area between the borderline (including also the borderline) and the 6 km line itself inside the neighbouring country may be interfered by higher field strength than the trigger field strength value given for the borderline in Annex 1 and 2 at a height of 3 m above ground.
- only 10 percent of the number of geographical area between the 6 km (including also 6km line) and 12 km line inside the neighbouring country may be interfered by higher field strength than the trigger field strength value given for the 6 km line in Annex 1 and 2 at a height of 3 m above ground.

It is recommended that during area calculations not only detailed terrain data but also clutter data be taken into account. Use of correction factors for clutter is crucial in particular where the border area is 'open' or 'quasi-open' from the point of view of clutter or where the interfering base station is just a few kilometres from a borderline.

If the distance between a base station and a terrain point of a borderline is closer than or equal to 1 km, free space propagation model needs to be applied. Furthermore, if there is no terrain obstacle within the 1st Fresnel zone, also the free space propagation model should be applied.

If clutter data is not available, it is proposed to extend the usage of free space propagation model to a few kilometres, depending on the clutter situation in border areas.

For area type interference calculations, propagation models with path specific terrain correction factors are recommended (e.g. Recommendation ITU-R P.1546 with the terrain clearance angle correction factor TCA, HCM method with the terrain clearance angle correction factor or Recommendation ITU-R P.1812).

As to correction factors for clutters ‘open area’ and ‘quasi-open area’, 20 dB and 15 dB should be used respectively. Recommendation ITU–R P.1406 should be used if a finer selection of clutter is required.

It must be noted that terrain irregularity factor  $\Delta h$  is not recommended to be used in area calculations. Administrations and/or operators concerned may agree to deviate from the aforementioned models by mutual consent.

## Appendix C: Cross-Border Radio Frequency Coordination

The following is extracted from Cross-Border Frequency Coordination: Harmonized Calculation Method for Africa (HCM4A) Agreement

### Frequencies requiring co-ordination

1. In the case of the Land Mobile Service a transmitting frequency shall be co-ordinated if the transmitter produces field strength, at the border of the country of the Administration affected, which, at a height of 10 m above ground level, exceeds the maximum permissible interference field strength as defined in Annex 1 of the Agreement. A receiving frequency shall be co-ordinated if the receiver requires protection.
2. It is strongly recommended to co-ordinate radio-relay links in the Fixed Service if the shortest distance from the border of at least one station is less or equal to the one defined in Annex 11 of the Agreement. All stations which may cause harmful interference to stations in other countries or need protection shall be co-ordinated regardless of the distance.
3. Any Administration wishing to take into operation a station shall circulate a request for co-ordination to all Administrations affected for their comment. This request shall include the characteristics in accordance with Annex 2A and Annex 2B of the Agreement.
4. If, for the purpose of technically evaluating this request, the Administration affected requires information that is lacking or needs to be supplemented in accordance with Annex 2A and Annex 2B of the Agreement, it shall ask for this information within 30 days upon receipt of the request for co-ordination. After this request, complete information concerning a request for co-ordination shall be sent by the requesting administration within 30 days, otherwise the coordination request shall be deemed null and void.
5. Having received complete information concerning a request for co-ordination, the Administration affected shall evaluate this information in accordance with the provisions of this Agreement. It shall notify the requesting Administration of the outcome within 45 days.



6. If the Administration which initiated the co-ordination procedure does not receive a reply within 45 days, it must send a reminder. The Administrations affected shall respond to this reminder with the outcome within 20 days.
7. If the Administration affected again fails to respond within the period fixed under paragraph 6, it shall be deemed to have given its consent, and the station shall be considered co-ordinated.
8. The periods specified under paragraphs 5 and 6 may be changed by mutual consent.
9. Any co-ordinated frequency assignment shall be notified to the Administrations affected as soon as the corresponding station is put into operation but not later than 180 days upon approval. Following such notification of the assignment, this assignment shall be included in the Frequency Register.
10. If no notification of assignment is given within 180 days, the Administration affected shall send a reminder to the Administration that has asked for co-ordination. If no notification of assignment is given within another 30 days, the request for co-ordination shall be deemed null and void.
11. No notification shall be required if the frequency registers are exchanged semi-annually.
12. The Administration wishing to change the technical characteristics of stations registered in the Frequency Register, shall notify the Administrations affected of its intentions. Co-ordination shall be required if this change causes the probability of interference to increase in the affected country. If the situation remains unchanged with regard to interference or if it improves, the Administrations affected shall only be informed of such a change. The entry in the Frequency Register shall be corrected accordingly.
13. In special cases, the Administrations may assign frequencies for temporary use (up to 45 days) without co-ordination provided this does not cause harmful interference to co-ordinated stations. As soon as possible, the Administration affected shall be notified of the planned taking into operation. Such stations shall immediately be taken out of operation if they cause harmful interference to co-ordinated stations of the affected country. These assignments shall be made on preferential frequencies as far as possible.
14. If an assignment is no longer in force, the competent Administration shall notify the affected Administration within three months and the entry in the Frequency Register has to be deleted.

**Preferential frequencies**

- 15 Frequencies in the frequency bands specified in paragraph 2 may be defined by prior bi- or multilateral agreements concluded in the framework of this agreement as preferential frequencies for given Administrations.
- 16 The Administration which has been granted a preferential right may put stations operating on preferential frequencies within the terms of the relevant bi- or multilateral agreements into use without prior co-ordination. If the conditions for the protection of the receiver in the mobile service are not defined in bi- or multilateral agreements, paragraph 16 of Annex 1 of the Agreement will apply.
- 17 Mutually agreed preferential frequencies granted to an Administration shall have priority rights over assignments made to other Administrations concerned.
- 18 The entry into service of stations using preferential frequencies shall be notified to the Administrations affected, unless otherwise laid down in bi- or multilateral agreements. The notification shall include the characteristics as set out in Annex 2A and Annex 2B of the Agreement. These frequencies and their technical characteristics shall be entered with status "P" into the Frequency Register. No response to such a notification is required.
- 19 Preferential frequencies to be assigned on conditions other than those agreed in bi-or multilateral agreements mentioned in Section 1.3.2 shall be co-ordinated in accordance with paragraph 1.
- 20 Following a positive co-ordination procedure in accordance with Section 4.1, Administrations may bring into use another Administration's preferential frequencies. These shall have the same rights as frequencies co-ordinated in accordance with Paragraph 1.
- 21 If the existing radio networks of one Administration cause harmful interference to the stations operated by another Administration on frequencies to which it has a preferential right, or if, in particular cases, frequency assignments not enjoying preferential rights have to be adjusted, the Administrations concerned shall determine the transition period by mutual consent.

**Frequencies for planned radio communication networks**

- 22 Prior to the co-ordination of a planned radio communication network the Administrations may embark on a consultative procedure in order to facilitate the taking into operation of this new network. The request for consultation shall include the planning criteria as well as the following data:
- a. planned frequencies (transmitting and receiving frequency of the station);
  - b. coverage area of the entire radio communication network;
  - c. class of the station;
  - d. the coverage area of a station;
  - e. effective radiated power;
  - f. maximum effective antenna height;
  - g. designation of the emission;
  - h. network development plan;
  - i. antenna characteristics for stations belonging to the network.
- 23 The Administration affected shall acknowledge receipt of the request for consultation and communicate its reply within 60 days.
- 24 In complicated planning issues this consultation may require a bi- or multilateral consultation meeting in order to assist the Administration planning a radio communication network in coming to a quicker solution.
- 25 To co-ordinate frequencies for a planned radio communication network the Administration affected shall apply, no sooner than three years prior to the planned taking into operation of the network, the procedure described in Paragraph 1 together with the following changes:
- 26 The receipt of the request for co-ordination shall be acknowledged.
- 27 If there is no prior consultation the Administration affected shall submit its reply within 180 days from the day of the receipt of the request for co-ordination. Any request for co-ordination following a consultation process shall be responded to within 120 days.
- 28 The Administration requesting co-ordination shall notify to the Administration affected the date at which the radio communication network will be taken into operation.

29 Stations forming part of the radio communication network shall be entered into the Frequency Register together with the date of the termination of the co-ordination procedure and enjoy the same rights as the stations co-ordinated in accordance with Paragraph 1.

30 Co-ordination shall be null and void for those co-ordinated stations which have not been taken into operation within 30 months of the termination of the co-ordination procedure.

#### **Frequencies used on the basis of geographical network plans**

31 Geographical network plans covering certain parts of the frequency bands indicated in Section 1.2 may be prepared and co-ordinated, divergence from the defined parameters being permissible, subject to prior agreement reached between the Administrations affected. These frequencies shall be entered in the Frequency Register. On the basis of the geographical network plans adjusted in this fashion, an Administration shall be authorised to put stations into service without prior co-ordination with the Administration with which the plan has been agreed by mutual consent.

32 Frequencies used on the basis of geographical network plans and intended to be assigned on conditions other than those agreed between Administrations concerned, shall be co-ordinated in accordance with Paragraph 1.

#### **Frequencies using preferential codes**

33 Preferential code groups or preferential code group blocks may be agreed between Administrations concerned where centre frequencies are aligned.

34 The Administration which has been granted a preferential right may put stations operating on preferential code groups or preferential code group blocks within the terms of the relevant bi- or multilateral agreements into use without prior co-ordination.

35 Preferential code groups or preferential code group blocks granted to an Administration shall have priority rights over assignments made to other Administrations concerned.

36 The entry into service of stations using preferential code groups or preferential code group blocks shall be notified to the Administrations affected, including the characteristics as set out in Annex 2A of the Agreement, unless otherwise laid down in bi- or multilateral agreements. These frequencies and their

technical characteristics shall be entered with status “P” in the Frequency Register. No response to such notification is required.

- 37 Frequencies using preferential code groups or preferential code group blocks which have to be assigned on conditions other than those agreed in bi- or multilateral agreements mentioned in Section 1.3.6 shall be co-ordinated in accordance with Paragraph 1.
- 38 Following a positive co-ordination procedure in accordance with Paragraph 1, Administrations may bring into use frequencies using another Administration's preferential code groups or preferential code group blocks. These shall have the same rights as frequencies co-ordinated in accordance with Paragraph 1.
- 39 If the existing radio networks of one Administration cause harmful interference to the stations operated by another Administration on frequencies using preferential code groups or preferential code group blocks, or if, in particular cases, frequency assignments not enjoying preferential code groups rights or preferential code group blocks rights, have to be adjusted, the Administrations concerned shall determine the transition period by mutual consent.

#### **Frequencies used on the basis of arrangements between operators**

- 40 Operators in neighbouring countries are allowed to conclude mutual arrangements on the condition that the Administrations concerned have signed an agreement authorizing such arrangements.
- 41 Such arrangements shall be the subject of agreements submitted to the preliminary validation of concerned Administrations.
- 42 Arrangements between operators may deviate from the technical parameters or other conditions laid down in the annexes of this Agreement or in relevant bi- or multilateral agreements between the Administrations concerned.

#### **Evaluation of requests for co-ordination**

- 43 In evaluating the requests for co-ordination, the Administration affected shall take into account the following frequencies:
- a. frequencies entered in the Frequency Register;

- b. frequencies used on the basis of bi- or multilateral agreements; and
  - c. frequencies awaiting an answer to a co-ordination request (in chronological order of requests).
- 44 A request for co-ordination of a transmitting frequency in the Land Mobile Service may only be rejected if the respective station:
- 45 produces an interference field strength exceeding the maximum permissible value as given in Annex 1 of the Agreement at a station entered in the Frequency Register; or
- intends to use a frequency without meeting the conditions agreed upon bi- or multilaterally; or
  - produces an interference field strength exceeding the maximum permissible value as given in Annex 1 of the Agreement in the case of a station awaiting an answer to a co-ordination request; or
  - does not meet the conditions governing the maximum cross-border ranges of harmful interference as given in Annex 1 of the Agreement.
- 46 Within the Land Mobile Service the request for protection of a receiver may only be rejected if
- at least one of the co-ordinated transmitters of the Administration affected produces at the respective receiver an interference field strength which is higher than the maximum permissible interference field strength given in Annex 1 of the Agreement; or
  - the protection of the receiver would restrict the use of a preferential frequency of the Administration affected under the conditions agreed upon bi- or multilaterally; or
  - one of the transmitters awaiting an answer to a co-ordination request of the Administration affected produces at the respective receiver an interference field strength which is higher than the maximum permissible interference field strength given in Annex 1 of the Agreement; or
  - the conditions governing the cross-border ranges of harmful interference as given in Annex 1 of the Agreement are not met.
- 47 A request for co-ordination of a transmitter frequency in the Fixed Service may only be rejected if the respective station:
- produces a threshold degradation exceeding the maximum permissible value given in Annex 9 of the Agreement at a station entered in the Frequency Register; or
  - is intended for using a frequency without meeting the conditions agreed upon bi- or multilaterally; or
  - produces a threshold degradation exceeding the maximum permissible value given in Annex 9 of the Agreement in the case of a station awaiting an answer to a co-ordination request.

- 48 Within the Fixed Service, the protection of a receiver may only be rejected if:
- the request for co-ordination for the associated transmitter has been refused; or
  - the protection of the receiver would restrict the use of a preferential frequency of the Administration affected under the conditions agreed upon bi- or multilaterally.
- 49 If protection from interference cannot be guaranteed, a request for co-ordination must be accepted with "G" (Appendix 9 to Annex 2A and Annex 2B of the Agreement).
- 50 In case a request for co-ordination is rejected or a conditional reply is given to such a request, the reasons shall be given for this, indicating, if appropriate, either the radio station to be protected or the radio station which could cause harmful interference to the planned radio station.
- 51 An Administration making reference to Section 2.4 of the Agreement may only respond to a request for co-ordination by indicating "C" or "G" in accordance with Appendix 9 to Annex 2A and Annex 2B of the Agreement. No reason needs to be given for "G" in accordance with Section 4.7.7; reference to Section 2.4 shall be sufficient.

#### **Evaluation in connection with tests**

- 52 In order to make more efficient use of the radio spectrum, to avoid possible harmful interference and facilitate the enhancement of existing networks, the following procedure may be used:
- If the Administrations affected arrive at different results in their evaluations of the interference situation, or if the request for co-ordination currently being processed justifies a trial basis, they shall agree to open the service on a trial basis. Stations falling into the above cases shall be given a temporary status "D" in accordance with Appendix 9 to Annex 2A and Annex 2B of the Agreement, until final status can be accomplished.
- 53 The provisions on measurement procedures are given in Annex 7 of the Agreement.
- 54 On completion of the tests a final decision shall be communicated to the requesting Administration within 30 days, indicating the measured values of the interference field strength.

**Exchange of Lists**

Each Administration shall prepare an up-to-date Frequency Register in accordance with Section 1.4. The List corresponding to each affected Administration contained in the Frequency Register shall be exchanged bilaterally at least once every six months. The Administrations shall undertake to use the data appearing in the Lists of other Administrations for service purposes only. These Lists may not be communicated to other Administrations or other third parties without the consent of the Administration affected.

End///



**INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA  
NOTICE 166 OF 2019**



**PURSUANT TO SECTION 4 (1) OF THE ELECTRONIC COMMUNICATIONS ACT  
2005, (ACT NO. 36 OF 2005)**

**HEREBY ISSUES A NOTICE REGARDING THE FINAL RADIO FREQUENCY  
MIGRATION PLAN 2019**

The Independent Communications Authority of South Africa ("the Authority"), in terms of section 4, read with sections 31 (4), 34 (7) (c) (iii), 34 (8) and 34 (16) of the Electronic Communications Act (Act No. 36 of 2005), read with the Radio Frequency Migration Regulations published in Government Gazette Number 36334 (notice 352 of 2013), hereby gives notice of the Final *Radio Frequency Migration Plan 2019*.

---

**RUBBEN MOHLALOGA  
CHAIRPERSON**



# Final Radio Frequency Migration Plan 2019

## **PART 1**

# **Frequency Migration Regulations Overview**

**REGULATION**  
**Overview of Radio Frequency Migration Regulations**

**SCHEDULE**

**1. Definitions**

In these Regulations, terms used shall have the same meaning as in the Electronic Communications Act 2005 (no. 36 of 2005); unless the context indicates otherwise:

“**Act**” means the Electronic Communications Act, 2005 (Act No. 36 of 2005) as amended;

“**ITU**” means the International Telecommunication Union;

“**SADC FAP**” means the Southern African Development Community Frequency Allocation Plan;

“**User**” means a licensed or licence exempt user of the radio frequency spectrum; and

“**WRC**” means the World Radiocommunication Conference.

**2. Overview**

The Authority, on 3 April 2013, in Government Gazette number 36334 (Notice 352 and 353) published the Radio Frequency Migration Regulations and Radio Frequency Migration Plan and Explanatory Document.

**3. Purpose**

The purpose of the regulations was to establish the framework by which the Authority may migrate users of the radio frequency spectrum under the National Radio Frequency Plan of South Africa.

#### 4. Principles

- (1) Radio frequency spectrum migration must be in accordance with the Radio Frequency Migration Plan.
- (2) Radio frequency spectrum migration must be consistent with the National Radio Frequency Plan.
- (3) The National Radio Frequency Plan itself must be consistent with the International Telecommunications Union (ITU) Radio-regulations as updated by WRC, and with the SADC FAP, to the extent possible.
- (4) Systems and equipment of existing users within a radio frequency band, which have been identified for migration, will be migrated to the same or a different frequency band.
- (5) The users to be migrated shall not be entitled to be compensated by the Authority for the costs of the migration.
- (6) To the extent that it is possible, the cost of migration should be minimised by considering, amongst other things, the duration of the licence and the economic life time of the equipment.
- (7) Frequency Migration may be required in the core and central astronomy advantage areas in terms of section 22(2) (c) of the Astronomy Geographical Advantage Act (Act No. 21 of 2007).

#### 5. Process for Radio Frequency Migration

The Authority shall initiate a process of radio frequency migration in the following circumstances:

- (a) As specified in the Frequency Migration Plan;
- (b) Where a change in the use of a radio frequency band is required to bring the South African National Radio Frequency Plan in line with the final acts of the latest WRC and in turn, the latest ITU Radio-Regulations Edition;

- (c) Where a change in the use of a radio frequency band is required to ensure harmonisation of the latest published South African National Radio Frequency Plan with the latest approved SADC FAP;
- (d) Where the Authority has determined that a change in use of the frequency is necessary for efficient utilisation of the radio frequency spectrum and to otherwise meet the objectives of the Act;
- (e) Where the Authority has determined that a change in a radio frequency spectrum licence holder's assignment within a radio frequency band is required to enable more efficient use of the radio frequency spectrum (in-band migration); and
- (f) Where a South Africa specific requirement must be accommodated such as that arising from protecting radio frequency spectrum for radio astronomy purposes in core and central astronomy advantage areas in terms of the Astronomy Geographical Advantage Act (Act No. 21 of 2007), However the Authority should guard against non-standard frequency spectrum usage and application practices.

## **6. Preparation of a Radio Frequency Spectrum Assignment Plan**

- (1) A change in the use of a radio frequency band(s) must be initiated through a Radio Frequency Spectrum Assignment Plan for the radio frequency spectrum bands in the manner specified in the latest Radio Frequency Spectrum Regulations in force.
- (2) With respect to the radio frequency migration process, a Radio Frequency Assignment Plan may include
  - (a) The process for migrating existing users and usages from their existing spectrum location, specifying the bands to which the users and uses will be migrated; including in-band migration where applicable.
  - (b) The time scale for the reallocation of the radio frequency band in question, specifying the date at which the users to be migrated should cease transmission.
- (3) A Radio Frequency Spectrum Assignment Plan shall be subject to public consultation:

- (a) The Authority shall publish the Radio Frequency Spectrum Assignment Plan in the Government Gazette, inviting interested persons to submit written representations as specified by the notice in the Gazette; and
- (b) The Authority may, after any defined period for lodging comments by interested persons has passed, hold a public hearing in respect of the application.

## **7. Amendment of a Radio Frequency Spectrum Licence**

- (1) Upon completion of the Radio Frequency Spectrum Assignment Plan, the Authority must issue a notice to users to be migrated.
- (2) The notice of amendment may include the following:
  - (a) The date at which the licensee must cease transmitting within the frequency range of his existing assignment;
  - (b) The date at which the licensee may commence transmitting within the new assignment; and
  - (c) The date within which the licensee must collect their updated radio frequency spectrum licence which contains the new terms and conditions of the new assignment, including technical parameters and whether the assignment is exclusive or shared.

## **8. Short title and commencement**

The plan is called the Radiocommunication Frequency Migration Plan 2019 and shall come into effect upon publication of the notice in the Government Gazette.

**CONTINUES ON PAGE 386 - PART 4**





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## **PART 2**

# **Radio Frequency Migration Plan 2019**

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# 1 Introduction

Given the increasing demand for limited radio frequency resources, efficient spectrum management including the transition from analogue to digital services are critical issues for policy makers, regulators, network operators and other stakeholders

With a national spectrum plan the regulator strives to ensure effective and efficient spectrum usage and compliance with international standards as well as informing market parties on the current and future (intended) use of spectrum.

At a national level, the radio-frequency spectrum is considered the state's public domain. As such, it is subject to the state authority and must be managed efficiently so as to be of the greatest benefit to the entire population. As the result of the state's right to manage the spectrum, authorized spectrum users derive the benefits of the right and associated obligations to access and use the spectrum.

The national spectrum plan is the result of the national (long term) planning process for spectrum usages and basically matches supply with future market demand. The associated planning process spans across all categories of use.

## 1.1 Purpose

The purpose of the Radio Frequency Migration Plan is to inform the national spectrum planning process on the implications of radio frequency migration to digital services with a particular focus on traditional broadcasting services. The intention being to execute the process as efficiently as possible and to the benefit of all South Africans in terms of section 2 (e) of the Electronic Communications Act, 2005 (Act No. 36 of 2005) as amended ("the Act").

The plan provides :

- Background and the basis of the Radio Frequency Migration Plan.
- Overview of the development of the Radio Frequency Migration Plan.
- Identification of the radio frequency bands requiring migration and suggestions regarding the manner in which migration might be done.
- Identify the radio frequency bands which require a feasibility study.
- The frequency bands for which Radio Frequency Spectrum Assignment Plans have been developed.
- The impact of the Frequency Migration Plan considering currently available information.

## 1.2 Definitions

In order to use terminologies and avoid confusion, the technical and administrative terms generally used in spectrum management are clarified in the following section.

Full definitions of terms are given in Appendix A.

### 1.2.1 ITU Definitions – Spectrum Management

The standard definitions for spectrum management in the International Telecommunication Union (ITU) Radio regulations (Article 1) are as follows:

**allocation** (of a frequency band): Entry in the Table of Frequency Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space *radiocommunication services* or the *radio astronomy service* under specified conditions. This term shall also be applied to the frequency band concerned. (1.16)

**allotment** (of a radio frequency or radio frequency channel): Entry of a designated frequency channel in an agreed plan, adopted by a competent conference, for use by one or more administrations for a terrestrial or space *Radiocommunication service* in one or more identified countries or geographical areas and under specified conditions. (1.17).

**assignment** (of a radio frequency or radio frequency channel): Authorization given by an administration for a radio station to use a radio frequency or radio frequency channel under specified conditions. (1.18).

**refarming** (of frequency spectrum) “Spectrum redeployment (spectrum refarming) is a combination of administrative, financial and technical measures aimed at removing users or equipment of the existing frequency assignments either completely or partially from a particular frequency band. The frequency band may then be allocated to the same or different service(s). These measures may be implemented in short, medium or long time-scales;” reference Recommendation. ITU-R SM.1603 (See Appendix H).

From the above the key element is the clear distinction between allocation and assignment which is not always followed in certain benchmark examples.

### 1.2.2 Clarification of Spectrum Migration definitions

Herewith further clarification of terms generally used in the process of describing spectrum migration and associated regulations. The ITU does not exhaustively define spectrum migration terms.

In the Act, the reference to spectrum migration is clearly the migration of users of radio frequency spectrum within the same band or other radio frequency bands in accordance with the radio frequency plan. The emphasis of the FMP is thus on migrating existing users.

It is important to expand the definition of migration term to also include usage<sup>1</sup> users of spectrum .

***“Radio Frequency Spectrum Migration” thus means the movement of users or uses of radio frequency spectrum from their existing radio frequency spectrum location to another.***

### 1.2.3 Spectrum re-farming

The term spectrum re-farming is widely used, but as for spectrum migration it does not have a universal definition and its interpretation may vary somewhat in different countries.

The ICT Regulation Toolkit<sup>2</sup> notes the following regarding spectrum re-farming:

*Generally speaking, re-farming may be seen as process constituting any basic change in conditions of frequency usage in a given part of radio spectrum. Such basic changes might be:*

1. *Change of technical conditions for frequency assignments;*
2. *Change of application (particular Radiocommunication system using the band); or*

---

<sup>1</sup> This allows spectrum migration to encompass re-farming of spectrum within assigned bands to other technologies and in-band migration such as the digitalisation of TV broadcast.

<sup>2</sup> The ICT Regulation Toolkit is a joint production of info Dev and the International Telecommunication Union

3. *Change of allocation to a different Radiocommunication service.*

The term re-farming is used to describe:

- the process where a GSM operator changes the use of all or part of the spectrum used for GSM to UMTS / LTE; especially where the spectrum licence has specified the technology (as GSM) and the operator licence has to be changed<sup>3</sup>.
- The situation where the individual assignments within a band are changed to allow more efficient use to be made of the frequency band (usually due to a change in technology).
- The process of reallocating and reassigning frequency bands where the licence period has expired, this is happening in Europe where the original GSM licences are expiring<sup>4</sup>.

For the purposes of the plan therefore, radio frequency spectrum re-farming may be defined as follows:

*"Radio Frequency Spectrum Re-farming" means the process by which the use of a Radio Frequency Spectrum band is changed following a change in allocation, this may include change in the specified technology and does not necessarily mean that the licensed user has to vacate the frequency.*

#### **1.2.4 Other definitions**

Where the user of a radio frequency has a change of assignment within the same band, usually to allow greater efficiency in the use of the spectrum, it may be termed **in-band migration**.

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<sup>3</sup> Even where the licences are not technologically specific and it could be argued that the change in use from GSM to LTE does not require a regulator to get involved, in order to make efficient use of the spectrum it may be necessary to modify the individual assignments within the band.

<sup>4</sup> A good example is in Ireland ref: "Multi-band Spectrum Release: Release of the 800 MHz, 900 MHz and 1800 MHz Radio Spectrum Bands' – various consultations by ComReg 2012.



In some cases, a radio spectrum user may not only have the assignment changed in the same band, but could also have new spectrum allocated in a different band. This has occurred with respect to the balancing of spectrum assignments in the IMT2000 to IMT advance through to IMT2020 bands and may well become a feature of mobile broadband assignments in the future.

## 2 Review of Legislation and Regulations

### 2.1 Electronic Communications Act

#### 2.1.1 Section 34 - Radio Frequency Plan

Section 34 of the Act deals with the National Radio Frequency Plan and as part of this, radio frequency migration.

Subsection (2) essentially contains the key statement:

*.....national radio frequency plan developed by the Authority, which must set out the specific frequency bands designated for use by particular types of services.....*

Referring specifically to matter of migration:

- Section 34 (7) (c) (iii), states that the Authority must:

*Co-ordinate a plan for migration of existing users, as applicable, to make available radio frequency spectrum to satisfy the requirements of subsection (2) and the objects of this Act and of the related legislation.*

- Section 34 (16) states that:

*The Authority may, where the national radio frequency plan identifies radio frequency spectrum that is occupied and requires the migration of the users of such radio frequency spectrum to other radio frequency bands, migrate the users to such other radio frequency bands in accordance with the national radio frequency plan, except where such migration involves governmental entities or organisations, in which case the Authority—*

*(a) must refer the matter to the Minister; and*

*(b) may migrate the users after consultation with the Minister*

It is clear that ICASA has the obligation and authority to plan and implement the migration of users, subject to the approval of the Minister with respect to government entities.

#### 2.1.2 Section 31 - Radio Frequency Spectrum Licence

Section 31 of the Electronic Communication Act (2005) deals with the radio frequency spectrum licences.

- Section 31 (4) states that:

*(4) The Authority may amend a radio frequency spectrum licence—*

*(a) to implement a change in the radio frequency plan;*

*(b) in the interest of orderly radio frequency spectrum management;*

*(c) to effect the migration of licensees in accordance with a revised radio frequency plan or the transition from analogue to digital broadcasting;*

*(d) if requested by the licensee concerned to the extent that the request is fair and does not prejudice other licensees; or*

*(e) with the agreement of the licensee.*

This section clearly establishes that the ICASA has the right to amend a radio frequency licence to cater for instances listed in section 31(4) (a)-(e) of the Act.

### **2.1.3 Chapter 3 – Licensing Framework**

Chapter 3 of the Act which in principle deals with the award of licences for individual and class licences for the provision of services. It also refers to the use of the radio frequency spectrum. This is consistent with the provisions of Section 31(1) and (2) of the Act dealing with the radio frequency spectrum licence in that a person cannot provide services, in terms of chapter 3, which requires the use of the radio frequency spectrum without a radio frequency spectrum licence.

### **2.1.4 Spectrum Licence Duration**

The process of migrating users will not have an impact on the duration of their radio frequency spectrum licences, however the license will be amended accordingly to effect the migration.

## **2.2 Review of Regulations**

### **2.2.1 Radio Frequency Spectrum Regulations**

The Final Radio Frequency Spectrum Regulations in Government Gazette 38641 (Notice 279 of 2015) do not elaborate further (than the Act) on the issue of migration or the related issue of the amendment of a radio frequency spectrum licence initiated by the authority.

Regulation 17 deals with the duration of a radio frequency spectrum licence

- Regulation 17 (1) stipulates that; *The granting of a radio frequency spectrum licence must not be construed as conferring upon the holder a monopoly for the use of or a right of continued tenure of the radio frequency spectrum;*
- Regulation 17 (2) stipulates that, *unless otherwise specified in a radio frequency spectrum licence, a radio frequency spectrum licence shall run parallel to and not exceed the duration of a service licence contemplated in Chapter 3 of the Act, issued to the person in possession of a radio frequency spectrum licence.*
- Regulation 17 (3) stipulates that, *the duration of a radio frequency spectrum licence, without a corresponding service licence contemplated in Chapter 3 of the Act, except those mentioned in sub regulation (4), is a year (i.e. from 1 April until 31 March) and such a licence will expire on the due date of the then current licence year.*
- Regulation 17 (4) stipulates that, *where a radio frequency spectrum licence is issued in the Amateur Radio, Aeronautical Band, Marine Band, Citizen Band Radio for Ski Boats, the licence shall remain valid from 1 April of the year in which it was issued and is thereafter renewable by payment of the prescribed licence fee before or on the due date in the year it is set to expire.*

### **2.2.2 Terrestrial Broadcasting Frequency Plan**

The Final Terrestrial Broadcasting Frequency Plan in Government Gazette 36321(Notice 298 of 2013) and the Update to the Terrestrial Broadcasting Frequency Plan in Government Gazette 38005 (Notice 801 of 2014) deals with the re-planning of the broadcast bands in South Africa including the Digital Terrestrial Television Migration programme and the vacation of broadcast channels.

This was developed taking into consideration the International Telecommunications Union (ITU) Radio Regulations (RR), Provision Number 5.1.2 of the Geneva 2006 (GE06) Agreement, and the World Radiocommunication Conference (WRC) Resolution 224, Resolution 232 (WRC-12) and the results of activities undertaken by the within ITU Region 1 (African Region). The migration of Broadcasting service in the frequency band 790 to 862 MHz frequency band following the 2006 regional radio conference in Geneva (GE06).

This plan reflected the WRC-07 and WRC-12 resolutions with respect to the migration of broadcast channels from the 694 to 790 MHz and 790 to 862 MHz bands respectively.

The plan took into consideration “End of the transition period to digital broadcasting set forth by the GE06 Agreement, that is, the Regional Agreement, Geneva 2006 for the planning of the digital terrestrial broadcasting service in parts of Regions 1 and 3, in the frequency bands 174-230 MHz and 470-862 MHz, set forth as 17 June 2017, and notified through Administrative Circular CR/375.

The Multiplexes in the latest updated version of the Terrestrial Broadcasting Plan 2013 has been coordinated in terms of the GE06 Agreement and meets the conformance requirements of the Plan. The frequencies on this version have been successfully notified to the ITU-R Bureau and have been included in the Master International Frequency Register.

This plan essentially deals with the conversion of analogue to digital Television and the subsequent migration of the existing TV channels to a new spectrum location that is 470 to 694 MHz.

The Broadcasting Spectrum Assignments for the frequency band above 694 MHz, in the affected areas as stipulated in the Terrestrial Broadcasting Frequency Plan (Notice No. 298 of 2013 in Government Gazette No. 36321 and Notice No. 801 of 2014 in Government Gazette 38005 or the latest version), are to be used subject to meeting the conformance requirements in line with the GE06 Plan and are to be phased out during the performance period.

The key issues of interest are that there is a period during which broadcasts continue simultaneously in analogue and digital until the analogue channels are switched off.

## **2.3 Overview of rights and responsibilities**

### **2.3.1 Radio frequency spectrum rights**

Neither in the Act nor in the regulations are there any rights on the parts of users to retain spectrum. The spectrum licence is currently valid as specified in a radio frequency spectrum licence and a spectrum assignment can be revoked at any time. This is not unique to South

Africa and many administrations retain the ultimate right to decide on the use of the spectrum at any time, notwithstanding the procedures for withdrawal, amendment or suspension of a licence.

The process for spectrum migration shall include the following:

- a consultation process,
- consideration of the economic lifetime of the equipment,
- the identification of alternative frequencies for users who have to be migrated out of a frequency band,
- advance planning along with an adequate time frame,
- consideration of the duration of the radio frequency spectrum licence,
- consideration of the duration of a broadcast licence.

### **2.3.2 Responsibilities**

The Authority is the responsible body for frequency migration planning.

The Authority has the obligation to consult with the Minister<sup>5</sup> on various issues, notably where migration involves government entities and organisations.

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<sup>5</sup> Section 34 (16) of the Act

## **3 Principles Governing Frequency Migration**

### **3.1 Identification of Bands subject to Frequency Migration**

Bands are identified for radio frequency migration according to the following hierarchy

- First Level – where the ITU radio regulations / decision of a World Radiocommunication Conference (WRC) require a change in national allocation that will require existing users to be migrated.
- Second Level - where a Regional Radio Conference require a change in national allocation that will require existing users to be migrated
- Third Level – where the SADC Frequency Allocation Plan (FAP) requires a change of use and in turn a change in national allocation that will require existing users to be migrated.
- Fourth Level – a decision is taken to change the use of a frequency band at national level and this requires the migration of existing users.

### **3.2 Process**

The process of frequency migration is carried out in a manner consistent with the radio frequency spectrum regulations and the generic process is described in the frequency migration regulations. The key processes are:

- Preparation of a Radio Frequency Spectrum Assignment Plan
- Amendment of a Radio Frequency Spectrum Licence

When it has been established that migration is required, then the critical issue is to determine the time frame in a manner consistent with sound radio frequency spectrum management.

### **3.3 Time Frame for Migration**

In principle, the Authority can migrate a user to another frequency band or frequency location as part of sound radio frequency spectrum management. However, an appropriate time frame should be applied as a matter of standard practice.

In determining the time frame, the following factors should be taken into account:

- the duration of the spectrum licence,
- the time frame to migrate existing customers (end users)
- the economic life of the equipment installed,
- adequate forward planning

### **3.3.1 Duration of the radio frequency spectrum licence**

The radio frequency spectrum licences in South Africa are in principle granted for a one-year period, the multi-year licences will be restricted so that any migration will not fall within the period of a multi-year licence.

### **3.3.2 Time Frame to migrate existing end users**

The issue of the migration of existing users is a key determinant of a spectrum migration time frame. The issue arose in the past with cessation of the analogue mobile phone systems and the migration to GSM and is currently an issue with respect to broadcasting. In Europe, the main controversy is with regard to proposed plans to terminate VHF FM and possibly Medium Wave broadcasting and as a result of this opposition; the termination of FM does not seem likely in the short term. There has been less opposition to the cessation of analogue television broadcasts.

The critical area in South Africa is the digitalisation of TV where end users have to obtain a digital-to-analogue set-top box to accommodate digital signals to their existing televisions before analogue switch off.

Potential areas that may arise in the future include:

- Conversion of existing Mobile International Mobile Telecommunication frequencies to IMT2020.

Because of the large number of GSM customers with voice / text only phones and the availability of other bands for mobile broadband, it is unlikely that GSM bands will be shut off any time soon.

A switch over from 3G / HSPA to LTE – if this ever occurs would involve a time frame of 3-5 years to accommodate the life cycle of the end-terminal equipment.

- Switch off of analogue radio. This is unlikely to occur within the time frame envisaged by this spectrum migration strategy.



### 3.3.3 Economic life of the equipment installed

It should not be automatically assumed that a change in frequencies will require new transmission equipment; it is entirely possible that the equipment can be retuned at relatively low cost.

In terms of the economic lifetime of the equipment, SABRE 2 which was gazetted in August 2001, planned for switchover deadline of December 2005 for the services subject to migration which was a time frame of just under 5 years. This was at a time when the technological life-cycle was longer than it is today.

### 3.3.4 Adequate Forward Planning

Probably the most important factor for a frequency migration is the allowance of sufficient time for adequate forward planning. In terms of the overall process this may include:

- Proper time for consultation.
- Band planning.
- Adequate time for existing users of the spectrum to migrate out.
- Adequate time required for dual illumination during a switchover period subject to no interference.

In terms of the time frame, the critical determinant is the earliest time in which new users can begin transmitting as this will be the final date at which existing users cease transmitting. In principle, there is little to be achieved by shutting down existing transmission before new licensees are ready to start transmitting.

### 3.3.5 Conclusions regarding time frame.

It has been established that the forward-looking time frame for a process of spectrum migration should be between 3 to 5 years from the moment of announcement, unless otherwise specified.

To ensure that there is no confusion, where there are multi-year radio frequency spectrum licences, these should generally not exceed 5 years. Where there is a spectrum migration planned for a particular frequency band, there is nothing to stop a licence being issued for the period up to the date at which transmission should cease if the licensee is able to 'live with' this.

## 4 Development of the Radio Frequency Migration Plan

### 4.1 Background

The figure below illustrates the time line and sequence of documents and conferences that informed the creation of the Radio Frequency Migration Plan.

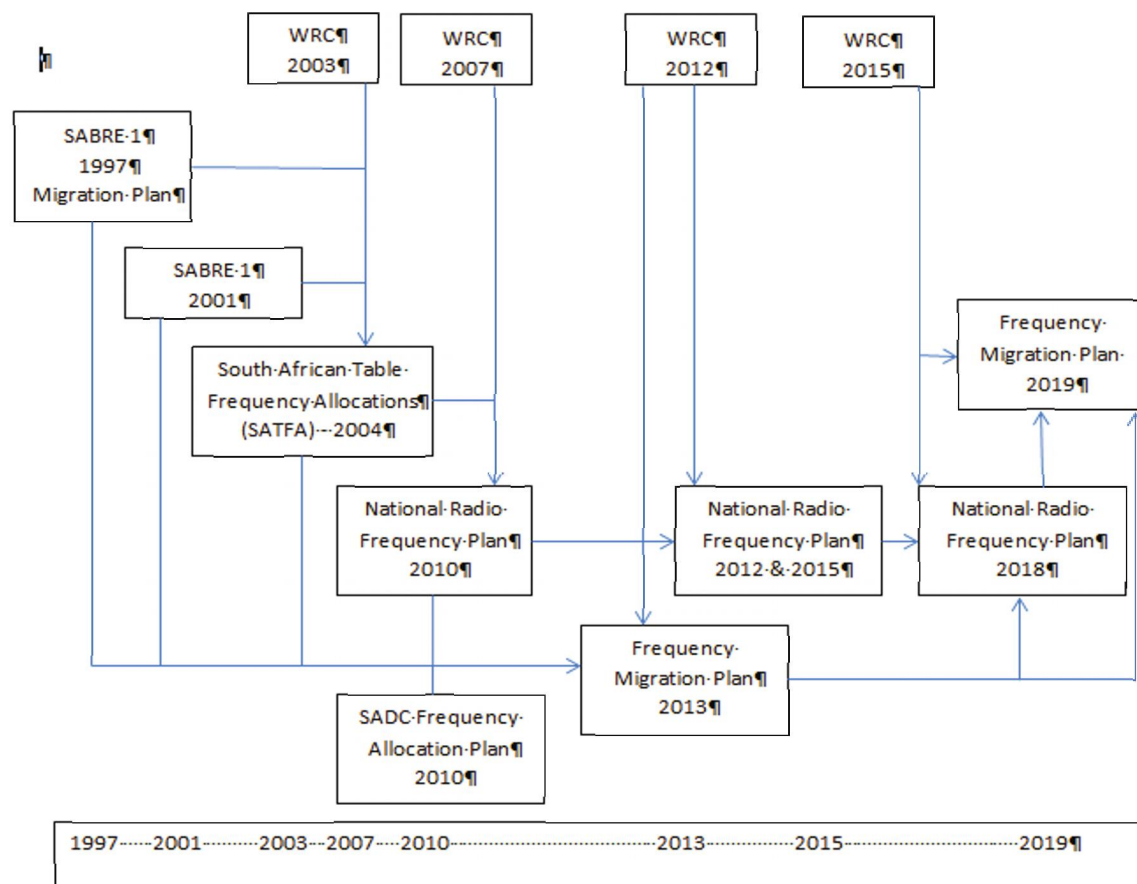


Figure 1 Time Frame and events informing Frequency Migration Plan

The radio Frequency Migration Plan reflects all relevant activities to date and comments on potential long-term migration issues.

### 4.2 International Context

The use of the Radio Frequency Spectrum is fundamentally determined through the ITU Radio Regulations which are established by treaty and modified by treaty in the form of the Resolutions and decisions of the World Radiocommunication Conferences in which South

Africa has participated since 1994. South Africa fundamentally follows the allocations in the Radio Frequency Plan for Region 1 in the ITU Radio Regulations and the primary driver for a change in use is a change in allocation stemming from a World Radiocommunication Conference Resolution.

As Region 1 also includes Europe, it is common for South Africa to harmonise the way it uses and manages frequency bands with Europe on the grounds that this facilitates coordination and allows South Africa to benefit from potential economies of scale with regard to equipment as well being able to capitalize on existing development work.

South Africa also participates in the African Telecommunications Union and again will seek to harmonise its frequency allocations with other African countries.

For Southern Africa, South Africa is part of SADC, the Southern African Development Community. South Africa has actively participated in the preparation of the SADC Frequency Allocation Plan (SADC FAP) and to keep the National Radio Frequency Plan as harmonised as possible with the latest version of the SADC FAP is necessary to maintain international co-ordination with neighbouring countries.

### **4.3 Approach to development of FMP**

The Radio Frequency Migration Plan is drawn up using the latest National Radio Frequency Plan (NRFP 2018) as a baseline.

The first step was to check progress made concerning the frequency migrations proposed in SABRE<sup>6</sup> (see below) with respect to the following:

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<sup>6</sup> The Revision of South African Frequency Allocation Plans (Band Plans) and Migration Strategies – Notice 759 of 1997 – which covered 20MHz to 3 GHz (SABRE-1) and 3.4GHz to 3.6 GHz (SABRE 2).

- Whether the migration as proposed (both from and to other bands) has been carried out and
- If certain services still continue to occupy the original band, whether these services should still be migrated or if this is now irrelevant in the present context. This is carried out by:

Evaluating the current utilization of these bands by the incumbent

Determining whether these bands could be put to better use

The next step was, the proposals in the SADC Frequency Allocation Plan 2016 (SADC FAP 2016) are considered for relevancy in the Republic of South Africa. In terms of relevancy, points under consideration are:

- Whether the bands proposed for alternate use by SADC are being currently utilized (by whom and to what extent).
- If there is a global trend and perceived economic benefit in migrating the current users to accommodate new services.

The third step involves looking at the resolutions adopted at the World Radiocommunication Conference (WRC) 2007, 2012 and 2015 applicable to Region 1 and determine applicability for South Africa. Similar criteria as used to evaluate SADC proposals would be applied here.

The fourth step involves identifying South Africa specific migration issues. In this manner, all matters of significance from global, regional and national context along with the historical activities around migration are awarded due consideration in drafting the frequency migration plan.

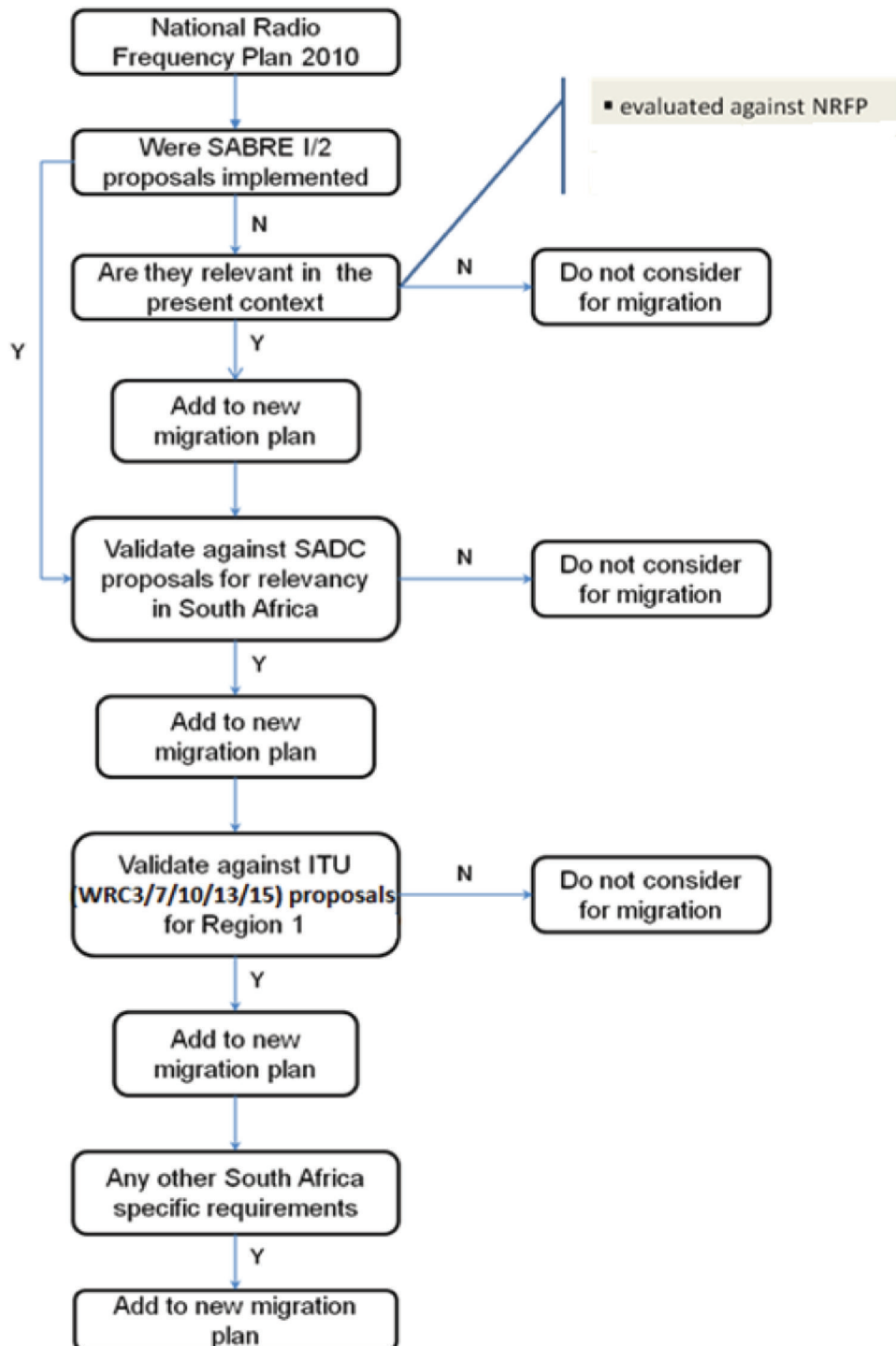


Figure 2 Process for Development of Frequency Migration Plan

#### 4.4 SABRE 1 and SABRE 2

There were two South African Band Re-Planning Exercises (SABRE) carried out in 1997 and 2001. SABRE 1 has been the most comprehensive spectrum migration exercise to date.

- SABRE I – in 1997 addressing the radio frequency spectrum between 20MHz and 3 GHz, and between 3.4 – 3.6 GHz
- SABRE II – in 2001 addressing radio frequency spectrum above 3 GHz with the exception of those bands already addressed in SABRE I

##### 4.4.1 SABRE 1 – 1997

SABRE 1<sup>7</sup> was a significant programme to re-plan the radio frequency in line with the ITU Region 1 frequency allocation plan from 20 MHz to 3 GHz and to migrate users that either did not accord with the existing allocation plan or prevented efficient use of the spectrum. A prime example of this was the drive to migrate fixed links to over 3 GHz. SABRE 1 was extended to cover 3.4 – 3.6 GHz

The primary services which were targeted for this exercise were:

- Fixed links – plan to migrate the fixed links (wherever possible) to higher frequencies above 3 GHz. The primary rationale was that the frequency below 3 GHz was prime estate for mobile communications and should be reserved for that purpose.
- Mobile services in VHF High Band – plan for migrating existing services such as paging, alarms, municipal and governmental authorities into bands reserved for their use. Migrate in mobile services into the cleared band.
- Paging services – consolidate paging services into bands specifically allocated for that purpose. This would include low power paging, amateur, regional and other paging system.
- Alarms – consolidate alarm systems into specific bands.

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<sup>7</sup> The Revision of South African Frequency Allocation Plans (Band Plans) and Migration Strategies – Notice 759 of 1997 – which covered 20MHz to 3 GHz (SABRE-1) and 3.4GHz to 3.6 GHz.

#### 4.4.2 SABRE 2 – 2001

SABRE 2<sup>8</sup> was a programme to re-plan the radio frequency spectrum from 3 GHz to 70 GHz (with the exception of 3.4 – 3.6 GHz which was part of SABRE 1), partly driven by the need to in-migrate fixed-links from below 3 GHz.

Extracts from SABRE 2 are given in the appendix (6.1 Appendix C).

#### 4.4.3 Analysis of SABRE

The analysis conducted showed that the following migration of services out of specified bands as proposed under SABRE (1 and 2) was taken into consideration in developing the Radio Frequency Migration Plan 2019.

**Table 1 SABRE planned allocations that have been taken into consideration in the Frequency Migration Plan 2019**

Frequency Band (MHz)	Planned allocation under SABRE	Current allocation in NRFP 2019
53.025 – 53.225	Low power paging	Wireless Microphones (53 -54 MHz)
(81 – 81.625 BTX) paired with (86.375 - 87 MTX)	Dual frequency alarms/ Mobile	Mobile 7 BTX only
141 – 142	None	Remote controlled industrial apparatus (should be in the ISM band)
150.05 – 151	Wide area paging	Wildlife telemetry tracking 148-152 MHz
(165.55 – 167.4875) paired with (172.05 – 173.9875)	BTX-DF (165.55 – 167.4875 MHz) MTX-DF (172.05 – 173.9875 MHz)	MTX-DF (165.55 – 167.4875 MHz) BTX-DF (172.05 – 173.9875 MHz)
240 – 246	DAB	International distress (239 MHz)

<sup>8</sup> Radio frequency spectrum band plan covering the range 3 GHz to 70 GHz – (SABRE-2) Notice 1920 of 2001

Frequency Band (MHz)	Planned allocation under SABRE	Current allocation in NRFP 2019
278 - 286	FLEX outbound paging services	SF Mobile
406.1 – 410	SF links only	Fixed links (406.1 – 407.625 MHz) paired with (416.1 – 417.625 MHz) Fixed links (407.625 – 410 MHz) paired with (417.625 – 420 MHz)
426.1 – 427.625	Public trunking	SF links (426.1 – 430 MHz)
427.625 – 430	urban–government and public safety rural – SF links	SF links (426.1 – 430 MHz) only
(454.425 – 460) paired with (464.425 – 470)	Mobile trunking MTX (454.425 – 460 MHz) BTX (464.425 – 470 MHz)	Mobile trunking BTX (454.425 – 460 MHz) MTX (464.425 – 470 MHz)
463 – 463.975	SF Mobile out of the band	SF Mobile
876 – 880	Digital trunking	Mobile Wireless Access (824 – 849 MHz paired with 869 - 894 MHz)
925 – 925.4	Two-way paging (FLEX inbound)	No allocation
1885 – 1980	FPLMTS (satellite)	No allocation
1980 – 2010/ 2170 - 2200	Mobile – Satellite (earth – to – space)	Fixed links 1980 – 2010 MHz paired with 2170 – 2200 MHz
21400 – 22000	Broadcasting satellite service	Fixed links

#### 4.5 National Radio Frequency Plans

After SABRE, there have been four (4) national radio frequency plans, SATFA, NRFP 2010, NRFP 2013 and NRFP 2018.



#### **4.5.1 The South African Table of Frequency Allocations 2004**

SATFA: The South African Table of Frequency Allocations 2004<sup>9</sup> consolidated SABRE 1 and SABRE 2 in one plan covering the range 20MHz to 70 GHz.

This plan is discussed in the 6.1Appendix D with respect to frequency migration.

#### **4.5.2 National Radio Frequency Plan 2010**

The National Radio Frequency Plan 2010<sup>10</sup> updated SATFA 2004<sup>11</sup> and extended the frequency range covered (now 9 kHz – 3000 GHz). Its stated aim was to incorporate the decisions taken by WRC and include updates on the Table of Frequency Allocations extending up to 3000 GHz.

This plan is discussed in the Appendix E with respect to frequency migration.

#### **4.5.3 National Radio Frequency Plan 2013**

The National Radio Frequency Plan 2013<sup>12</sup> updated National Radio Frequency Plan 2010, its stated aim was to incorporate the decisions taken by WRC and include updates on the Table of Frequency Allocations extending up to 3000 GHz.

This plan is discussed in the 6.1Appendix E with respect to frequency migration.

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<sup>9</sup> The South African Table of Frequency Allocations (SATFA) – Notice 1442 of 2004.

<sup>10</sup> The National Radio Frequency Plan – Notice 727 of 2010

<sup>11</sup> The main reason for the name change is that the term ‘National Radio Frequency Plan’ is used in the ECA.

<sup>12</sup> The National Radio Frequency Plan – Government Gazette 36336 (Notice 354 of 2013)

#### **4.5.4 National Radio Frequency Plan 2018**

The National Radio Frequency Plan 2018 updated National Radio Frequency Plan 2013 and extended the frequency range covered (now 8.3 kHz – 3000 GHz). Its stated aim was to incorporate the decisions taken by WRC 15 and include updates on the Table of Frequency Allocations extending up to 3000 GHz.

#### **4.6 SADC Frequency Allocation Plan (FAP)**

The Southern African Development Community (SADC) agreed to development of a regional Frequency Allocation Plan (FAP) that provides for a harmonised framework on the allocation of the radio frequency spectrum in the SADC.

The SADC Frequency Allocation Plan revised in 2016 with the frequency range 8.3 kHz – 3000 GHz and guides the use of frequency in the SADC countries as spectrum coordination is required between SADC members.

This edition of the SADC FAP seeks to align to the changes made by WRC 15 and also reflect all other spectrum usage needs of the SADC region.

The allocations of the SADC FAP are largely consistent with those for South Africa and the SADC FAP is used as a reference in the preparation of the FMP.

#### **4.7 World Radiocommunication Conference 2015**

For WRC 15, South Africa joined together with other SADC countries to adopt a common position on 30 agenda items related to frequency allocation and frequency sharing for the efficient use of spectrum and orbital resources.

Key issues with potential implications for spectrum migration as a result of WRC 15 includes the following amongst others:

##### **4.7.1 Mobile broadband communications**

Following the growing demand for spectrum for mobile broadband services, WRC-15 identified frequency bands in the L-band (**1427-1518 MHz**) and in the lower part of the C-band (**3.3 -3.4 GHz**).

WRC-15 achieved agreement on some additional portions in other bands that were also allocated to mobile broadband services in order to be used in regions where there was no interference with other services.

Furthermore, WRC-15 took a key decision that will provide enhanced capacity for mobile broadband in the **694 - 790 MHz** frequency band in ITU Region-1 (Europe, Africa, the Middle East and Central Asia) and a globally harmonized solution for the implementation of the digital dividend. In taking this decision WRC 15 ensured the full protection is given to television broadcasting between **470 and 694 MHz**, as well as to the aeronautical radionavigation systems operating in this frequency band for countries listed in RR No.5.312

<sup>13</sup>.

#### **4.7.2 Amateur radio service gets new allocation**

New allocation for amateur radio service in the frequency band 5351.5 - 5366.5 kHz will maintain stable communications over various distances, especially for use when providing communications in disaster situations and for relief operations.

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<sup>13</sup> 5.312 Additional allocation: in Armenia, Azerbaijan, Belarus, the Russian Federation, Georgia, Kazakhstan,

Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan and Ukraine, the frequency band 645-862 MHz, in Bulgaria the

frequency bands 646-686 MHz, 726-758 MHz, 766-814 MHz and 822-862 MHz, and in Poland the frequency band

860-862 MHz until 31 December 2017, are also allocated to the aeronautical radionavigation service on a primary

basis. (WRC-15)

#### **4.7.3 Emergency communications and disaster relief**

WRC-15 identified spectrum in the 694-894 MHz frequency band to facilitate mobile broadband communications for robust and reliable mission critical emergency services in public protection and disaster relief (PPDR), such as police, fire, ambulances and disaster response teams.

#### **4.7.4 Search and rescue**

WRC-15 reinforced protection to Search and Rescue beacons that transmit in the 406-406.1 MHz frequency band signals to uplink to search and rescue satellites, such as the Cospas-Sarsat system. Resolution 205 was modified to ensure that frequency drift characteristics of radiosondes are taken into account when operating above 405 MHz to avoid drifting close to 406 MHz.

Administrations were requested to avoid making new frequency assignments for the mobile and fixed services within the adjacent frequency bands to prevent interference in the frequency band 406-406.1MHz. As of December 2013, the Cospas-Sarsat System has provided assistance in rescuing over 37,000 persons in over 10,300 incidents worldwide.

#### **4.7.5 Earth observation satellites for environmental monitoring**

WRC-15 resolved on a new allocation in the 7-8 GHz frequency range needed to uplink large amounts of data for operations plans and dynamic spacecraft software modifications that will eventually lead to simplified on-board architecture and operational concepts for future missions of earth-exploration satellite services (EESS).

Allocations of spectrum in the 9-10 GHz frequency range leads to the development of modern broadband sensing technologies and space-borne radars on active sensing EESS. Scientific and geo-information applications will provide high quality measurements in all weather conditions with enhanced applications for disaster relief and humanitarian aid, land use and large-area coastal surveillance.

#### **4.7.6 Unmanned aircraft and wireless avionics systems**

WRC-15 opened the way for the development by the International Civil Aviation Organisation (ICAO) of worldwide standards for unmanned aircraft systems (UAS) and identified the regulatory conditions that may be applied to such systems internationally.

WRC-15 also agreed on spectrum for wireless avionics intra-communications (WAIC) to allow for the heavy and expensive wiring used in aircraft to be replaced by wireless systems.

#### **4.7.7 Global flight tracking for civil aviation**

Agreement was reached on the allocation of radio-frequency spectrum for global flight tracking in civil aviation for improved safety. The frequency band 1087.7-1092.3 MHz has been allocated to the aeronautical mobile-satellite service (Earth-to-space) for reception by space stations of Automatic Dependent Surveillance-Broadcast (ADS-B) emissions from aircraft transmitters. This will facilitate reporting the position of aircraft equipped with ADS-B anywhere in the world, including oceanic, polar and other remote areas. The International Civil Aviation Organization (ICAO) will address the performance criteria for satellite reception of ADS-B signals according to established standards and recommended practices (SARP).

#### **4.7.8 Enhanced maritime communications systems**

WRC-15 considered regulatory provisions and frequency allocations to enable new Automatic Identification System (AIS) applications and other possible new applications to improve maritime Radiocommunication. New applications for data exchange, using AIS technology, are intended to improve the safety of navigation. New allocations were made in the bands 161.9375 - 161.9625 MHz and 161.9875 - 162.0125 MHz to the maritime mobile-satellite service. Studies will continue on the compatibility between maritime mobile-satellite service (MMSS) in the downlink in the band 161.7875 - 161.9375 MHz and incumbent services in the same and adjacent frequency bands.

#### **4.7.9 Road Safety**

Radio-frequency spectrum needed for the operation of short-range high-resolution automotive radar has been allocated in the 79 GHz frequency band. This will provide a globally harmonized regulatory framework for automotive radar to prevent collisions and improve vehicular safety by reducing traffic accidents. According to the United Nations (UN) data, more than 1.25 million fatalities occur each year on the roads around the world.

#### **4.7.10 Operation of broadband satellite systems: Earth Stations in Motion**

WRC-15 agreed to facilitate the global deployment of Earth Stations in Motion (ESIM) in the 19.7-20.2 and 29.5-30.0 GHz frequency bands in the fixed-satellite service (FSS), paving

the way for satellite systems to provide global broadband connectivity for the transportation community. Earth stations on-board moving platforms, such as ships, trains and aircraft, will be able to communicate with high power multiple spot beam satellites, allowing transmission rates in the order of 10-50 Mbits/s.

#### **4.7.11 Universal Time**

WRC-15 decided that further studies regarding current and potential future reference time-scales are required, including the modification of coordinated universal time (UTC) and suppressing the so-called “leap second”. A report will be considered by the World Radiocommunication Conference in 2023. Until then, UTC shall continue to be applied as described in Recommendation ITU-R TF.460-6 and as maintained by the International Bureau of Weights and Measures (BIPM).

#### **4.7.12 Conclusion on WRC 15 Resolutions**

The National Radio Frequency Plan 2018 takes into consideration these resolutions taken by the World Radiocommunication Conference of 2015 (WRC 15). National Footnotes have been updated to make provision for transitional arrangements where migration of services and use are to be taken care off.

### **4.8 ITU World Radiocommunication Conference resolutions**

The following resolutions from the World Radiocommunication Conferences have been taken into consideration – see Table 4 (WRC Resolutions). The primary focus is on WRC15, however 4 resolutions from WRC07 have also been analysed. WRC15 is discussed in the Appendix F

### **4.9 Key issues with respect to migration**

The following explains the approach to key issues regarding the frequency migration plan:

#### *Broadcasting Service*

- DTT – Digital Terrestrial Television. The process of moving TV services from analogue to digital (and corresponding in-band migration) is in progress. The plans were updated following the WRC 12 along with the allocation of the 700 MHz band to IMT and the corresponding need to consolidate UHF TV broadcasting to the 470-694 MHz UHF band in line with the original Broadcasting Digital Migration Framework (Government Gazette number 31490). The freed spectrum that has been allocated to the Mobile

Radiocommunication Services and identified for IMT in the band 790 to 862 MHz (WRC07) and 694 to 790 MHz band is a major spectrum resource for mobile broadband.

- Studio Links – These are point-to-point links connecting broadcast studios to transmitters that have been part of the broadcast frequency bands, especially the 800MHz band. With the allocation to the Mobile of the 700MHz and 800 MHz frequency bands and the subsequent identification to IMT, the studio links had to be migrated out in line with the Frequency Migration Plan 2013. These have been given assignments in the destination bands allocated for Fixed Point to Point links.
- Self Help Stations – These are repeater stations rebroadcasting television channels to limited areas on a low power basis<sup>14</sup>. These stations are to be switch off, in accordance with the Digital Terrestrial Television Migration Rollout Plan in accordance with the Terrestrial Broadcasting Plan 2013 as updated.

#### *Mobile Service*

- Mobile broadband. ‘Mobile’ broadband is an important use of radio frequency spectrum at the current time and there is a large demand for spectrum in several bands for this purpose. As such, mobile broadband is the service that is most likely to require the migration of other services to accommodate its spectrum needs. The allocation of spectrum for mobile broadband / IMT has already been done via WRC resolutions for ITU region 1 as well as per SADC proposed common sub-allocation/ utilization. This ensures that equipment is readily available, and a harmonized service can be provided both across the Southern African region as well as other countries in Region 1.
- Paging – Paging were considered to be a major service at the time of SABRE, however (due mainly to GSM) the use of paging services is declining to the point where it will only be used in certain niche areas such as hospitals. SABRE aimed to consolidate paging channels and planned specific migration to achieve this; however, this is probably no longer relevant. It is expected that the remaining principle use will continue to be in medical environments where current allocations for low-power paging services would be more than adequate to meet the demand. Accordingly, the SABRE plans for paging

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<sup>14</sup> Refer to ‘Review of Self-Help Stations’ – ICASA Position Paper February 2006 and ‘Inquiry into Self Help Stations’ – ICASA Discussion document of December 2004.

can be discounted. The Frequency Migration Plan 2013 identified destination bands for these Radiocommunication Services and the Radio Frequency Spectrum Assignment Plans in order to implement the migration process.

- Alarms – The migration plan identified that there are large number of assignments in the bands allocated for alarms and the bands are generally highly utilised. The migration plan identified two options to satisfy the present trend of demand for new assignments:
  - Direct users to convert to a newer technology that is more spectrally efficient and can be accommodated in the existing spectrum allocation; or
  - Allocate more spectrum for Alarms in adjacent bands.

The Frequency Migration Plan 2013 identified destination bands for some of the Alarm Assignments. The Radio Frequency Spectrum Assignment Plans have been developed in order to do with the implementation of these Radiocommunication Services.

- Public Safety: The Frequency Migration 2013 identified that:

All public safety services should be consolidated in the same radio frequency band (380 – 400 MHz) and that where possible public safety users should adopt a common standard. This would have multiple benefits including economic benefits borne out of infrastructure sharing as well as increased effectiveness due to interoperability between users using a common equipment base.

The Frequency Migration Plan 2013 identified the destination bands. The Radio Frequency Assignment Plans have been developed in order to implement the migration process.

#### **4.10 Commentary on bands with respect to Frequency Migration Plan 2019**

This section focusses on the migration issues as listed in the Frequency Migration Plan 2019 and the actions taken to address the migration issues.

##### **4.10.1 75.2 – 87.5 MHz**

The band is primarily used by Repeaters (Private, Communal) in several applications such as mining, farming and other small businesses. SABRE 1 had proposed migration of the dual-frequency alarms into this band. The Radio Frequency Spectrum Assignment Plan was published for public consultation in Government Gazette Number 41164 (Notice 781 of 2017).



#### 4.10.2 138 – 144 MHz

The band is primarily used by Repeaters (Private, Communal) in several applications such as mining, farming and other small businesses along with SF alarms. In addition, there is an assignment for remote controlled industrial apparatus (ISM Licence exempt band 141 – 142)<sup>15</sup>.

Final Radio Frequency Spectrum Assignment Plan was published for public consultation in Government Gazette Number 41512 (Notice 146 of 2018).

A feasibility study will be performed to establish the destination band for Transnet operation in this band. In the interim Transnet's license will be amended to co-exist with the alarms and to operate until 31 March 2020.

#### 4.10.3 150.05 – 153 MHz

The current users may continue to operate in this band in line with the rules contained in the Final Radio Frequency Spectrum Assignment Plan that was published for public consultation in Government Gazette Number 41512 (Notice 149 of 2018).

#### 4.10.4 156.4875 – 156.5625 MHz

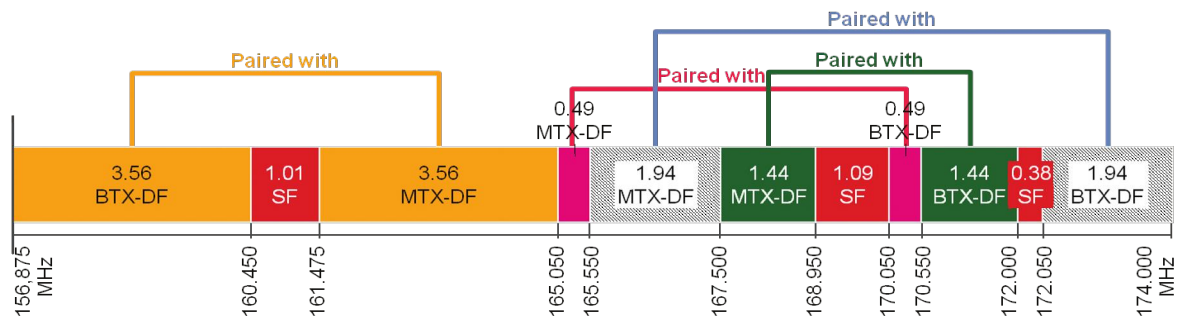
Although SF Mobile may continue to operate within 156.375 – 156.7625 MHz on a non-interference basis and non-protection basis to Maritime mobile services in inland areas, there are many occasions where these are situated in proximity (50 km or less to water-bodies). "*The conditions for the use of this frequency and the band 156.4875-156.5625 MHz are contained in Articles 31 and 52 of the ITU Radio Regulations, and in Appendix 18, in line with ITU RR 5.226. Refer to:*

- Appendix F; and
- Radio Frequency Spectrum Assignment Plan that was published for public consultation in Government Gazette Number 41350 (Notice 971 of 2017).

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<sup>15</sup> Government Gazette No. 31290, Notice No. 926 of 2008 as amended.

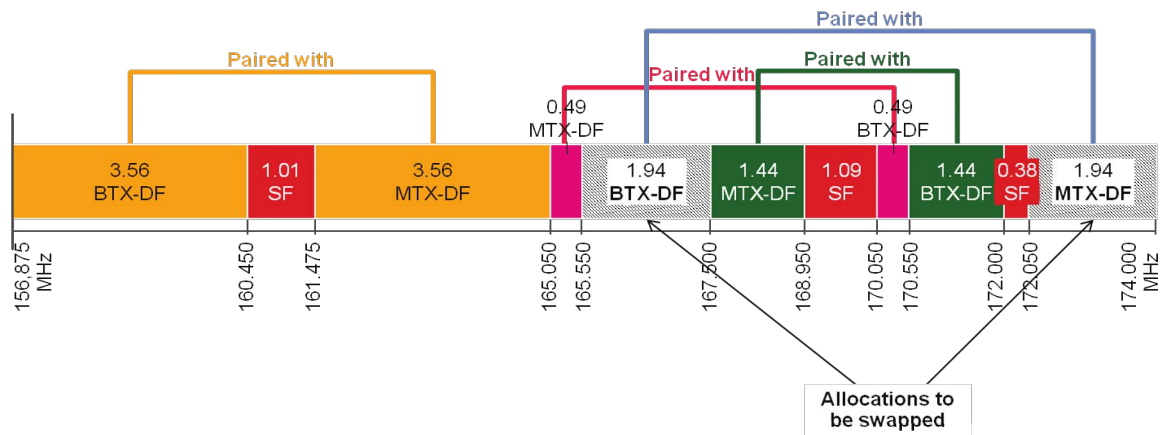
**4.10.5 156.875 - 174 MHz**



**Figure 3 Proposed Allocation 156.875 MHz – 174 MHz**

The planned frequency assignment as per the NRFP in this band is as shown in Figure 3

However, at present the MTX-DF (165.55 – 167.5 MHz) and BTX-DF (172.05 – 174 MHz) are interchanged as indicated in Figure 4.



**Figure 4 Current situation 156.875 MHz – 174 MHz**

This has resulted in the situation that the BTX lies within the MTX assignment and *vice-versa*, leading to interference and other challenges during assignment.

It is therefore planned to:

- First step: ensure that the appropriate nesting of the spectrum is carried out by swapping the MTX and BTX;

- Second step: - Conduct technical feasibility study into simplex frequencies (FDMA or TDMA) with different channel spacing – including coexistence of multiple technologies, bandwidth etc. Depending upon the outcome, the band would need to be re-planned (year 2 + after studies have been completed) – need for studies stemming from the submissions; and
- Third step: Develop Radio Frequency Spectrum Assignment Plan for the band.

#### **4.10.6 174 – 223 MHz**

The current analogue Television Services operating in this band is being migrated to DTT since February 2016 in accordance with the Terrestrial Broadcast Frequency Plan 2013. The new assignment could be carried out in line with SADC FAP proposed common sub-assignment / utilization Including the SADC guidelines on Digital Sound Broadcasting.

Refer to the Radio Frequency Migration Plan 2013. Government Gazette No 36334 (Notice no. 352 of 2013) and the Terrestrial Broadcasting Frequency Plan GG 36321 (Notice 298 of 2013).

#### **4.10.7 214 - 230 MHz T-DAB.**

The Radio Frequency Spectrum Assignment Plans is to be optimised to increase T-DAB multiplexes on a national and regional basis.

#### **4.10.8 223 – 230 & 230 – 238 MHz**

The process is underway for the use of the band for T-DAB. Refer to the Radio Frequency Migration Plan 2013, Government Gazette No 36334 (Notice no. 352 of 2013), the Terrestrial Broadcasting Frequency Plan GG 36321 (Notice 298 of 2013), and the Digital Sound broadcasting discussion document published in Government Gazette, No. 41534 (Notice No 161 of 2018). (Refer to section 4.10.6)

#### **4.10.9 238 – 267 MHz**

This band is currently partially being occupied by Analogue TV. Consequent to the planned migration in line with GE-06, the band can be used for the following purposes as per SADC proposed sub-allocation / utilization:

- 230 – 238 MHz to form a complete 8 MHz DVB-T2 Channel;
- 238 – 242.95 MHz PMR including public trunking (national trunking);
- 242.95 – 243.05 MHz International Distress;

- 243.05 – 246 MHz Low power devices ancillary to broadcasting services;
- 246– 254 MHz TV Broadcast (Channel 13) to form a complete 8 MHz DVB-T2 Channel. This is DTT VHF spectrum in addition to the UHF spectrum in the Terrestrial Broadcasting Frequency Plan GG 36321 (Notice 298 of 2013);
- A Radio Frequency Spectrum Assignment Plan is to be developed to implement this.
- 254 – 267 MHz PMR and/ or PAMR including public trunking (national trunking)

#### **4.10.10 335.4 - 380 MHz**

Spectrum in this band could be freed up for rural broadband if equipment for BFWA in this band is available in the market. The current players have shown indications that they may relinquish this spectrum due to spectrum fees imposed.

Planned feasibility study on the use of this band as per SADC FAP proposed sub-allocation/ utilization including BFWA and UAV's:

- 335.4-336 MHz PMR and / or PAMR.
- 366.0-380.0 MHz PMR and / or PAMR.
- 336-346 MHz paired with 356-366 MHz for Fixed Wireless Access/ PTP/PTMP rural system.

#### **4.10.11 380 - 387 & 387 – 390 & 390 – 399.9 MHz**

This band will be assigned as a continuous block for Public Protection and Disaster Relief (PPDR) as well as Public Safety with users including SAPS, SANDF, the Ambulance Service, Metro Police and Fire-Fighting Services. All other users will migrate out of this band. This assignment recognizes the importance of having a band dedicated for Public Safety and free of any other potential sources of interference. In ideal circumstances these users could make use of a common digital public trunking network which could also promote interoperability between such users in periods of emergency.

The Authority is of the view that private establishments who serve private health care should work alongside public institutions since they are all responsible for Public Safety operating within this band. This is to allow interoperability with other Public Safety/ Emergency Service users.

The planned assignment of this band would be as per SADC proposed sub-allocation utilization.

Radio Frequency Spectrum Assignments Plan was published for public consultation in Government Gazette Number 41164 (Notice 787 of 2017). The final Radio Frequency Spectrum Assignment Plan was subsequently published in GG No. 41512 (Notice 418 of 2018) dealing with the band 380 – 400 MHz.

#### **4.10.12 410 – 420 & 420-430 MHz**

The frequency band 410 to 430 MHz is exclusively allocated for Digital Public Trunking. A feasibility study within the frequency band 410 – 430 MHz is to be performed.

#### **4.10.13 440 - 450 MHz**

This band is allocated for Short Range Business Radio (440 – 440.1 MHz) while the remaining portion is allocated for PMR (both UHF repeaters and DMR). The Short-Range Business Radio has wide application in South Africa and is type approved (unlicensed). It is important to ensure that this sub-band is maintained for Short Range Business Radio purposes. There is no migration planned in the PMR446 sub-band which is license exempted.

It is hence resolved that:

- 440 – 440.1 MHz (paired with 445 to 445,1 MHz) be allocated to Short-range Business radio.
- 440 – 441 MHz (paired with 445 – 446 MHz) be used for temporary assignments within PMR band.
- A feasibility study into the possibility to use the band 440 – 450 MHz for PPDR is to be performed.
- A Radio Frequency Assignment Plan is to be developed.
- All other users migrate out of the band. The band 441.1 to 445 MHz is paired with 446.1 to 450.
- The rest of the users in this band can stay as-is.

#### 4.10.14 450 – 455 & 455 – 456 & 456 – 459 & 459 – 460 & 460 - 470 MHz

This band is currently used amongst others for Trunked Mobile with several users including the Railways (Transnet, previously referred to as Transtel as well in various publications) and mines (Figure 5). The SADC FAP proposed common sub-allocation/ utilization seeks to allocate this spectrum for Mobile IMT. This is important to note that several adjacent countries (e.g. Mozambique) are moving to implement this proposal. Although the band has a large number of assignments, a recently concluded spectrum audit indicates that the spectrum usage is quite low – indicating inefficient spectrum use.

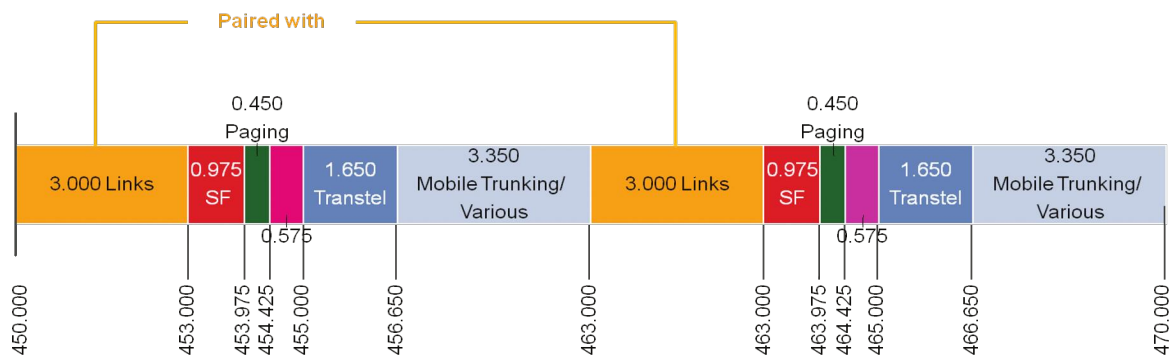


Figure 5 Current assignment 450 – 470 MHz

Note that the numbers in Figure 5 above refer to MHz and the total MHz available for the specific service.

In view of the other spectrum that has been identified for IMT, it was decided therefore:

- To assign this frequency band to Mobile (IMT) as per Res. 224 revision WRC-15;
- Update the Radio Frequency Spectrum Assignment Plan for 450 – 470 MHz frequency band in accordance with Recommendation ITU-R.M1036-5
- The IMT450 Radio Frequency Spectrum Assignment Plan is to be updated in line with the updated Recommendation ITU-R.M1036-5, published in Government Gazette Number 38640 (Notice 270 of 2015, in accordance with the Frequency Migration Plan published in government Gazette Number 2013 GG 36334 (Notice 352 and 353 of 2013) and the Final International Mobile Telecommunications Roadmap 2014, published in Government Gazette Number 38146 (Notice 1009 of 2014).
- To develop the Final Radio Frequency Spectrum Assignment Plan: Frequency Band 450 to 470 MHz was

This decision is based on the fact that Transnet was given the option of vacating this frequency band or shifting in this frequency band, if Transnet can prove the co-existence without interference with other telecommunication operators/providers within the band. Transnet has performed trials in the IMT450 in 2018.

#### **4.10.15 694 - 790 MHz**

- Migration in this band is to be implemented in accordance with the Terrestrial Broadcasting Frequency Plan, published in Government Gazette 36321 (Notice 298 of 2013) and the ongoing efforts within the 700 MHz Band as defined in Government Gazette Number 40145 (Notice Number 438 of 2016).

#### **4.10.16 790 - 862 MHz**

This band has been allocated for IMT (Terrestrial) for Region 1 countries at WRC-07) and is often termed as Digital Dividend 1. Currently this band is occupied by UHF TV. Migration is currently underway.

It is proposed that:

- The migration plan is aligned with the on-going efforts within the 800 MHz band as defined in Government Gazette 40145<sup>16</sup>.
- With respect to the small number of Studio to Transmitter Links (STL's) in this band; these must be migrated out and given point to point fixed assignments.
- Self Help stations must be switched off with all other analogue services at the end of television dual illumination. Refer to Terrestrial Broadcasting Frequency Plan, published in Government Gazette 36321 (Notice 298 of 2013)
- Migration in this band is to be implemented in accordance with the Terrestrial Broadcasting Frequency Plan, published in Government Gazette 36321 (Notice 298 of 2013).

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<sup>16</sup> Government Gazette 40145 ( Notice Number 438 of 2016) : Invitation to apply for a radio frequency spectrum licence to provide mobile broadband wireless access services for urban and rural areas using the complimentary bands, 700 MHz, 800 MHz and 2.6GHz

**4.10.17 862 - 890 MHz**

This band currently has several users including:

- Wireless audio (863-865 MHz).
- Fixed links (856 – 864.1 MHz paired with 868.1–876 MHz).
- RFID (865 – 868 MHz), RFID (869.4- 869.65 MHz).
- Alarms operate amongst others in 860.25 – 869.3 MHz).
- Wireless Access Services (872.775 – 877.695 MHz paired with 827.775 – 832.695 MHz).
- Mobile (880-890 MHz paired with 925-935 MHz) – currently assigned to Cell-C.
- 864.1 – 868.1 MHz assigned to Telkom for FWA
  
- The use of the band by non-specific SRDs, GSM-R and CT2 cordless telephones

It is essential to note that alarms were not part of the SABRE proposed allocations and may need to be consolidated within designated alarm bands. It is proposed to:

- Align re-planning efforts within the 800 MHz band as defined in Government Gazette Number 40145 (Notice Number 438 of 2016)<sup>17</sup>.
- Remove the assignment for Wireless Access Services in this band.
- Re-plan the entire band to accommodate IMT (terrestrial) as per SADC FAP proposed common sub-allocation/ utilization.
- Migrate existing users out of this band.

Refer to IMT 850 consultation in Government Gazette number 38640 (notice no. 274 of 2015), Government Gazette number 41082 (Notice 678 of 2017) and Government Gazette number 41082 (Notice no. 648 of 2017).

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<sup>17</sup> Government Gazette 40145 ( Notice Number 438 of 2016) : Invitation to apply for a radio frequency spectrum licence to provide mobile broadband wireless access services for urban and rural areas using the complimentary bands, 700 MHz, 800 MHz and 2.6GHz.



**NOTE:**

**The migration plan as contained in Government Gazette number 36334 (Notices Number (352 and 353 of 2013) were implemented through the following notices:**

- a) Radio Frequency Assignment Plan for the Band 825 to 830 MHz and 870 to 875 MHz was published in Government Gazette Number 38640 (Notice 274 of 2015) and
- b) Government Gazette Number 41082 (Notice 648 of 2017) for public consultation in accordance with the Frequency Migration Plan published in Government Gazette Number 36334 (Notice 352 and 353 of 2013) and
- c) the Final International Mobile Telecommunications Roadmap 2014 published in Government Gazette Number 38146 (Notice 1009 of 2014

**4.10.18 890 - 942 MHz**

This band was implemented through a notice in the Government Gazette;

- RFSAP was developed and is contained in Government Gazette number 38640 (Notice Number 275 of 2015)

**4.10.19 942 - 960 MHz**

This band was implemented through a notice in Government Gazette number 38640 (Notice Number 275 of 2015).

**4.10.20 1350 - 1375 MHz paired with 1492- 1518 and 1375 – 1400 MHz paired with 1427 – 1452 MHz**

This band is currently allocated to low capacity PTP / DF links. Spectrum is available on a radio coordinated basis. Based upon availability of equipment as well as user demand, ICASA proposes that:

- Maintain existing links where required (too expensive to migrate etc.).
- Allocation to rural broadband (BFWA) due to good propagation characteristics.
- Feasibility Study to be performed considering the WRC-15 decision (enabling harmonization, equipment availability etc.).
- Radio Frequency Spectrum Assignment Plan to be developed in line with the study results conducted within ITU-R WP 5D and in accordance with the latest version of Recommendation 1036 in respect of L-Band.

**4.10.21 1452 - 1492 MHz**

This band is currently allocated to T-DAB and S-DAB due to the current South African allocations of BROADCASTING and BROADCASTING-SATELLITE. Given the allocation of DAB+ in the VHF band (from 214 – 230 MHz) it is important to determine whether the frequency allocation is sufficient or additional spectrum in the L-band needs to be allocated for the purpose. Consideration of this depends upon:

- Whether there is sufficient and adequate demand for DAB services to require assignment in two bands.
- Whether equipment is readily available encompassing both bands.

Under the present and forecasted situation, it is believed that the DAB+ allocation in the VHF band is sufficient to meet the requirements of T-DAB. This would also result in lower equipment costs since any receiver would have to be designed to cover only a single band rather than two distinct bands. In addition, S-DAB may have only very limited potential within South Africa and this spectrum may be better utilized for other purposes. It is there proposed by ICASA to:

- Modify the allocation in this band and align it with the ITU Region 1 to include FIXED, MOBILE except aeronautical mobile, BROADCASTING and BROADCASTING-SATELLITE.
- Consider developments and outcome of WP5D (i.e. sharing and compatibility studies and the development of a channelling plan).
- Allocate this band to PTP/ PMP/ BFWA depending upon the availability of equipment. Communal/ private repeaters could also operate in this band.
- Consider the band for Public Mobile and Emergency and Temporary transmissions

Radio Frequency Spectrum Assignment Plan to be developed in line with the study results conducted within ITU-R WP 5D and in accordance with the latest version of Recommendation 1036 in respect of L-Band.

**4.10.22 1518 - 1525 MHz**

The band was allocated for both SF links as well as the IMT satellite component. However, this band remains unoccupied and there are views that the IMT (satellite) will have limited usage within South Africa.

Due to these factors, ICASA proposes to:

- Assign this band for repeater links for land-mobile radio (LMR) and migrate such links into this band.
- Assign for outside-broadcasting links currently operating in 2300 – 2450 MHz
- Radio Frequency Spectrum Assignment Plan was published for public consultation in Government Gazette Number 41164 (Notice 784 of 2017)

#### **4.10.23 1525 – 1530 & 1530 – 1535 & 1535 – 1559 MHz**

The band has been identified for IMT (satellite); Res. 225 (WRC applies). In the band 1530 – 1544 MHz priority for maritime mobile distress, urgency and safety communication (GMDSS); Res. 222 applies. The band is currently being used by INMARSAT.

The Radio Frequency Spectrum Assignment Plan to be developed

#### **4.10.24 1668 – 1675MHz**

The band has been identified for the satellite component of IMT; Res 225 applies. However, the use of IMT (Satellite) within South Africa is limited and it is unclear whether this application would ever become significant for broadband with the strong growth of IMT (Terrestrial).

It was therefore decided to:

- Change the current allocation to be in line with ITU Region 1 allocations of:

1668 – 1668.4 MHz:

- MOBILE-SATELLITE (earth-to-space)
- RADIO ASTRONOMY
- SPACE RESEARCH (passive)
- Fixed
- Mobile except aeronautical mobile

1668.4 – 1670 MHz:

- METEOROLOGICAL AIDS
- FIXED
- MOBILE except aeronautical mobile

- MOBILE-SATELLITE (earth-to-space)
- RADIO ASTRONOMY

1670 – 1675 MHz:

- METEOROLOGICAL AIDS
  - METEOROLOGICAL SATELLITE (space-to-earth)
  - MOBILE
  - MOBILE-SATELLITE (earth-to-space)
- This change in allocation, in line with ITU region 1 would open up the possibilities of introducing fixed links (PTP, PMP) into this band.
  - No Migration at this stage.
    - FIXED service allocations are currently not included in Government Gazette Number 41650 (Notice 266 of 2018)

#### **4.10.25 1880 - 1900 MHz**

The band was allocated for cordless DECT by SABRE proposed allocation. This is being currently in use by Telkom to provide WLL services. Depending upon the current utilization of this band, as per SADC FAP proposed common sub-allocation/ utilization, the Authority decided to:

- Allocate this band to BFWA, and
- To have no Migration.

#### **4.10.26 1980-2010/ 2170-2200 MHz**

The band has been identified for the satellite component of IMT; Res 225 applies. However, the use of IMT (Satellite) within South Africa is limited and it is unclear whether this application would ever become significant for broadband with the strong growth of IMT (Terrestrial). The band is also allocated for Fixed Links, but currently lies unused in the lower band and utilized by SANDF, amongst other users in the upper band; this is however under-utilized.

The implementation of satellite component of IMT in the frequency bands 1885 – 2025 MHz and 2110 – 2200 MHz will be addressed at WRC-19 under agenda item 9.1.1. Any further

decisions regarding the use of the bands 1980 – 2010 MHz and 2170 – 2200 MHz will be taken after WRC-19.

The Authority has therefore decided to:

- Allocate for Fixed links and migrate in fixed links from other bands into this band.
- Allocate for BFWA depending upon availability of equipment in these bands (New ICASA proposal for the future after WRC-19).
- Have no Migration at this stage.

#### **4.10.27 2025 – 2110 paired with 2200 - 2285 MHz**

The band is currently allocated for fixed links – but is under-utilized. SABRE proposed use of 2075 - 2110 MHz for WLL was never implemented.

It is decided to:

- Assign BFWA depending upon availability of equipment in these bands
- Develop a Radio Frequency Spectrum Assignment Plan which was published for public consultation in Government Gazette Number 41164 (Notice 782 of 2017) for public consultation.

#### **4.10.28 2290 - 2300 MHz**

Currently unused; In line with SADC proposed common sub-allocation/ utilization, ICASA proposes to:

- Assign this band to BFWA.
- Develop a Radio Frequency Spectrum Assignment Plan which was published for public consultation in Government Gazette Number 41164 (Notice 783 of 2017) for public consultation.
- Final Radio Frequency Spectrum Assignment Plan was published in GG No. 41512 (Notice 145 of 2018).

#### **4.10.29 2300 - 2483.5 MHz**

The band is currently in use for several services including:

- Fixed links – 2307 – 2387 MHz paired with 2401 – 2481 MHz

- Outside broadcasting links (28 MHz) – primary basis at (2377, 2471 MHz), secondary basis at (2321, 2349 MHz, 2415, 2443 MHz).
- ISM – 2400 – 2483.5 MHz

As per SADC FAP proposed common sub-allocation/ utilization, it is proposed to:

- Allocate 2300 – 2400 MHz for IMT (Terrestrial).
- Continue to retain allocation of 2400 – 2483.5 MHz for ISM.
- Existing Fixed links could be migrated above 3 GHz.
- Migrate outside-broadcasting links in line with the DTT migration (potentially to 1518 – 1559 MHz band).

The Authority decided that;

- A feasibility study is to be conducted

#### **4.10.30 2500 - 2690 MHz**

- The RFSAP was developed and is contained in Government Gazette number 38640 (Notice Number 277 of 2015)

Centre gap (i.e. 2570 – 2620 MHz) is included with respect to migration only and this centre gap will be subject to a separate Radio Frequency Spectrum Assignment Plan which needs to be developed.

An amendment to the Radio Frequency Spectrum Assignment Plan IMT2600 to be undertaken in order to change the channel arrangement from FDD to TDD to maximise the efficient use of spectrum.

#### **4.10.31 3300 - 3400 MHz**

- The band 3300 to 3400 has been identified for IMT through resolution 223 (Rev WRC-15)
- This can form a continuous block of IMT frequencies with the band 3400 to 3600 MHz
- Sharing and compatibility studies called for resolution 223 (Rev. WRC-15) are currently undertaken within ITU-R.
- Radio Frequency Spectrum Assignment Plan to be developed in line with the study results conducted within ITU-R WP 5D and in accordance with the latest version of Recommendation 1036 in respect of L-Band.

#### **4.10.32 3400 - 3600 MHz**

- The RFSAP was developed and is contained in Government Gazette number 38640 (Notice Number 278 of 2015).
- An amendment to the Radio Frequency Spectrum Assignment Plan IMT2600 to be undertaken in order to change the channel arrangement from FDD to TDD to maximise the efficient use of spectrum.

#### **4.10.33 3600 - 4200 MHz**

This band (C-band) is currently being utilized for PTP links (terrestrial backhaul) and Satellite links including VSAT, Satellite downlink and tracking. The proposed the following allocation:

- (3600-4200 MHz) Fixed services (PTP).
- (3600-4200 MHz) Fixed-satellite (space-to-Earth) (PTP/VSAT/SNG).

The sub-band 3600-4200 is used for FSS. The sub-band 3 600-3 800 MHz could be used for BFWA where frequency sharing with FS PTP and/or FSS is feasible. The channelling arrangement for PTP links in this band is based on ITU-R Recommendation F.635 **Annexure 1**. The sub-band 3 600-4 200 MHz is used for medium and high capacity PTP links and FSS. In the band 3 600-3 800 MHz, FS PTP and FSS applications will have to operate on coordinated basis.

#### **4.10.34 5470 - 5725 MHz**

As per as per SADC proposed common sub-allocation/ utilization, the band can be allocated for:

- Wireless Access Systems (WAS) / RLAN.
- No Migration at this stage.

#### **4.10.35 5725 - 5850 MHz**

This band is currently being used for ISM, amateur and SRD services. As per ITU footnote 5.453 the band can also be allocated for fixed and mobile services on a primary basis. SADC FAP footnote SADC18 allocates this band for similar services in Swaziland and

Tanzania. The NRFP can be updated to reflect the assignment if there is an interest within South Africa for this service in the band.

- No Migration at this stage.

#### **4.10.36 5850 - 5925 MHz**

The upper C-band is currently being used for terrestrial backhaul and satellite (uplink, VSAT). As per the SADC FAP proposed common sub-allocation/ utilization outside broadcasting links could also be potentially migrated into this band with the proposed allocation as follows:

- Fixed-satellite uplinks (PTP/VSAT/SNG) (5850-6425 MHz) – this could also be used for temporary outside-broadcast links.
- FIXED links (5850-5925 MHz).
- ISM (5725-5875 MHz).
- No Migration at this stage.

#### **4.10.37 5925 - 6700 MHz**

As per the SADC proposed common sub-allocation/ utilization the current band would be allocated as follows:

- 5925 – 6425 MHz Fixed links (lower 6 GHz in accordance with ITU-R Rec. F.383).
- 6425 – 7110 MHz Fixed links (upper 6 GHz in accordance with ITU-R Rec. F.384).
- 5850 – 6425 Fixed-satellite uplinks (PTP, VSAT, SNG).
- No Migration at this stage.

#### **4.10.38 10700 - 11700 MHz**

This is the defined Ku band.

- No Migration at this stage.

#### **4.10.39 15400 – 15700 MHz**

No Migration at this stage

#### **4.10.40 40000 MHz and above**

Although out-migration is not an issue above 40GHz, the following comment should be made:



- Frequency bands above 40 GHz are relatively under-utilized. Equipment is available off the shelf for high bandwidth PTP links over distances of up to 5km. It is proposed that in the spectrum above 40GHz, allocations are made for Fixed Services such as PTP links – which would be useful especially in metropolitan areas for line-of-sight (LoS) high capacity data links.
- It is planned to carry out feasibility studies regarding the use of the high frequency band in accordance with the outcome of WRC 19 Agenda Item 1.13 (i.e. frequency bands for IMT 2020)

#### 4.11 Summary of the Authority's decision

The following table summarises the Authority's decision regarding frequency migration as extracted from the previous section. These decisions are additional to those proposals made by SABRE and migrations stemming from the WRC and the SADC FAP.

**Table 2 Consolidated list of New ICASA proposals for migration**

Frequency Band (MHz)	Notes on migration/ usage
141 – 141.5	Migrate SF Mobile out of this band and allocate for SF alarms.
141 – 142	Migrate remote controlled industrial apparatus to ISM Band.
380 – 400	Allocated for public safety/ government services. Migrate all such users into this band.
410 – 430	Allocated for Digital Public Trunking.
440 – 440.1 paired with 445 – 445.1	Allocated for Short-range Business Radio; all other users migrate out of this band.
921 – 925 paired with 876 – 880	Allocated for GSM-R; migrate other users out of this band.
1452 - 1492	Use of the band for IMT.as identified by WRC-15 Use for BFWA/ PTP/ PMP depending upon availability of equipment.
1518 – 1530	Allocate for links for LMR repeaters; Migrate in outside-broadcasting links currently operating in 2300 – 2450 MHz

Frequency Band (MHz)	Notes on migration/ usage
1668 – 1675	Change allocation in line with ITU Region 1 allocations to include FIXED and Mobile except aeronautical mobile within the allocations.
1980 – 2010 paired with 2170- 2200	Migrate in Fixed links (DF) from other bands; allocate for BFWA ;
2025 – 2110 paired with 2200 - 2285	Migrate in Fixed links (DF) from other bands; allocate for BFWA.
2300 – 2450	Migrate outside broadcasting links to the 1518 – 1525 MHz band.

## 4.12 Commentary on Spectrum Re-farming

### 4.12.1 Definition of spectrum re-farming

Spectrum re-farming is defined as a process of changing the conditions of frequency usage in any part of the radio spectrum<sup>18</sup>. This includes:

- Change of the technical conditions of the frequency assignment.
- Change of the application.
- Change of allocation to a different telecommunications service.

This definition is directly in line with the Spectrum Re-Farming Definition in Recommendation ITU-R SM.1603, which reads as thus:

“Spectrum redeployment (spectrum re-farming) is a combination of administrative, financial and technical measures aimed at removing users or equipment of the existing frequency assignments either completely or partially from a particular frequency band. The frequency

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<sup>18</sup> ICT Regulation Toolkit

band may then be allocated to the same or different service(s). These measures may be implemented in short, medium or long time-scales;”

For more see Appendix H to this document.

#### **4.12.2 Need for Re-farming in GSM / Mobile bands**

Frequency bands in the sub- GHz range are attractive to operators since it offers better propagation characteristics leading to better coverage at lower cost as well as indoor coverage in comparison to higher frequency bands.

At the same time mobile broadband subscriptions and traffic continue to grow at a rapid rate and is expected to reach over 5 billion devices by 2016, worldwide. This is mainly due to a shift towards mobile-broadband enabled smart phones over voice centric phones in the mass market coupled with a rapid declining price for the same. However, in order to provide a good quality of mobile broadband service requires better network quality. This can be achieved either through:

- Enhancements in technology (MIMO, Adaptive techniques etc.) or.
- Additional spectrum dedicated to mobile broadband either via new carriers or new bands.
- Use existing frequency assignments for in-house re-farming i.e. IMT2000 to IMT advance through to IMT2020 bands for #G services.

#### **4.12.3 Points of consideration for GSM / Mobile Bands**

- South Africa still retains a large number of its subscriber base for Voice with the current 2G GSM spectrum (900 MHz and 1800 MHz) being fully utilized by the current license holders. This subscriber base would to a large extent be represented by lower income groups and it would be important to maintain the voice service for their benefit.
- Until such a stage is reached that the subscriber base using the existing 2G spectrum is reduced in size to a level where the existing 2G bands have spare capacity, the issue of spectrum re-farming should not be allocated high priority. Instead efforts should be focused towards locating additional bands for IMT as per WRC and SADC proposed spectrum allocation/ utilization.

- However, it should be noted that in some cases, such spectrum re-farming may also be in the interest of the current licensee (e.g. the operator) since it allows him to change the allocation/ technical conditions in order to better serve his customer base.
- The GSM 900 MHz and 1800 MHz frequencies are currently occupied by the incumbent mobile operators who have nationwide assignments. If there is a case to inject competition in this market, a re-farming exercise would also need to consider ways and means to re-allocate spectrum between the incumbents and new entrant(s) so as to facilitate free and fair competition. Such an exercise could be carried out for both 900 and 1800 bands at the same time in conjunction with assignments in other bands allocated to IMT to allow existing operators to maintain their existing level of service.

## 5 Potential Impact of Spectrum Migration

### 5.1 Bands planned for IMT

One of the critical issues under public debate in South Africa is the availability of spectrum for mobile broadband wireless access. The total of 649 MHz of spectrum is made available for IMT following SADC FAP proposed common sub-allocation and WRC resolutions, as indicated in the following table.

**Table 3 Bands planned for IMT**

Frequency Band (MHz)	Bandwidth (MHz)	Current Allocation	Notes
450 – 470	20	FIXED, MOBILE 5.286AA NF9	Enabled for IMT as per WRC-7, Res. 224 applies
694 – 792	98	MOBILE except aeronautical mobile 5.312A 5.317A NF9 BROADCASTING 5.300 5.311A 5.312 NF8A	Enabled for IMT as per WRC-12, Res. 232 – Digital Dividend 2
790 – 862	72	FIXED MOBILE except aeronautical mobile 5.316B 5.317A NF9 BROADCASTING 5.312 5.319 NF8A	Enabled for IMT as per WRC-7, planned for 2015 – Digital Dividend 1
862 – 876	14	FIXED MOBILE except aeronautical mobile 5.317A NF10	Enabled for IMT as per SADC FAP proposed common sub-allocation/ utilization

1880 – 1920	40	FIXED MOBILE 5.384A 5.388A NF9	Enabled for IMT as per SADC FAP proposed common sub- allocation/ utilization
2010 – 2025	15	FIXED MOBILE 5.388A NF9	Enabled for IMT as per SADC FAP proposed common sub- allocation/ utilization
2500 – 2690	190	MOBILE except aeronautical mobile 5.384A NF9 Radio astronomy	Enabled for IMT as per SADC FAP proposed common sub- allocation/ utilization
3400 – 3600	200	FIXED MOBILE 5.430A NF9	Enabled for IMT as per WRC-07, effective Nov. 2010

This does not include the frequency already allocated and assigned to GSM / UMTS.

## 5.2 Frequency Migration Resolutions resulting from WRC 15

The following Resolutions were considered to be included in the Frequency Migration Plan 2019.

Table 4 WRC resolutions

Frequency Band (MHz)	WRC	Res. / Rec.	Footnote	Resolution/ Footnote
5.3515 - 5 3665	15		<b>5.133B</b>	1. Stations in the amateur service using the frequency band 5 351.5-5 366.5 kHz shall not exceed a maximum radiated power of 15 W (e.i.r.p.).

108 - 117.975	12	413		2. Use by aeronautical mobile (R) service without interfering with existing ARNS systems
450 – 470	7	224		3. Frequency bands for the terrestrial component of International Mobile Telecommunications below 1 GHz
694 – 790	12	232		4. Use of the frequency band 694-790 MHz by the mobile, except aeronautical mobile, service in Region 1 and related studies
790 – 862	12	224		5. Frequency bands for the terrestrial component of International Mobile Telecommunications below 1 GHz
1 452-1 492	15	223, 750 & 761	5.346	6. Additional frequency bands identified for International Mobile Telecommunications 7. Compatibility between the Earth exploration-satellite service (passive) and relevant active services 8. Compatibility of International Mobile Telecommunications and broadcasting-satellite service (sound) in the frequency band 1 452-1 492 MHz in Regions 1 and 3
960 – 1164	12	417		9. Use of 960 – 1164 MHz by aeronautical mobile (R) service meeting standard and recommended practice

1518 - 1544 1545 - 1559 1610 - 1626.5 1626.5 - 1645.5 1646.5 - 1660.5 1668 - 1675 2483.5 - 2500	12	225		10. Use of additional frequency bands for the satellite component of IMT
1525 – 1559/ 1626.5 – 1660.5	12	222		11. Use of 1525-1559 MHz and 1626.5-1660.5 MHz by the mobile-satellite service, and procedures to ensure long-term spectrum access for the aeronautical mobile-satellite (R) service
161.9375 -161.9625	15		5.228AA	12. The use of the frequency bands 161.9375-161.9625 MHz and 161.9875-162.0125 MHz by the maritime mobile-satellite (Earth-to-space) service is limited to the systems which operate in accordance with Appendix 18. (WRC-15)
161.9875-162.0125 MHz	15		5.228AA	13. The use of the frequency bands 161.9375-161.9625 MHz and 161.9875-162.0125 MHz by the maritime mobile-satellite (Earth-to-space) service is limited to the systems which operate in accordance with Appendix 18. (WRC-15)
173.7 – 175.1			NF5	14. This frequency band may be used for wireless microphones for services ancillary to Broadcasting (SAB) and services ancillary to programme (SAP) making. Use



				of wireless microphones must be co-ordinated and licensed.
403-406 MHz	15	205	5.265	15. Protection of the systems operating in the mobile satellite service in the frequency band 406-406.1 MHz
406-406.1	15	205	5.265	16. Protection of the systems operating in the mobile satellite service in the frequency band 406-406.1 MHz
406.1-410 MHz	15	205	5.265	17. Protection of the systems operating in the mobile satellite service in the frequency band 406-406.1 MHz
410-420 MHz	15		5.268	18. Use of the frequency band 410-420 MHz by the space research service is limited to space-to-space communication links with an orbiting, manned space vehicle.
432-438 MHz	15		5.279A	19. The use of the frequency band 432-438 MHz by sensors in the Earth exploration-satellite service (active) shall be in accordance with Recommendation ITU-R RS.1260-1
450-455 MHz	15	224	5.286AA	20. Frequency bands for the terrestrial component of International Mobile Telecommunications below 1 GHz
455-456 MHz	15	224	5.286AA	21. Frequency bands for the terrestrial component of International Mobile Telecommunications below 1 GHz
456-459 MHz	15	224	5.286AA	22. Frequency bands for the terrestrial component of

				International Mobile Telecommunications below 1 GHz
456-459 MHz	15	224	5.287	23. Use of the frequency bands 457.5125-457.5875 MHz and 467.5125-467.5875 MHz by the maritime mobile service is limited to on-board communication stations.
459-460 MHz	15	224	5.286AA	24. Frequency bands for the terrestrial component of International Mobile Telecommunications below 1 GHz
460-470 MHz	15	224	5.286AA	25. Frequency bands for the terrestrial component of International Mobile Telecommunications below 1 GHz
				26.
470-694 MHz	15	760	5.296	27. <i>Additional allocation:</i> the frequency band 470-694 MHz is also allocated on a secondary basis to the land mobile service, intended for applications ancillary to broadcasting and programme-making.
694 – 790 MHz	15	224, 760	5.312A, 5.317A	28. Provisions relating to the use of the frequency band 694-790 MHz in Region 1 by the mobile, except aeronautical mobile, service and by other services
790 – 862 MHz	15	224, 749	5.312A, 5.317A	29. Use of the frequency band 790-862 MHz in countries of Region 1 and the Islamic

				Republic of Iran by mobile applications and by other services
862-890 MHz	15	224, 760 & 749	5.317A	30. The parts of the frequency band 698-960 MHz in Region 2 and the frequency bands 694-790 MHz in Region 1 and 790-960 MHz in Regions 1 and 3 which are allocated to the mobile service on a primary basis are identified for use by administrations wishing to implement International Mobile Telecommunications (IMT)
960-1 164 MHz	15	417	5.327A, 5.328	31. Use of the frequency band 960-1 164 MHz by the aeronautical mobile (R) service
1 350-1 400 MHz	15	750		32. Compatibility between the Earth exploration-satellite service (passive) 33. and relevant active services
1 427-1 429 MHz	15	223	5,341A	34. Additional frequency bands identified for International Mobile Telecommunications
1 452-1 492 MHz	15	223, 739, 761	5.346, 5.208B	35. Additional frequency bands identified for International Mobile Telecommunications 36. Compatibility of International Mobile Telecommunications and broadcasting-satellite service (sound) in the frequency band 1 452-1 492 MHz in Regions 1 and 3
1 492-1 518 MHz	15	223	5.341A	37. Additional frequency bands identified for International Mobile Telecommunications
1 525-1 530 MHz	15	739	5.208B	38. Compatibility between the radio astronomy service and the active space services in certain

				adjacent and nearby frequency bands
1 530-1 535 MHz	15	739	5.208B	39. Compatibility between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands
1 535-1 559 MHz	15	739	5.208B	40. Compatibility between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands
1 559-1 610 MHz	15	739	5.208B	41. Compatibility between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands
1 613.8-1 626.5 MHz	15	739	5.208B	42. Compatibility between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands
1 710-1 930 MHz	15	223, 212	5.384A, 5.388	43. Additional frequency bands identified for International Mobile Telecommunications 44. Implementation of International Mobile Telecommunications in the frequency bands 1 885-2 025 MHz and 2 110-2 200 MHz
1885 – 2025/ 2100 - 2200	07	212		45. Implementation of International Mobile Telecommunications in the bands 1885-2025 MHz and 2110-2200 MHz
1 930-1 970 MHz	15	223, 212	5.388	46. Additional frequency bands identified for International Mobile Telecommunications 47. Implementation of International Mobile Telecommunications in

				the frequency bands 1 885-2 025 MHz and 2 110-2 200 MHz
1970-1980 MHz	15	223, 212,	5.388	48. Additional frequency bands identified for International Mobile Telecommunications 49. Implementation of International Mobile Telecommunications in the frequency bands 1 885-2 025 MHz and 2 110-2 200 MHz
1980-2010 MHz	15	223,212	5.388	50. Additional frequency bands identified for International Mobile Telecommunications 51. Implementation of International Mobile Telecommunications in the frequency bands 1 885-2 025 MHz and 2 110-2 200 MHz
2010-2025 MHz	15	223,212	5.388	52. Additional frequency bands identified for International Mobile Telecommunications 53. Implementation of International Mobile Telecommunications in the frequency bands 1 885-2 025 MHz and 2 110-2 200 MHz
2110-2120 MHz	15	223,212	5.388	54. Additional frequency bands identified for International Mobile Telecommunications 55. Implementation of International Mobile Telecommunications in the frequency bands 1 885-2 025 MHz and 2 110-2 200 MHz
2120-2160 MHz	15	223 212	5.388	56. Additional frequency bands identified for International Mobile Telecommunications 57. Implementation of International Mobile Telecommunications in the frequency bands 1 885-2 025 MHz and 2 110-2 200 MHz

2160-2170 MHz	15	223 212	5.388	58. Additional frequency bands identified for International Mobile Telecommunications 59. Implementation of International Mobile Telecommunications in the frequency bands 1 885-2 025 MHz and 2 110-2 200 MHz
2170-2200 MHz	15	223 212		60. Additional frequency bands identified for International Mobile Telecommunications 61. Implementation of International Mobile Telecommunications in the frequency bands 1 885-2 025 MHz and 2 110-2 200 MHz
2200-2290 MHz	97	622	5.391	62. In making assignments to the mobile service in the frequency bands 2 025-2 110 MHz and 2 200-2 290 MHz, administrations shall not introduce high-density mobile systems
2300 – 2400	12	223		63. Additional frequency bands identified for IMT
3300-3400 MHz	15	223	5.429A, 5.429B	64. Additional frequency bands identified for International 65. Mobile Telecommunications
3400-3600 MHz	2004		5.430A	66. The allocation of the frequency band 3 400-3 600 MHz to the mobile, except aeronautical mobile, service is subject to agreement obtained under No. <b>9.21</b> .
4200-4400 MHz	15	424	5.436, 5.437	67. Use of Wireless Avionics Intra-Communications in the frequency band 4 200-4 400 MHz
5010-5030 MHz	15	741	5.443B	68. Protection of the radio astronomy service in the

				frequency band 4 990-5 000 MHz from unwanted emissions of the radionavigation - satellite service (space-to-Earth) operating in the frequency band 5 010-5 030 MHz
5030-5091 MHz	15	114	5.444	69. Compatibility between the aeronautical radionavigation service and the fixed-satellite service (Earth-to-space) (limited to feeder links of the non-geostationary mobile-satellite systems in the mobile-satellite service in the frequency band 5 091-5 150 MHz
5091-5150 MHz	15	114	5.444A, 5.444	70. Compatibility between the aeronautical radionavigation service and the fixed-satellite service (Earth-to-space) (limited to feeder links of the non-geostationary mobile-satellite systems in the mobile-satellite service) in the frequency band 5 091-5 150 MHz
5150 – 5250/ 5250 – 5350/ 5470 – 5725	12, Rev.15	229	5.446	71. Use of the bands 5150-5250 MHz, 5250-5350 MHz and 5470-5725 MHz by the mobile service for the implementation of wireless access systems including radio local area networks
5250-5255 MHz		229,	5.447F	72. Use of the bands 5150-5250 MHz, 5250-5350 MHz and 5470-5725 MHz by the mobile service for the implementation of wireless access systems

				including radio local area networks
5470-5570 MHz	15	229	5.450A	73. Use of the bands 5150-5250 MHz, 5250-5350 MHz and 5470-5725 MHz by the mobile service for the implementation of wireless access systems including radio local area networks
5 725-5 830 MHz	15	762	5.150	74. Application of power flux-density criteria to assess the potential for harmful interference under No. 11.32A for fixed satellite and broadcasting-satellite service networks in the 6 GHz and 10/11/12/14 GHz frequency bands not subject to a Plan
5925-6700 MHz	03, rev.15	902	5.457A	75. Provisions relating to earth stations located on board vessels which operate in fixed-satellite service networks in the uplink bands 5 925-6 425 MHz and 14-14.5 GHz
7 300-7 375 MHz	15		5.461	76. <i>Additional allocation:</i> the bands 7 250-7 375 MHz (space-to-Earth) and 7 900-8 025 MHz (Earth-to space) are also allocated to the mobile-satellite service on a primary basis, subject to agreement obtained under No. <b>9.21</b> .
7 375-7 450 MHz	15		5.461AA 5.461AB	77. The use of the frequency band 7 375-7 750 MHz by the maritime mobile satellite service is limited to geostationary-satellite networks.



7 450-7 550 MHz	15		5.461AA 5.461AB	78. The use of the frequency band 7 375-7 750 MHz by the maritime mobile satellite service is limited to geostationary-satellite networks.
7 550-7 750 MHz	15		5.461AA 5.461AB	79. The use of the frequency band 7 375-7 750 MHz by the maritime mobile satellite service is limited to geostationary-satellite networks.
9 200-9 300 MHz	15		5.474A 5.474B 5.474C	80. In the band 9 200-9 500 MHz, search and rescue transponders (SART) may be used, having due regard to the appropriate ITU-R Recommendation
9900-10 000 MHz	15		5.474A 5.474B 5.474C	81. The use of the frequency bands 9 200-9 300 MHz and 9 900-10 400 MHz by the Earth exploration-satellite service (active) is limited to systems requiring necessary bandwidth greater than 600 MHz that cannot be fully accommodated within the frequency band 9 300-9 900 MHz
10-10.4 GHz	15		5.474D 5.479	82. Stations in the Earth exploration-satellite service (active) shall not cause harmful interference to, or claim protection from, stations of the maritime radionavigation and radiolocation services in the frequency band 9 200-9 300 MHz, the radionavigation and radiolocation services in the frequency band 9 900-10 000

				MHz and the radiolocation service in the frequency band 10.0-10.4 GHz. (WRC-15)
10.7-10.95 GHz	15		5.441	83. The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service.
10.95-11.2 GHz	15	155	5.484A 5.484B	84. Regulatory provisions related to earth stations on board unmanned aircraft which operate with geostationary-satellite networks in the fixed-satellite service in certain frequency bands not subject to a Plan of Appendices 30, 30A and 30B for the control and non-payload communications of unmanned aircraft systems in non-segregated airspaces
11.2-11.45 GHz	15		5.441	85. The use of the bands 10.7-10.95 GHz (space-to-Earth), 11.2-11.45 GHz (space-to-Earth) and 12.75-13.25 GHz (Earth-to-space) by a non-geostationary-satellite system in the fixed-satellite service is subject to application of the provisions of No. 9.12 for coordination with other non-geostationary-satellite systems in the fixed-satellite service.

11.45-11.7 GHz	15	Rec.F387		86. This band is used for Fixed links (11 GHz) (10.7-11.7 GHz).
13.4-13.65 GHz	15	902		87. Standard frequency and time signal-satellite (Earth-to-space)
14-14.25 GHz	15	902		88. Provisions relating to earth stations located on board vessels which operate in fixed-satellite service networks in the uplink bands 5 925-6 425 MHz and 14-14.5 GHz
14.25-14.3 GHz	15	902		89. Provisions relating to earth stations located on board vessels which operate in fixed-satellite service networks in the uplink bands 5 925-6 425 MHz and 14-14.5 GHz
14.47-14.5 GHz	15	902		90. Provisions relating to earth stations located on board vessels which operate in fixed-satellite service networks in the uplink bands 5 925-6 425 MHz and 14-14.5 GHz
14.5-14.75 GHz	15		163,	91. Deployment of earth stations in some Regions 1 and 2 countries in the frequency band 14.5-14.75 GHz in the fixed-satellite service (Earth-to-space) not for feeder links for the broadcasting-satellite service
15400 – 15700	07	614		92. Use of the band 15.4-15.7 GHz by the radiolocation service
21.4-22 GHz	15	739	5.208B, 5.530A	93. Compatibility between the radio astronomy service and the active space services in certain adjacent and nearby frequency bands

22.550 – 23.150 GHz	07	753		94. Use of the band 22.55-23.15 GHz by the space research service
25.5-27 GHz	15	F.748	5.536B	95. National Polar-Orbiting Operational Environment Satellite System (NPOESS) Fixed Links (26 GHz) (24.5 – 26.5 GHz) BFWA (24.5-26.5 GHz)
27.5-28.5 GHz	07	143		96. Guidelines for the implementation of high-density applications in the fixed satellite service in frequency bands identified for these applications
29.1-29.5 GHz	15	143		97. Guidelines for the implementation of high-density applications in the fixed satellite service in frequency bands identified for these applications
31-31.3 GHz	15	07	5.149	98. In making assignments to stations of other services to which the band allocated, administrations are urged to take all practicable steps to protect the radio astronomy service from harmful Interference. Emissions from space borne or airborne stations can be particularly serious sources of interference to the Radio astronomy service (see Nos. <b>4.5</b> and <b>4.6</b> and Article <b>29</b> ). (WRC-07)
42.5-43.5 GHz	15	S.1586-1 RA.1631-0	5.551H	99. Calculation of unwanted emission levels produced by a non-geostationary fixed satellite service system at radio astronomy sites

				100. Reference radio astronomy antenna pattern to be used for compatibility analyses between non-GSO systems and radio astronomy service stations based on the epfd concept
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### 5.3 Other Migration issues

The table below summarises other migration issues that have been highlighted.

Table 5 Summary of migration issues

Frequency Band (MHz)	Current Allocation	Proposed Allocation	Notes
380 – 400	Public Safety (SAPS, DoD etc.)	Public Safety only	Consolidate all public safety related services in this band; move other users out of the band
410 – 430	Government services, Mobile Data and Trunking	Digital Trunking only	Reserve for Digital Trunking use only; migrate mobile data, ESKOM, SAPS out of the band
440 – 450	Short range business radio/ PMR/ other links	Short Range Business Radio, PMR only	Should be cleared of all other users; Communal repeaters can be allocated in this band
450 – 470	FIXED, MOBILE	IMT	Should be cleared of all other users
694 – 790 & 790-862	BROADCAST	IMT	Studio Links need to be migrated out to enable efficient allocation for IMT. Self Help stations need to migrate to below 694 MHz

			Frequency band 694 to 862 MHz to be cleared from analogue and digital broadcast services for implementation of IMT
<b>921 – 925 paired with 876 - 880</b>		GSM-R	Originally allocated by SABRE 1 for digital trunking – currently unused
<b>1350 – 1375 paired with 1492 – 1517</b>	Shared duplex band	BFWA	Could be a consideration for rural BFWA
<b>1375 – 1400 paired with 1427 – 1452</b>	Shared duplex band	BFWA	Could be a consideration for rural BFWA
<b>2025 – 2110 paired with 2200 – 2285</b>	Fixed links (DF)	BFWA	Fixed links currently underutilized
<b>3600 – 4200</b>	Satellite (VSAT, downlink), Terrestrial backhaul	3600 – 3800 MHz BFWA 3600 – 4200 MHz PTP and FSS	Sharing Criteria to be developed between BFWA and FS PTP and/or FSS where feasible.
<b>5850 – 6425</b>	Fixed/ Satellite uplinks	Fixed/ Satellite uplink/ Outside Broadcast links	Migrate outside-broadcast from 2300 – 2450 MHz into upper C band
<b>40000 and above</b>		Allocate for PTP links	For local high-speed PTP data links (up to 5 km)

## 6 Frequency Migration Plan

### 6.1 Progress Update to Final Frequency Migration Plan 2019.

The Frequency Migration Plan 2019 was compiled from unresolved issues from the Migration Frequency Plan 2013. WRC 2015, SADC FAP, and revisions, NRFP 2018 and ICASA Counsel resolutions and other information included in this document. The following table deals with all bands where there is a potential frequency migration issue. The motivation for a migration is either that it is an original SABRE proposal, stems from WRC resolutions, SADC FAP or the Authority's decision. The content of the Migration Frequency Plan 2018 needs to be viewed in conjunction with the NRFP 2018 published in Government Gazette Number 41650 Notice 266 of 2018. Section 4.10 contains more information on the frequency bands included in the Frequency Migration Plan.

Column 1 indicates the frequency range.

Column 2 states the existing allocation in the National Radio Frequency Plan 2018 and any applications that are mentioned in the NRFP. As is the standard practice for frequency plans, primary allocations are in UPPER CASE, secondary allocations are in Lower Case. Applications are (within brackets).

Column 3 indicates the proposals for new allocations and utilization. The proposed allocation is indicated along with the source of the proposal (SABRE, WRC, SADC FAP, New ICASA proposals or any other cross reference provided).

Column 4 contains notes on any migration issues.

This table only includes those bands where frequency migration is under consideration.

**Table 6 Proposed migration plan**

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
75.2 – 87.5	MOBILE except aeronautical mobile (Private and communal repeaters)	Radio Frequency Migration Plan Government Gazette Number. 36334 (Notice No. 352 & 353 of 2013) –	Radio Frequency Spectrum Assignment Plan Refer to: Government Gazette Number.41164 (Notice No. 781 of 2017)

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
138 – 144	FIXED MOBILE (SF alarms, SF Mobile, MTX-BTX paired links, Remote controlled industrial apparatus)	Radio Frequency Migration Plan Government Gazette Number. 36334 (Notice No. 352 & 353 of 2013)	Final Radio Frequency Spectrum Assignment Plan Refer to: Government Gazette Number.41512 (Notice No. 146 of 2018)  A feasibility study will be performed to establish the destination band for Transnet operation in this band. In the interim Transnet's license will be amended to co-exist with the alarms and to operate until 31 March 2020.
150.05 – 153	FIXED MOBILE except aeronautical mobile RADIO ASTRONOMY (Alarms, telemetry, SF Mobile and paging <sup>19</sup> )	Radio Frequency Migration Plan Government Gazette Number. 36334 (Notice No. 352 & 353 of 2013)	Draft Radio Frequency Spectrum Assignment Plan Refer to: Government Gazette Number.41512 (Notice No. 149 of 2018)

<sup>19</sup> Alarms, SF Mobile. In-house paging and load shedding (148.95 – 151 MHz); SF Alarms (152.05 – 152.55 MHz); Government Service Wildlife Telemetry Tracking (148 – 152 MHz); SF Mobile (152.55 – 153.05 MHz)



Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
156.4875 – 156.5625	MARITIME MOBILE (distress and calling via DSC)  FIXED  LAND MOBILE (Maritime Radio-navigation and location (radar), SF mobile in inland areas)	Radio Frequency Migration Plan  Government Gazette Number. 36334 (Notice No. 352 & 353 of 2013)	Draft Radio Frequency Spectrum Assignment Plan Refer to: Government Gazette Number.41350 (Notice No. 971 of 2017)
162.0375 – 174	MOBILE except aeronautical mobile (R) NF4  (Mobile 1 MTX-DF (161.475 – 165.0375 MHz)  Mobile 2 MTX-DF (165.05 – 165.5375 MHz)  Single Frequency Mobile (168.95 – 170.05 MHz) Mobile 3 MTX-DF (165.55 – 167.4875 MHz)  Single Frequency Mobile (172 –172.0375 MHz)  Mobile 4 MTX-DF (167.5 – 168.9375 MHz) Meter Reading (169.4 – 169.475 MHz)  Non-specific SRD's – Telecommand only (173.2125 – 173.2375 MHz)	Radio Frequency Migration Plan  Government Gazette Number. 36334 (Notice No. 352 & 353 of 2013)	Develop Radio Frequency Spectrum Assignment Plan Refer to: Feasibility Study to be performed. See section 4.10.5.

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	<p>Non-specific SRDs (173.2375 – 173.2875 MHz)</p> <p>Wireless microphones and assistive listening devices (173.7 – 175.1 MHz))</p>		
<b>174 - 223</b>	<p>BROADCASTING</p> <p>Television Broadcasting</p> <p>T-DAB</p>	<p>Radio Frequency Migration Plan</p> <p>Government Gazette Number. 36334 (Notice No. 352 &amp; 353 of 2013)</p>	<p>Refer to Terrestrial Broadcasting Frequency Plan Government Gazette Number 36321 (Notice No. 298 of 2013)</p> <p>The Radio Frequency Spectrum Assignment Plans is to be optimised and additional T-DAB multiplexes developed on a national and regional basis.</p> <p>Also refer to the Digital Sound broadcasting discussion document published in Government Gazette, No. 41534 (Notice No 161 of 2018). (refer to 4.10.6)</p>
<b>223 – 230 &amp; 230 - 238</b>	<p>BROADCASTING</p> <p>(Television Broadcasting)</p> <p>T-DAB</p>	<p>Radio Frequency Migration Plan</p> <p>Government Gazette Number. 36334 (Notice No. 352 &amp; 353 of 2013)</p>	<p>Refer to Terrestrial Broadcasting Frequency Plan Government Gazette Number 36321 (Notice No. 298 of 2013)</p>

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
			<p>The Radio Frequency Spectrum Assignment Plans is to be optimised and additional T-DAB multiplexes developed on a national and regional basis.</p> <p>Also refer to the Digital Sound broadcasting discussion document published in Government Gazette, No. 41534 (Notice No 161 of 2018). (refer to 4.10.6)</p>
<b>238 – 246 &amp; 246 - 254</b>	<p>BROADCASTING (246 – 254) (Television Broadcasting) MOBILE (238 – 246) (238-242.95 MHz PMR and/or PAMR International Distress Frequency at 243 MHz (242.95 – 243.05 MHz) 243.05-246.00 MHz Low-power devices)</p>	<p>Radio Frequency Migration Plan Government Gazette Number. 36334 (Notice No. 352 &amp; 353 of 2013)</p>	<p>Refer to Terrestrial Broadcasting Frequency Plan Government Gazette Number 36321 (Notice No. 298 of 2013) Radio Frequency Spectrum Assignment Plan to be developed for VHF Digital Television.</p>
<b>335.4 - 380</b>	<p>FIXED NF6 (FWA (336 – 346 MHz) FWA (356 – 366 MHz) 366-380 MHz (Govt.) Digital Trunking (Emergency) 335.4-336 MHz PMR and/or PAMR)</p>	<p>Radio Frequency Migration Plan Government Gazette Number. 36334 (Notice No. 352 &amp; 353 of 2013)</p>	<p>Migrate existing fixed links to above 3 GHz as per SADC proposed common sub-allocation/ utilization (refer to 4.10.10)</p>

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	MOBILE NF7 (336-346 MHz Fixed Wireless Access 336-346  Unmanned Aerial Vehicle (UAV) 356.0-366.0 MHz Fixed Wireless Access 366.0-380.0 MHz PMR and/or PAMR)	335.4-336 MHz/ / 366.0-380.0 MHz PMR and/or PAMR  336-346 MHz paired with 356-366 MHz Fixed Wireless Access/ PTP/PTMP rural system  (as per SADC FAP proposed common sub- allocation/ utilization)	There are 1362 Licenses issued in this band. Perform feasibility study on the use of this band as per SADC FAP proposed sub-allocation/ utilization including BFWA and UAV's :
<b>380-387 &amp; 387-390 &amp; 390 – 399.9</b>	FIXED NF6 & MOBILE NF7 MOBILE NF7 & Mobile-satellite (space-to-Earth) –(387-390 MHz) MOBILE NF7 – (390-399.9 MHz)  (Public safety, SAPS, DOD, Army etc.)	Radio Frequency Migration Plan Government Gazette Number. 36334 (Notice No. 352 & 353 of 2013)	The final Radio Frequency Spectrum Assignment Plan published in GG No. 41512 (Notice 418 of 2018).  This band will be assigned as a continuous block for Public Protection and Disaster Relief (PPDR) as well as Public Safety with users including SAPS, SANDF, the Ambulance Service, Metro Police and Fire-Fighting Services. All other users will migrate out of this band.
<b>403 - 406</b>	METEOROLOGICAL AIDS Mobile except aeronautical mobile	WRC15	Develop Radio Frequency Spectrum Assignment Plan

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	(Radiosonde Medical implants (402 – 405 MHz) Various SRD's (402 – 406 MHz))		
<b>406 - 410</b>	MOBILE-SATELLITE (Earth-to-space) (406 – 406.1 MHz) (COSPAS – SARSAT: Emergency Position Indicating Radio Beacon (EPIRB) Low power satellite EPIRBs (distress and safety purposes))  (Mobile MTX (407.625 – 410 MHz). Government Use for Public Safety)  FIXED &  Mobile except & aeronautical mobile  RADIO ASTRONOMY (406.1 – 410 MHz) (Mobile MTX (407.625 – 410 MHz) Government use for public safety Fixed Links (406.1 – 407.625 MHz) Fixed Links (407.625 – 410 MHz) Mobile MTX (406.1 – 407.625 MHz)	WRC15	Develop Radio Frequency Spectrum Assignment Plan

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	Mobile MTX (407.625 – 410 MHz) PMR and/or PAMR PPDR)		
<b>410 - 420</b>	FIXED  MOBILE except aeronautical mobile  (Mobile MTX (410 – 413 MHz). Government Use for Public Safety)  SPACE RESEARCH (space-to-space)  (Mobile MTX (410 – 413 MHz) Government Services Mobile MTX (410 – 413 MHz) Mobile MTX Digital Trunking (410 – 413 MHz) Mobile Data MTX (413-413.7625 MHz) Digital Trunking MTX (413.7625 – 416.1 MHz) Mobile BTX (416.1 – 417.625 MHz) PMR and/or PAMR PPDR)	SADC FAP proposed common sub-allocation/ utilization  Public digital trunking only (New ICASA proposal)	Develop Radio Frequency Spectrum Assignment Plan.  Band reserved for Public Digital Trunking (New ICASA proposal)  Migrate government services (especially SAPS) to public safety band 380 – 400 MHz,  Mobile Data - Migrate Mobile Data users out of this band  (refer to section 4.10.11
<b>420 – 430</b>	FIXED  Mobile except aeronautical mobile  Radiolocation	SADC FAP proposed common sub-allocation/ utilization  Public digital trunking only (New ICASA proposal)	Develop Radio Frequency Spectrum Assignment Plan.  Band reserved for Public Digital Trunking (New ICASA proposal)

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	(Government services, Mobile Data and public trunking Single Frequency Links (426.1 – 430 MHz) Digital Trunked Mobile BTX (420 – 423 MHz) Mobile Data BTX (423 – 423.7625 MHz) Digital Trunking BTX (423.7625 – 426.1 MHz) PMR and/or PAMR PPDR)		Migrate government services (especially SAPS) to public safety band 380 – 400 MHz, Mobile Data - Migrate Mobile Data users out of this band (refer to section 4.10.11)
440 – 450	FIXED MOBILE except aeronautical mobile (Short range business radio and PMR Channels 440 to 440.1 and 445 to 445.1 are used for simplex. Telemetry / Data BTX (440 – 441 MHz) Telemetry / Data MTX (445 – 446 MHz) Single Frequency Mobile (441 – 441.1 MHz) Mobile BTX (441.1 – 445 MHz) PMR 446 (446 – 446.1 MHz) Mobile 446.1 – 450 MHz PMR and/or PAMR	New ICASA proposal	Refer to Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013) Perform a feasibility study into the possibility to use the band 440 – 450 MHz for PPDR is to be performed. A Radio Frequency Spectrum Assignment Plan is to be developed.

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	PPDR FIXED (telemetry, dual frequency alarm systems))		
450 – 470 (450 – 455 & 455 – 456 & 456 – 459 & 459 – 460 & 460 – 470)	FIXED  MOBILE (Fixed links (450 – 453 MHz) Single Frequency Mobile (453 – 454 MHz) Government Services Paging (454 – 454.425 MHz) Trunked Mobile BTX (454.425 – 460 MHz) IMT450 (450 – 470 MHz) Fixed links (PTP) IMT (450-470 MHz) PMR and/or PAMR Trunked mobile BTX (454.425 – 460 MHz) IMT450 (450 – 470 MHz) Fixed Links (460 – 463 MHz) Single Frequency Mobile (463.025 – 463.975 MHz) Low Power Mobile Radio (463.975 MHz, 464.125 MHz, 464.175 MHz, 464.325 MHz, 464.375 MHz) Single Frequency Mobile (464.375 – 464.425 MHz)	Radio Frequency Migration Plan 2013 Government Gazette Number. 36334 (Notice No. 352 & 353 of 2013)	Spectrum identified for IMT. as per Res. 224 revision WRC-15;  Radio Frequency Spectrum Assignment Plan Government Gazette 38640 (Notice 270 of 2015)  The IMT450 Radio Frequency Spectrum Assignment Plan is to be updated in line with the updated Recommendation ITU-R.M1036-5, published in Government Gazette Number 38640 (Notice 270 of 2015, in accordance with the Frequency Migration Plan published in government Gazette Number 2013 GG 36334 (Notice 352 and 353 of 2013) and the Final International Mobile Telecommunications Roadmap 2014,



Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	Trunked Mobile MTX (464.425 – 470 MHz) IMT450 (450 – 470 MHz) Security Systems (464.5375 MHz) Non-specific SRDs (464.5 – 464.5875 MHz) Government Services)		published in Government Gazette Number 38146 (Notice 1009 of 2014)  To develop the Final Radio Frequency Spectrum Assignment Plan: Frequency Band 450 to 470 MHz  Also see section 4.10.13.
694 – 790	MOBILE except aeronautical mobile 5.312A 5.317A NF9 BROADCASTING 5.300 5.311A 5.312 NF8AIMT700	IMT 700 (Terrestrial) (WRC-12)	Digital Dividend 2; DTT bands between 694 – 790 MHz  Planned migration of television out of this band started in 2016  Refer to  1) Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013)  2) Radio Frequency Spectrum Assignment Plan Government Gazette Number 38640 (Notice No. 271 & 272 of 2015),  3) Self Help stations must be switched off with all other analogue

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
			services at the end of television dual illumination. Refer to Terrestrial Broadcasting Frequency Plan 2013 Government Gazette Number. 36321 (Notice 298 of 2013) and Government Gazette Number 38005 (Notice No. 801 of 2014)
790 – 862	FIXED BROADCASTING MOBILE except aeronautical mobile (TV Broadcast including fixed links (Secondary transmitter links) IMT800)	IMT800 (Terrestrial) (WRC-07).	Digital Dividend 1; DTT bands between 790 – 862 MHz Planned migration of television out of this band started in 2016 Refer to 1) Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013) 2) Radio Frequency Spectrum Assignment Plan Government Gazette Number 38640 (Notice No. 273 & 274 of 2015), 3) Refer Second draft Radio Frequency Assignment Plan for the

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
			<p>frequency band 825 to 830 MHz and 870 to 875 MHz for public consultation GG 41082 of 2017 (Notice No. 648 of 2017)</p> <p>4) Self Help stations must be switched off with all other analogue services at the end of television dual illumination. Refer to Terrestrial Broadcasting Frequency Plan 2013 Government Gazette Number. 36321 (Notice 298 of 2013) and Government Gazette Number 38005 (Notice No. 801 of 2014)</p> <p>5) With respect to the small number of Studio to Transmitter Links (STL's) in this band; these must be migrated out and given point to point fixed assignments</p> <p>6) Remove the assignment for Wireless Access Services in this band</p> <p>.</p>

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
862 – 890	<p>FIXED</p> <p>MOBILE except aeronautical mobile</p> <p>(Wireless audio (863-865 MHz),</p> <p>Fixed links (856 – 864.1 MHz paired with 868.1–876 MHz),</p> <p>RFID (865 – 868 MHz),</p> <p>RFID (869.4- 869.65 MHz)</p> <p>Alarms operate amongst others in 860.25 – 869.3 MHz, Wireless Access Services (827.775- 832.695 MHz paired with 872.775- 877.695 MHz)</p> <p>Mobile (880-890 MHz paired with 925-935 MHz))</p> <p>FWA (864.1 – 868.1 MHz)</p> <p>Other applications in the band include non-specific SRDs, GSM-R and CT2 cordless telephones</p>	<p>WRC 15</p> <p>Mobile (IMT800)</p> <p>(as per SADC FAP proposed common sub-allocation/ utilization)</p>	<p>Migrate to IMT as per SADC FAP proposed common sub-allocation/ utilization to facilitate development of harmonized channelling arrangement.</p> <p>Refer to:</p> <p>1) Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013)</p> <p>2) Radio Frequency Spectrum Assignment Plan Government Gazette Number 38640 (Notice No. 273 &amp; 274 of 2015),</p> <p>3) Second draft Radio Frequency Assignment Plan for the frequency band 825 to 830 MHz and 870 to 875 MHz for public consultation GG 41082 of 2017 (Notice No. 648 of 2017)4) The Final International Mobile Telecommunications Roadmap 2014, published in</p>

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
			<p>Government Gazette Number 38146 (Notice 1009 of 2014</p> <p>5) Align re-planning efforts within the 800 MHz band as defined in Government Gazette Number 40145 (Notice Number 438 of 2016)<sup>20</sup>.</p> <p>6) Remove the assignment for Wireless Access Services in this band</p> <p>7) Migrate existing users out of this band</p>
<b>890 – 942</b>	<p>MOBILE except aeronautical mobile (GSM-R (BTX) (921 - 925 MHz)</p> <p>IMT900 MTX (880 – 915 MHz)</p>	<p>Radio Frequency Migration Plan</p> <p>Government Gazette Number. 36334 (Notice No. 352 &amp; 353 of 2013)</p>	<p>Refer to:</p> <p>1) Radio Frequency Migration Plan</p> <p>Government Gazette</p>

<sup>20</sup> Government Gazette 40145 ( Notice Number 438 of 2016) : Invitation to apply for a radio frequency spectrum licence to provide mobile broadband wireless access services for urban and rural areas using the complimentary bands, 700 MHz, 800 MHz and 2.6GHz.

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	IMT900 BTX (925 – 960 MHz) RFID (including, passive tags and vehicle location (915.1 – 921 MHz)) 915-921 MHz 921-925 MHz GSM-R 925-960 MHz IMT)		Number 36334 (Notice no. 352 of 2013)  2) Radio Frequency Spectrum Assignment Plan Government Gazette Number 38640 (Notice No. 275 of 2015),
<b>942 – 960</b>	MOBILE except aeronautical mobile 5.317A NF9  (IMT900 BTX (925 – 960 MHz))	Radio Frequency Migration Plan Government Gazette Number. 36334 (Notice No. 352 & 353 of 2013)  IMT900	Refer to:  1) Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013)  2) Radio Frequency Spectrum Assignment Plan Government Gazette Number 38640 (Notice No. 275 of 2015),
<b>1350 – 1375 paired with 1492 – 1517 and 1375 – 1400 MHz paired with 1427 – 1429</b>	(1350 – 1400 MHz) FIXED NF 14(1 350-1 375 MHz Fixed links (duplex) 1 375-1 400 MHz Fixed links (duplex))  MOBILE RADIOLOCATION Radio Astronomy <b>1 400-1 427 MHz</b> EARTH EXPLORATION SATELLITE (passive)	(New ICASA proposal Rural BFWA)	Assign to rural BFWA; maintain existing links where required  Feasibility Study to be performed considering the WRC-15 decision (enabling harmonization, equipment availability etc.).

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	RADIO ASTRONOMY SPACE RESEARCH (passive) (Passive sensing) <b>1 427-1 429 MHz</b> SPACE OPERATION (Earth-to-space) FIXED NF14 MOBILE except aeronautical mobile 5,341A (1 427-1 429 MHz) (Fixed links duplex)		Develop a Radio Frequency Spectrum Assignment Plan to be developed in line with the study results conducted within ITU-R WP 5D and in accordance with the latest version of Recommendation 1036 in respect of L-Band.(refer to 4.10.20)  Refer to:  Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013)
<b>1429 – 1452 MHz</b>  <b>FIXED</b>  <b>MOBILE except aeronautical mobile 5.341A</b>	FIXED  MOBILE except aeronautical mobile 5.341A  (Fixed links duplex)5.338A 5.341	(New ICASA proposal Rural BFWA)	Paired with 1 375 – 1 400 MHz) In accordance with Recommendation ITU-R F.1242 See above  Refer to:  Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013)  Assign to Rural BFWA

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
5.338A 5.341 5.342			<p>Feasibility Study to be performed considering the WRC-15 decision (enabling harmonization, equipment availability etc.).</p> <p>Radio Frequency Spectrum Assignment Plan to be developed in line with the study results conducted within ITU-R WP 5D and in accordance with the latest version of Recommendation 1036 in respect of L-Band..</p>
1 452-1 492 MHz	<p>FIXED NF14</p> <p>MOBILE except aeronautical mobile 5.346</p> <p>BROADCASTING</p> <p>BROADCASTING-SATELLITE 5.208B</p> <p>(Fixed low capacity PTP DF links)5.341 5.345</p> <p>NF12</p>	FWBA/ PTP/ PMP/ New ICASA proposal	<p>Feasibility studies to be performed. Resolution <b>761 (WRC-15)</b> on the “Compatibility of International Mobile Telecommunications and broadcastingsatellite service and performé appropriate regulatory and technical studies, with a view of ensuring the compatibility of IMT and BSS (sound) are</p>



Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
5.341 5.342 5.345			<p>undertaken within the ITU-R Res. 223 (Rev.WRC-15)</p> <p>Refer to:</p> <p>Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013)</p> <p>Consider developments and outcome of WP5D (i.e. sharing and compatibility studies and the development of a channelling plan).</p> <p>Consider the band for Public Mobile and Emergency and Temporary transmissions</p> <p>Radio Frequency Spectrum Assignment Plan to be developed in line with the study results conducted within ITU-R WP 5D and in accordance with the latest version of Recommendation 1036 in respect of L-Band</p>

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
1518 – 1525	FIXED  MOBILE-SATELLITE (space-to-earth) 5.348 5.348A 5.351A  (IMT Satellite component)	Band is currently not occupied; potential application for LMR repeaters	Refer to:  1) Radio Frequency Spectrum Assignment Plan Government Gazette 41164 (Notice 784 of 2017)  2) Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013)
1525 – 1530 & 1530 – 1535 & 1535 - 1559	(1525 – 1530 MHz)  SPACE OPERATION (space-to-earth)  FIXED  MOBILE-SATELLITE (space-to-earth)  Earth exploration satellite  Mobile except aeronautical mobile (GMDSS Maritime satellite (1 525 – 1 544 MHz) Mobile satellite (1544 – 1545 MHz) Aeronautical Mobile satellite (1545 – 1555 MHz) Land Mobile satellite (1555 – 1559 MHz))	Potential application for LMR repeaters  New ICASA proposal	Feasibility studies to be performed. Migrate in fixed links for LMR repeaters, band could also be used for outside-broadcasting links currently operating in 2300 – 2450 MHz (New ICASA proposal) (refer to 4.10.23).  Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013)  Develop a Radio Frequency Spectrum Assignment Plan.

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	(1530 – 1535 MHz) SPACE OPERATION (space-to-earth) MOBILE-SATELLITE (space-to-earth) Earth exploration satellite Mobile except aeronautical mobile Fixed (GMDSS Maritime satellite (1 525 – 1 544 MHz) Mobile satellite (1544 – 1545 MHz) Aeronautical Mobile satellite (1545 – 1555 MHz) Land Mobile satellite (1555 – 1559 MHz))	Radio Frequency Migration Plan Government Gazette Number. 36334 (Notice No. 352 & 353 of 2013)	No migration planned (refer to 4.10.23)
	(1535 – 1559 MHz) MOBILE-SATELLITE (space-to-Earth) (GMDSS Maritime satellite (1 525 – 1 544 MHz) Mobile satellite (1544 – 1545 MHz) Aeronautical Mobile satellite (1545 – 1555 MHz) Land Mobile satellite (1555 – 1559 MHz))	Radio Frequency Migration Plan Government Gazette Number. 36334 (Notice No. 352 & 353 of 2013)	No migration planned (refer to 4.10.23)

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
1668.1 – 1668.4 & 1668.4 – 1670 & 1670 - 1675	(1668.1 – 1668.4 MHz) MOBILE SATELLITE (earth-to-space) RADIO ASTRONOMY SPACE RESEARCH (passive) (IMT satellite component (1 668 – 1 675 MHz))	(refer to 4.10.24)	Feasibility studies to be performed. Propose to align allocation with ITU Region 1 (New ICASA proposal)  (refer to 4.10.24)
	(1668.4 – 1670 MHz) METEOROLOGICAL AIDS MOBILE SATELLITE (earth-to-space) MOBILE except aeronautical mobile  RADIO ASTRONOMY (Radiosonde (1 668 – 1 700 MHz) IMT satellite component (1 668 – 1 675 MHz))	(refer to 4.10.24)	Feasibility studies to be performed. Propose to align allocation with ITU Region 1 (New ICASA proposal)  (refer to 4.10.24)
	(1670 – 1675 MHz) METEOROLOGICAL AIDS METEOROLOGICAL SATELLITE (space-to-Earth) MOBILE MOBILE SATELLITE (Earth-to-space)	(refer to 4.10.24)	Feasibility studies to be performed. Propose to align allocation with ITU Region 1 (New ICASA proposal)  (refer to 4.10.24)

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	(Radiosonde (1 668 – 1 700 MHz) IMT satellite component (1 668 – 1 675 MHz))		
<b>1710 – 1785 paired with 1805-1880</b>	FIXED  MOBILE  (IMT1800 band)		Feasibility studies to be performed. Spectrum re-farming when deemed required may be carried out based upon defined process (refer to 4.12)
<b>1710-1930</b>	FIXED  MOBILE FWA (1880 – 1900 MHz) FWA TDD (1900 – 1920 MHz) Fixed Broadband data applications (1 785 – 1 805 MHz) IMT1800 MTX (1710 – 1785 MHz) Cordless telephones (1880 – 1900 MHz) IMT1900 TDD (1900 – 1920 MHz) IMT2100 MTX (1920 – 1980 MHz)	(SADC FAP proposed common sub-allocation/ utilization)  IMT1800  FWA	Feasibility studies to be performed.  Currently under use by Telkom in a WLL configuration. Can be allocated for FWA (refer to 4.10.25)
<b>1710 – 1930 &amp; 1 930-1 970 &amp; 1970 – 1980 &amp; 2110 – 2120 &amp; 2120 – 2160 &amp; 2160 - 2170</b>	FIXED  MOBILE  (Current IMT1900 & IMT2100)  (MT2100 MTX (1920 – 1980 MHz)	1920 – 1980 paired with 2110 – 2170  WRC 07 & WRC15	Feasibility studies to be performed. Spectrum re-farming when deemed required may be carried out based upon defined process (refer to 4.12)

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	IMT2100 MTX (1920 – 1980 MHz) Fixed links (1980 – 2010 MHz) CGC/ATC fixed systems (1980 – 2010 MHz) IMT-satellite IMT (satellite) (1980-2010 MHz) IMT TDD (2010 – 2025 MHz) Fixed Links (2025 – 2110 MHz) IMT2100 BTX (2110 – 2170 MHz)		
<b>1980 – 2010 &amp; 2170 - 2200</b>	FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) (Fixed Links (DF), IMT (Satellite)) (Fixed links (1980 – 2010 MHz) CGC/ATC fixed systems (1980 – 2010 MHz) IMT-satellite IMT (satellite) (1980-2010 MHz))	IMT2100 (1980 – 2010 paired with 2170-2200 NRFP 2013) Fixed Links (DF), BFWA (New ICASA Proposal) WRC07 & WRC15	Feasibility studies to be performed. Migrate in Fixed links (DF) from other bands; consider for BFWA (New ICASA proposal) (refer to 4.10.26). Assign band to BFWA.
<b>2025 – 2110 &amp; 2200 - 2290</b>	SPACE OPERATION (space to Earth) (space to space) FIXED MOBILE (TT&C received from space Fixed Links (2025 – 2110 MHz paired with 2200 – 2285)	WRC15 Fixed Links (DF) <b>(2025 – 2110 paired with 2200 – 2285)</b> BFWA	Refer to: 1) Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013) 2) Radio Frequency Spectrum Assignment Plan Government

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	Fixed Links (2200 – 2285 MHz) BFWA (2 285-2 300 MHz))		Gazette 41164 (Notice 782 of 2017).
<b>2110 – 2120 &amp; 2120 – 2160 &amp; 2160 - 2170</b>	FIXED  MOBILE (Current 3G band) (IMT2100 BTX (2110 – 2170 MHz))	WRC15  2110 – 2170 paired with 1920 – 1980	Feasibility studies to be performed. Spectrum re-farming when deemed required may be carried out based upon defined process  (refer to 4.12)
<b>2290 – 2300</b>	FIXED  MOBILE except aeronautical mobile  SPACE RESEARCH (deep space) (space to Earth) (Fixed Links, BFWA (2 285-2 300 MHz) (Coordination is expected prior to the implementation of these services))	BFWA (as per SADC FAP proposed common sub-allocation/ utilization)	Refer to:  Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013)  Final Radio Frequency Spectrum Assignment Plan was published in GG No. 41512 (Notice 145 of 2018).
<b>2300 – 2450</b>	FIXED  MOBILE  Amateur (Fixed links (2307 – 2387 MHz) paired with (2401 – 2481 MHz)  Several outside broadcast links	IMT2300 (Terrestrial) 2300 – 2400 MHz as per SADC FAP proposed common sub-allocation/ utilization	Refer to:  1) Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013)  2) Radio Frequency Spectrum Assignment Plan Government Gazette Number 38640

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	ISM band (2400 – 2483.5 MHz) (FWA (PTP/PTMP) (2307-2387 MHz) FWA (PTP/PTMP) (2401 – 2481 MHz) IMT2300 TDD (2300 – 2400 MHz) WLAN, FDDA and model ctrl. (2400 – 2483.5 MHz) Non-Specific SRDs and low power video surveillance (2400 – 2483.5 MHz) RFID (2 400 – 2 483.5 MHz) ISM applications (2400 – 2483.5 MHz))		(Notice No. 276 of 2015), IMT 2300 3) Feasibility study be performed in accordance with section 4.10.28
<b>2500 – 2520 &amp; 2520 – 2655 &amp; 2655 – 2670 &amp; 2670 - 2690</b>	2500-2655 MHz MOBILE except aeronautical mobile (IMT2600 MTX (2500 – 2570 MHz) IMT2600 TDD (2570 – 2620MHz) IMT2600 BTX (2620 – 2690MHz) IMT (2500-2690 MHz)) 2655-2690 MHz MOBILE except aeronautical mobile Radio astronomy (IMT2600 BTX (2620 – 2690MHz); IMT (2500-2690 MHz))	BFWA Mobile IMT	Refer to: 1) Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013) 2) Radio Frequency Spectrum Assignment Plan Government Gazette Number 38640 (Notice No. 277 of 2015), IMT 2600 3) Radio Frequency Spectrum Assignment Plan needs to be updated. to include centre gap (i.e. 2570 – 2620 MHz)



Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
<p><b>3 300-3 400 MHz</b></p> <p><b>RADIOLOCATI ON</b></p> <p><b>5.149 5.429</b> <b>5.429A 5.429B</b> <b>5.430</b></p>	<p>3 300-3 400 MHz</p> <p>RADIOLOCATION (Government Services)</p> <p>5.149 5.429A 5.429B</p>	<p>IMT Res. 223 (Rev.WRC-15)</p>	<p>Feasibility Study to be undertaken considering the outcome of the sharing and compatibility studies called for by Resolution 223 (WRC-15) currently underway within the ITU-R, there might be a need to migrate Radars out of this band. This will be addressed through an update of the migration plan.</p> <p>3) The band 3300 to 3400 has been identified for IMT through resolution 223 (Rev WRC-15)</p> <p>4) This can form a continuous block of IMT frequencies with the band 3400 to 3600 MHz</p> <p>5) Sharing and compatibility studies called for resolution 223 (Rev. WRC-15) are currently undertaken within ITU-R.</p> <p>6) Radio Frequency Spectrum Assignment</p>

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
			Plan to be developed in line with the study results conducted within ITU-R WP 5D and in accordance with the latest version of Recommendation 1036 in respect of L-Band.
3400 – 3600	FIXED MOBILE  (MT3500 TDD (3400 – 3600 MHz))	IMT Roadmap Government Gazette Number 38213 14 November 2014 BFWA Mobile IMT	Refer to: 1) Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013) 2) Radio Frequency Spectrum Assignment Plan Government Gazette Number 38640 (Notice No. 278 of 2015), IMT 3500 3) An amendment to the Radio Frequency Spectrum Assignment Plan IMT2600 to be undertaken in order to change the channel arrangement from FDD to TDD.to maximise the efficient use of spectrum.
3600 – 4200	FIXED	(3600-4200 MHz) Fixed services (PTP)	As per the NRFP 2018. The sub-band 3 600-3

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	<p>FIXED-SATELLITE (space-to-Earth)</p> <p>(Satellite (VSAT, downlink), Terrestrial backhaul)</p> <p>(Fixed links (4 GHz) (3600 – 4200 MHz))</p>	<p>(3600-4200 MHz)</p> <p>Fixed-satellite (space-to-Earth)</p> <p>(PTP/VSAT/SNG)</p> <p>(3600-3800 MHz)</p> <p>Broadband Fixed Wireless Access (BFWA)</p> <p>as per SADC FAP proposed common sub-allocation/ utilization</p>	<p>800 MHz could be used for BFWA where frequency sharing with FS PTP and/or FSS is feasible. The channelling arrangement for PTP links in this band is based on ITU-R Recommendation F.635 Annex 1 (also refer to 4.10.33).</p>
5150 – 5250 & 5250 – 5255 & 5255 - 5350	<p>(5150 – 5250 MHz)</p> <p>AERONAUTICAL RADIONAVIGATION</p> <p>FIXED-SATELLITE-SERVICE (Earth-to-space)</p> <p>MOBILE except aeronautical mobile</p> <p>(Wireless Access (short range))</p> <p>(NGSO MSS feeder links (5091 – 5150 MHz)</p> <p>WAS / RLAN (5150 – 5350 MHz) (indoor use only))</p>	<p>Wireless Access Systems / RLAN</p> <p>As per SADC FAP proposed common sub-allocation/ utilization</p>	<p>Feasibility study to be performed. License exempt; Wireless Access Systems / Radio Local Access Network (WAS &amp; RLAN) indoor use only. as per Notice 184 of 2011 Government Gazette 34172 (<i>previously Notice number 944 of 2008 in Government Gazette 31321</i>)</p> <p>No migration at this stage</p>
	<p>(5250 – 5255 MHz)</p> <p>SPACE RESEARCH</p> <p>MOBILE except aeronautical mobile</p>		<p>Refer to section 4.10.33.</p>

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	WAS / RLAN (5150 – 5350 MHz) (indoor use only)		
	(5255 – 5350 MHz) EARTH EXPLORATION SATELLITE (active) RADIOLOCATION SPACE RESEARCH (active) MOBILE except aeronautical mobile (WAS / RLAN (5150 – 5350 MHz) (indoor use only))		
<b>5470 – 5570 &amp; 5570 – 5650 &amp; 5650 - 5725</b>	(5470 – 5570 MHz) MARITIME RADIONAVIGATION MOBILE except aeronautical mobile EARTH EXPLORATION SATELLITE (active) SPACE RESEARCH (active) RADIOLOCATION (Maritime radionavigation (radar) and Wireless Access (short range)) (WAS / RLAN (5150 – 5350 MHz) (indoor use only))	Wireless Access Systems / RLAN  As per SADC FAP proposed common sub-allocation/ utilization	Feasibility study to be performed. No migration planned; as per as per Notice 184 of 2011 Government Gazette 34172 ( <i>previously Notice number 944 of 2008 in Government Gazette 31321</i> )  (refer to 4.10.34)  No migration at this stage

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	(5570 – 5650 MHz) MARITIME RADIONAVIGATION MOBILE except aeronautical mobile RADIOLOCATION (Location Radar Ground based meteorological radars (5600 – 5650 MHz) WAS / RLAN (5470 – 5725 MHz) Weather Radars (5600 – 5650 MHz))		
	(5650 – 5725 MHz) RADIOLOCATION MOBILE except aeronautical mobile Amateur Space Research (deep space) (WAS / RLAN (5470 – 5725 MHz) (indoor use only))		
<b>5725 – 5850</b>	<b>5725 – 5830</b> FIXED-SATELLITE (Earth-to-space) RADIOLOCATION Amateur Fixed (ISM, Amateur, SRD) <b>5830 – 5850</b>	WRC15	Feasibility study to be performed. No migration for South Africa; maintain for ISM as per Notice 184 of 2011 Government Gazette 34172 ( <i>previously Notice number 926 of 2008 in Government Gazette 31290</i> ).

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	FIXED-SATELLITE (Earth-to space) RADIOLOCATION Amateur Amateur-satellite (space-to-Earth) (Fixed links (5725 – 5850 MHz) RTT data (5795 – 5815 MHz) ISM applications (5725 – 5875 MHz) BFWA (5725-5850 MHz) ISM (5725-5875 MHz) RTTT (Road Transport and Traffic Telematics) (5795-5815 MHz) SRD applications (5 725- 5 875 MHz) SRD - Transport and information control systems (5 805-5 815 MHz)		
<b>5850 -5925</b>	FIXED FIXED-SATELLITE (Earth-to-space) MOBILE (C-band uplink (VSAT/SNG/PTP links) ISM applications (5725 – 5875 MHz) Fixed-satellite uplinks (PTP/VSAT/SNG) (5850-6425 MHz) FIXED links (5850-5925 MHz) ISM (5725-5875 MHz))	(5850-6425 MHz) Fixed-satellite uplinks (PTP/VSAT/SNG)/ temporary Outside broadcast links (5850-5925 MHz) FIXED links (5725-5875 MHz) ISM as per SADC FAP proposed common sub-allocation/ utilization	Feasibility study to be performed. (refer to 4.10.36)
<b>5925 – 6700</b>	FIXED FIXED-SATELLITE (Earth-to-space)	5925 – 6425 MHz Fixed links	Feasibility study to be performed. (refer to 4.10.37)

Frequency Band (MHz)	Existing Allocation in NRFP 2018 (Applications)	Proposed Allocation/ (Utilization)	Notes on migration/ usage
	(Fixed links/ VSAT, FSS, SNG feeder links) (Fixed links - Lower 6 GHz (5925- 6425 MHz) and Upper 6 GHz (6425-7110 MHz), BFWA Fixed-satellite uplinks (PTP/VSAT/SNG) (5850-6425 MHz) ESVs (5925 – 6425 MHz))	6425 – 7110 MHz Fixed links as per SADC FAP proposed common sub-allocation/ utilization	
<b>10700 – 10950 &amp; 10950 – 11200 &amp; 11200 – 11450 &amp; 11450 - 11700</b>	FIXED  FIXED-SATELLITE (space-to-earth)/(earth-to-space)  MOBILE except aeronautical mobile  (Ku-band satellite) (Fixed Links (11 GHz) (10.7 – 11.7 GHz) Ku-band downlink (VSAT/SNG/BSS feeder links Fixed links - 11 GHz (10.7-11.7 GHz) Fixed-satellite downlinks (PTP/VSAT/SNG)),	No change	All assignments remains as-is  (refer to 4.10.38)
<b>15400 – 15430 &amp; 15430 – 15630 &amp; 15630 - 15700</b>	RADIOLOCATION  AERONAUTICAL RADIONAVIGATION (Radio Altimeters Radars)	Radio location service  as per WRC-07 Res. 614	No Migration
<b>40000 – above</b>		Allocate for high capacity PTP links	Feasibility studies to be performed.

<b>Frequency Band (MHz)</b>	<b>Existing Allocation in NRFP 2018 (Applications)</b>	<b>Proposed Allocation/ (Utilization)</b>	<b>Notes on migration/ usage</b>
			(refer to 4.10.39)  Refer to:  Radio Frequency Migration Plan Government Gazette Number 36334 (Notice no. 352 of 2013)





## Appendix A Glossary

<b>Act</b>	means the Electronic Communications Act, 2005 (Act No. 36 of 2005);
<b>Authority</b>	means ICASA is the Independent Communications Authority of South Africa;
<b>3G</b>	means 3rd Generation of mobile telecommunications and a generation of standards for mobile phones and mobile telecommunication services fulfilling the International Mobile Telecommunications-2000 (IMT-2000) specifications by the ITU
<b>Amateur</b>	means a person who is interested in the radio technique solely for a private reason and not for financial gain and to whom the Authority has granted an amateur radio station licence and shall mean a natural person and shall not include a juristic person or an association: provided that an amateur radio station licence may be issued to a licensed radio amateur acting on behalf of a duly founded amateur radio association;
<b>Assignment</b>	means the authorization given by the authority to use a radio frequency or radio frequency channel under specified conditions;
<b>Base station</b>	means a land radio station in the land mobile service for a service with land mobile stations;
<b>BS</b>	means Broadcast Service
<b>BTX</b>	means Base Transceiver;
<b>Burglar alarm service</b>	means a land mobile service installed, maintained and operated to monitor burglar alarm signals of clients by means of a signal forwarded from a radio transmitter to a central position;
<b>Burglar alarm transmitter</b>	means a transmission radio station in the land mobile service that is intended to transmit automatic alarm signals to a central position;
<b>CDMA</b>	means Code Division Multiple Access
<b>CEPT</b>	means Conference of European Posts and Telecommunications Authorities;
<b>Citizen-band radio service</b>	means a private, two-way, limited coverage speech communication service in the land mobile service to personal and business operations, which may also be used as a paging system;

<b>Communal radio repeater station service</b>	means a land mobile service installed, maintained and operated via repeater stations that are available for communal use;
<b>Cordless Phone</b>	means a portable telephone with a wireless handset that communicates via radio waves with a base station connected to a fixed telephone line, within a limited range of its base station;
<b>DAB</b>	means Digital Audio Broadcasting is a digital radio technology for broadcasting radio stations
<b>DECT</b>	means Digital Enhanced Cordless Telecommunications is a digital communication standard, which is primarily used for creating cordless phone systems
<b>DECT-</b>	means Digitally Enhanced Cordless Telephone 1880 - 1900MHz;
<b>DF</b>	means Dual Frequency
<b>DTT</b>	means Digital Terrestrial Television
<b>DTT Mobile</b>	means Digital Terrestrial Television for Mobile services
<b>e.i.r.p</b>	means effective isotopically radiated power;
<b>e.r.p</b>	means effective radiated power, is the product of the power supplied to an antenna and its gain relative to a half wave dipole in a given direction;
<b>EBU</b>	means European Broadcasting Union
<b>ECA</b>	means Electronic Communications ACT of South Africa
<b>ECNS</b>	means Electronic Communications Network Services;
<b>ECS</b>	means Electronic Communications Services;
<b>EDGE</b>	means Enhanced Data rates for GSM Evolution is a digital mobile phone technology that allows improved data transmission rates as a backward-compatible extension of GSM
<b>EMC</b>	means Electromagnetic Compatibility;
<b>ETSI</b>	means European Telecommunications Standards Institute
<b>FDMA</b>	means Frequency Division Multiple Access
<b>FLEX</b>	means paging software originally developed for Motorola;
<b>FMP</b>	means Frequency Migration Plan
<b>FPLMTS</b>	means Future Public Land Mobile Telecommunications System also called IMT-2000
<b>FTBFP 2008</b>	means Final Terrestrial Broadcast Frequency Plan of 2008
<b>FWBA</b>	Fixed Wireless Broadband Access

<b>GHz</b>	means Gigahertz of Radio Frequency Spectrum;
<b>GE06</b>	means Digital Broadcast Conference held in Geneva, Switzerland in 2006.
<b>GMDSS</b>	means the Global Maritime Distress and Safety System is an internationally agreed-upon set of safety procedures, types of equipment, and communication protocols used to increase safety and make it easier to rescue distressed ships, boats and aircraft.
<b>GSM</b>	means Global System for Mobile Communications, ( originally Groupe Spécial Mobile), is a standard set developed by the European Telecommunications Standards Institute (ETSI) to describe technologies for second generation (2G) digital cellular networks
<b>GSM-R</b>	means GSM for Railways
<b>HF</b>	means High Frequency;
<b>IMT</b>	means International Mobile Telecommunications
<b>Inductive Loop Systems</b>	means radio apparatus which operates by producing a controlled magnetic field within which a predetermined recognisable signal is formed;
<b>INMARSAT</b>	means International Maritime Satellite
<b>ISM</b>	means Industrial, Scientific and Medical;
<b>ITU</b>	means International Telecommunications Union
<b>ITU RR</b>	means International Telecommunications Union Radio Regulations
<b>kHz</b>	means kilohertz of Radio Frequency Spectrum;
<b>Land mobile service</b>	means a mobile radio-communication service between fixed stations and mobile land stations, or between land mobile stations;
<b>LEO</b>	means Low Earth Orbit satellites
<b>LMR</b>	means Land Mobile Radio
<b>Low Power Radio</b>	means radio apparatus, normally hand-held radios used for short range two-way voice communications;
<b>LTE</b>	means Long Term Evolution is a standard for wireless communication of high-speed data for mobile phones and data terminals. It is based on the GSM/EDGE and UMTS/HSPA network technologies
<b>M2M</b>	means Machine to Machine
<b>MFN</b>	means Multiple Frequency Networks

<b>MHz</b>	means Megahertz of Radio Frequency Spectrum;
<b>MIMO</b>	means Multiple-Input and Multiple-Output is the use of multiple antennas at both the transmitter and receiver to improve communication performance
<b>Mobile station</b>	means a radio station that is intended to be operated while it is in motion or while it is stationary at an unspecified place;
<b>Model Control apparatus</b>	means radio apparatus used to control the movement of the model in the air, on land or over or under the water surface;
<b>MTX</b>	means Mobile Transceiver;
<b>Non-specific Short-Range Devices</b>	means radio apparatus used for general telemetry, telecommand, alarms and data applications with a present duty cycle (0.1%: S duty cycle < 100%);
<b>NRFP</b>	means the National Radio Frequency Plan 2010 for South Africa
<b>PAMR</b>	means Public Access Mobile Radio
<b>PMR</b>	means Private Mobile Radio or Professional Mobile Radio
<b>PMR</b>	means Public Mobile Radio is radio apparatus used for short range two-way voice communications;
<b>PPDR</b>	Public Protection and Disaster Relief for emergency and safety radio communications systems
<b>PTM</b>	means Point to Multipoint
<b>PTP</b>	means Point to Point
<b>Radio trunking</b>	means a technique by means of which free channels out of a group of radio frequency channels allocated to a base station are automatically made available for the establishment of a connection between the stations of a user;
<b>Radio-beacon station</b>	means a radio station whose radiation is intended to enable a mobile station to fix its position or obtain its bearing with regard to the radio beacon;
<b>Radio-communication</b>	means all electronic communication by means of radio waves;
<b>Relay or repeater station</b>	means a land station in the land mobile service;
<b>RFID</b>	means Radio Frequency identification is a wireless system that uses radio frequency communication to automatically identify, track and manage objects, people or animals. It consists of two main

	components viz, tag and a reader which are tuned to the same frequency;
<b>RLAN</b>	means Radio Local Access Network is the high data rate two way (duplex) wireless data communications network;
<b>SABRE</b>	means South African Band Re-planning Exercise
<b>SADC</b>	means Southern African Development Community
<b>SADC FAP</b>	means Southern African Development Community Frequency Allocation Plan 2010
<b>SAPS</b>	means South African Police Service
<b>SATFA</b>	means South African Table of Frequency Allocations 2004
<b>Self Helps</b>	means repeater stations rebroadcasting television channels to limited areas on a low power basis
<b>Service licence</b>	means a BS, ECS or ECNS licence;
<b>SF</b>	means Single Frequency
<b>SFN</b>	means Single Frequency Network
<b>Ship station</b>	means a mobile station in the maritime mobile service that has been erected
<b>SNG</b>	means Satellite News Gathering
<b>Spread spectrum</b>	means a form of wireless communications in which the frequency of the transmitted signal is deliberately varied, resulting in a much greater bandwidth than the signal would have if its frequency were not varied;
<b>SRD</b>	means Short Range Device is a piece of apparatus which includes a transmitter, and/or a receiver and or parts thereof, used in alarm, telecommand telemetry applications, etc., operating with analogue speech/music or data (analogue and/or digital) or with combined analogue speech/music and data, using any modulation type intended to operate over short distances;
<b>Studio Links</b>	means point to point links in the broadcasting frequency bands used to connect studios to transmitters
<b>STB</b>	means Set Top Box for DVB-T2 reception
<b>T-DAB</b>	means Terrestrial Digital Audio Broadcasting
<b>TDMA</b>	means Time Division Multiple Access
<b>Telemetry</b>	means the transmission of remotely measured data;

<b>TETRA</b>	means Terrestrial Trunked Radio is a professional mobile radio [2] and two-way transceiver specification. TETRA was specifically designed for use by government agencies, emergency services, (police forces, fire departments, ambulance) for public safety networks, rail transportation staff for train radios, transport services and the military. TETRA is an ETSI standard.
<b>TPC</b>	means Transmitter Power Control is a technical mechanism used within some networking devices in order to prevent unwanted interference between wireless networks;
<b>UHF</b>	means Ultra High Frequency;
<b>UMTS</b>	means Universal Mobile Telecommunications System is a third-generation mobile cellular technology for networks based on the GSM standard
<b>VHF</b>	means Very High Frequency;
<b>Video Surveillance Equipment</b>	means radio apparatus used for security camera purposes to replace the cable between a camera and a monitor;
<b>VSAT</b>	means Very Small Aperture Terminal is a two-way satellite ground station that is smaller than 3 meters' diameter
<b>WAS</b>	means Wireless Access Systems is end-user radio connections to public or private core networks;
<b>Wideband Wireless Systems</b>	means radio apparatus that uses spread spectrum techniques and has high bit rate;
<b>WRC 2007</b>	means World Radiocommunication Conference 2007 held in Geneva
<b>WRC 2012</b>	means World Radiocommunication Conference 2012 held in Geneva
<b>WRC 2015</b>	means World Radiocommunication Conference 2015 held in Geneva

## Appendix B      ECA – Section 34

### *Radio frequency plan*

34.

(1) *The Minister, in the exercise of his or her functions, represents the Republic in international fora, including the ITU, in respect of—*

*(a) the international allotment of radio frequency spectrum; and*

*(b) the international coordination of radio frequency spectrum usage, in accordance with international treaties, multinational and bilateral agreements entered into by the Republic.*

(2) *The Minister must approve the national radio frequency plan developed by the Authority, which must set out the specific frequency bands designated for use by particular types of services, taking into account the radio frequency spectrum bands allocated to the security services.*

(3) *The Authority must assign radio frequencies consistent with the national radio frequency plan for the use of radio frequency spectrum by licence holders and other services that may be provided pursuant to a licence exemption.*

(4) *The Authority must, within 12 months of the coming into force of this Act, prepare the national radio frequency plan or make appropriate modification to any existing radio frequency plan to bring it into conformity with this Act.*

(5) *The national radio frequency plan must be updated and amended when necessary in order to keep the plan current. When updating and amending this plan due regard must be given to the current and future usage of the radio frequency spectrum.*

(6) *The national radio frequency plan must—*

*(a) designate the radio frequency bands to be used for particular types of services;*

*(b) ensure that the radio frequency spectrum is utilised and managed in an orderly, efficient and effective manner;*

*(c) aim at reducing congestion in the use of the radio frequency spectrum;*

*(d) aim at protecting radio frequency spectrum licensees from harmful interference;*

*(e) provide for flexibility and the rapid and efficient introduction of new technologies;*



*(f) aim at providing opportunities for the introduction of the widest range of services and the maximum number of users thereof as is practically feasible.*

*(7) In preparing the national radio frequency plan as contemplated in subsection (4), the Authority must—*

*(a) take into account the ITU's international spectrum allotments for radio frequency spectrum use, in so far as ITU allocations have been adopted or agreed upon by the Republic, and give due regard to the reports of experts in the field of spectrum or radio frequency planning and to internationally accepted methods for preparing such plans;*

*(b) take into account existing uses of the radio frequency spectrum and any radio frequency band plans in existence or in the course of preparation; and*

*(c) consult with the Minister to—*

*(i) incorporate the radio frequency spectrum allocated by the Minister for the exclusive use of the security services into the national radio frequency plan;*

*(ii) take account of the government's current and planned uses of the radio frequency spectrum, including but not limited to, civil aviation, aeronautical services and scientific research; and*

*(iii) co-ordinate a plan for migration of existing users, as applicable, to make available radio frequency spectrum to satisfy the requirements of subsection (2) and the objects of this Act and of the related legislation.*

*(8) The Authority must give notice of its intention to prepare a national radio frequency plan in the Gazette and in such notice invite interested parties to submit their written representations to the Authority within such period as may be specified in such notice.*

*(9) The Authority may, after the period referred to in subsection (8) has passed, hold a hearing in respect of the proposed national radio frequency plan.*

*(10) After the hearing, if any, and after due consideration of any written representations received in response to the notice mentioned in subsection (8) or tendered at the hearing, the Authority must forward the national radio frequency plan to the Minister for approval.*

*(11) The Minister must, within 30 days of receipt of the national radio frequency plan, either approve the plan, at which time the plan must become effective, or notify the Authority that further consultation is required.*

(12) Upon approval of the national radio frequency plan by the Minister, the Authority must publish the plan in the Gazette.

(13) Any radio frequency plan approved in terms of this section and all the comments, representations and other documents received in response to the notice contemplated in subsection (8) or tendered at the hearing must be—

(a) kept at the offices of the Authority; and

(b) open for public inspection by interested persons during the normal office hours of the Authority.

(14) The Authority must, at the request of any person and on payment of such fee as may be prescribed, furnish him or her with a copy of the radio frequency plan.

(15) The provisions of subsections (6) to (14) apply, with the necessary changes, in relation to any amendment made by the Authority to the radio frequency plan.

(16) The Authority may, where the national radio frequency plan identifies radio frequency spectrum that is occupied and requires the migration of the users of such radio frequency spectrum to other radio frequency bands, migrate the users to such other radio frequency bands in accordance with the national radio frequency plan, except where such migration involves governmental entities or organisations, in which case the Authority—

(a) must refer the matter to the Minister; and

(b) may migrate the users after consultation with the Minister

## Appendix C SABRE 2 – 2001

SABRE 2<sup>21</sup> was a programme to re-plan the radio frequency spectrum from 3GHz to 70 MHz, partly driven by the need to in-migrate fixed-links from below 3Gz.

SABRE 2 made the following comment on migration issues above 3 GHz.

*Above 3 GHz the cost of backbone infrastructure equipment is borne by one or a few organisations. Band reallocation and spectrum use migration activities have to carefully consider industry's return on investment over pre-planned equipment life cycles. Ideally any additionally identified SABRE 2 band migrations will be voluntary and will occur within the constraints of the infrastructure life cycle.*

*A number of bands were identified during the SABRE 2 project that requires consideration due to anticipated future congestion and reallocation. Three types of migration are recommended; band, equipment, and channels. These migrations are viewed as voluntary because they are expected to occur as part of the natural system life cycle.*

Band	Migration Objective	Target Date
3600-4200 MHz	Analogue to digital terrestrial systems	31 December 2005
5925-6425 MHz 6425-7110 MHz	Analogue to digital systems	31 December 2005
7110-7425 MHz 7425-7750 MHz	Analogue to digital systems	31 December 2005
7110-7425 MHz 7425 - 7750 MHz	Digital systems to channel plan	Not specified
10.7- 11.7 GHz	Analogue to digital systems	31 December 2005
21.4 22 GHz	FS reverts to secondary service 22-22.6 GHz // 23.0 23.6 GHz, 26 GHz and 38 GHz bands also available	1 April 2007

<sup>21</sup> Radio frequency spectrum band plan covering the range 3 GHz to 70 GHz – (SABRE-2) Notice 1920 of 2001

*Operators are expected to identify all migration links, plan their migration, and coordinate their schedule with ICASA. at least three years before the deadline. The 21.4 - 22.0 GHz band will revert from Fixed, Mobile and Broadcasting Satellite Services to the Broadcast Satellite Service application in the year 2007. Currently, there is a limited set of licences in the band according to ICASA records. Operators intending to maintain FS links in the 21.4-22 GHz band will be accommodated with no protection after 1 April 2007. Another migration issue is the "opening of the 38 GHz band." Prior to making assignments in this portion of the spectrum, it is recommended that a migration of 20-24 GHz FS assignments be established. The primary criteria for migration would be link distance associated with specific frequency assignments, once the band is released to the public.*

## Appendix D SATFA – 2004

The South African Table of Frequency Allocations 2004<sup>22</sup> consolidated SABRE 1 and SABRE 2 in one plan covering the range 20MHz to 70 GHz.

Regarding migration, the following points were made:

*The migration process has had its successes and failures. Some migration time-frames have been revised whilst others are maintained at their original deadlines. One can mention that the 2008 deadline for current public trunking operators has been reviewed at the request of the public trunking operators. The use of the band 406.1 - 407.625 // 416.1 - 417.625 MHz by the national electricity utility has been re-instated.*

The changes implemented in SATFA 2004 were listed as:

- *The Radio Frequency Identification systems (RFID) allocation in the 900 MHz band*
- *Pre-programmed low power PMR446 two-way radios.*
- *Allocation of Broadband FWA in the 2.6GHz band,*
- *Public Protection and Disaster relief (PPDR) bands which includes 380 -385//390-395MHz.*
- *Full allocation of 2x10MHz E-GSM spectrum. Previously the E-GSM allocation was 2 x 400 kHz short because of an allocation to a now defunct two-way paging service.*
- *Allocation of the 5GHz band to “mobile” so as to enable wireless LAN” Hotspots”.*
- *Allocation of the band 14-14.5 GHz to aeronautical mobile to enable broadband internet access by aircraft passengers.*
- *At the WRC03 the South African delegation added the country name to an ITU Radio Regulation footnote which seeks to protect future radio astronomy activities in the 14GHz band.*

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<sup>22</sup> The South African Table of Frequency Allocations (SATFA) – Notice 1442 of 2004.

## Appendix E National Radio Frequency Plan – 2010 and 2013

The National Radio Frequency Plan 2010<sup>23</sup> updated SATFA 2004<sup>24</sup> and extended the frequency range covered (now 9 kHz – 3000 GHz<sup>25</sup>). Its stated aim was to incorporate the decisions taken by WRC and include updates on the Table of Frequency Allocations extending up to 3000GHz. In 2013, the National Radio Frequency Plan 2013<sup>26</sup> was updated.

The fundamental objectives informing the National Radio Frequency Plan were to:

- *To effect.... policy directives published in Government Gazette No. 30308 of 17 September 2007 which states that the Authority should take into account the results of WRC 2007 when revising the national radio frequency plan*
- *To update the table with changes made by WRC 97, WRC 2000, WRC03, and WRC07*
- *To allocate spectrum that was previously not allocated by extending the range to cover 9 kHz to 3000 GHz in line with the Act and ITU-R*
- *To make spectrum available for new radio interfaces such as WIMAX, which were included as the newest member of the IMT family of standards*
- *To facilitate future identification of spectrum for very low power fixed links in the spectrum below 1 GHz in order to promote small medium and micro enterprises in the communications industry.*

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<sup>23</sup> The National Radio Frequency Plan – Notice 727 of 2010.

<sup>24</sup> The main reason for the name change is that the term National Radio Frequency Plan is used in the ECA.

<sup>25</sup> Although 1000 – 3000 GHz is not allocated.

<sup>26</sup> National Radio Frequency Plan 2013, Government Gazette 36336 (354 of 2013)

- *To facilitate developments of the frequency migration strategies and to facilitate migration of high capacity fixed links to higher frequency bands*
- *To facilitate the development of a framework for usage of ISM frequency bands to support rural development objectives*
- *To promote access to lower frequency bands for broadband wireless access to support rural development*
- *To promote access to frequency bands below 1 GHz such as the 790 – 862 MHz band which offers both coverage and capacity to help bridge the "digital gap" between sparsely-populated and densely-populated areas and to increase universal service and access in the country.*

The following changes were implemented:

- *Identification and allocation of spectrum for IMT - spectrum has been allocated in line with WRC 07 in the bands 790 - 862 MHz, 2300 – 2400 MHz, 2500 - 2690 MHz, 3400 - 3600 MHz, 1518 -1525 MHz and 1668-1675 MHz. Where there are existing services that need to be protected such provision has been made.*
- *Allocation of spectrum for amateur radio - spectrum has been allocated in line with WRC 07 and previous WRCs in the bands 135.7 - 137.8 kHz, 2300 - 2450 on secondary basis.*
- *Addition of a proposal to change DTH from secondary to primary status in the 10.7-11.7 GHz*
- *National footnote NF 49 of SATFA 2004 has been replaced by national footnote NF 2 addressing the Astronomy Geographic Advantage Act, 2007 (Act No. 21 of 2007)*
- *Updated ISM frequency bands in line with Government Gazette Number 31321 Notice No. 944 of 08 August 2008*
- *Updated the 5725 - 5850 MHz band in line with Government Gazette Number 31290 Notice No.926 of 29 July 2008.*
- *Added allocations for inductive loop and RFID in line with Government Gazette Number 31290 Notice No. 926 of 29 July 2008*
- *Added new maritime, aeronautical allocations below 20 MHz and new satellite allocations above 70 GHz*

The Plan did not specify any migration activities, although the plan includes the WRC mandated allocation of the 800 MHz to IMT (digital dividend 2).

**CONTINUES ON PAGE 514 - PART 5**





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# Appendix F      Appendix F National Radio Frequency Plan – 2018

This National Radio Frequency Plan 2018 (NRFP-18) has been prepared under Section 34 of the Act.

The NRFP-17 allocates the *Radio Frequency Spectrum* to Radio Services in the Frequency Bands between 8.3 kHz and 3000 GHz. All frequency assignments must be in accordance national radio frequency plan.

This revised *NRFP-18* incorporates the decisions taken by 2015 World Radiocommunication Conferences (WRC-15). The revision reflects the 2016 version of the ITU Radio Regulations, including the frequency allocations relevant to Region 1 and its associated footnotes. It also includes updates on the Table of Frequency Allocations extending up to 3000 GHz and South African National Footnotes. The revised NRFP-17 further reflects agreements taken at regional level including that of the African Telecommunication Union (ATU) and the Southern African Development Community (SADC)<sup>27</sup> *Frequency Allocation Plan (FAP)*<sup>28</sup>. *These aforementioned agreements do not supersede any regulations developed by the Authority.*

The Authority consulted with the *government Department that is responsible for approving the frequency band plan as prescribed in the Electronic Communications Act*, to incorporate the radio frequency spectrum allocated by the Minister for use by security services taking into account the Government's current and planned use of radio frequency spectrum, including but not limited to, civil aviation, and aeronautical services and scientific research. This updated version of the NRFP-17 incorporates the outcome of the public consultation as mandated by the EC Act.

A document containing relevant ITU – R Resolutions and Recommendations referred in this document can be found on the Authority's website.

The pattern of radio use is not static as it is continuously evolving to reflect the many changes that are taking place in the radio environment; particularly in the field of technology. Spectrum

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<sup>27</sup> <http://www.crasa.org/crasa-publication/cat/18/regulatory-guidelines/>

<sup>28</sup> [http://www.crasa.org/common\\_up/crasa-setup/10-11-2016\\_SADC%20FREQUENCY%20ALLOCATION%20PLAN%202016.pdf](http://www.crasa.org/common_up/crasa-setup/10-11-2016_SADC%20FREQUENCY%20ALLOCATION%20PLAN%202016.pdf)

allocations must reflect these changes and the position set out in this plan is therefore subject to regular reviews.

In view of the above, it is the intention of the Authority to update the NRFP when necessary in order to keep the plan current with due regard given to the current and future usage of the radio frequency spectrum.

**The following updates and amendments amongst others have been implemented in NRFP -18:**

- National footnotes have been revised.
- The resolutions and decisions taken by World Radiocommunication Conferences preceding WRC-15.
- The resolutions and decisions taken by the WRC-15, as ratified by the South Africa (Republic of), have been reflected.
- The Astronomy Geographic Advantage Act, 2007 (Act No. 21 of 2007) covered in a separate chapter in view of the award of the Square Kilometre Array (SKA) to South Africa. The commencement of the Astronomy Geographic Advantage Act, 2007 (Act No. 21 of 2007) in terms of section 53 of the Astronomy Geographic Advantage Act, 2007 (Act No. 21 of 2007), the 24 April 2009 has been determined as the date on which the said Act comes into operation.
- The Regulations apply to the Karoo Central Astronomy Advantage Areas declared for the purpose of radio astronomy and related scientific endeavours in terms of sections 9(1) and 9(2) of the Act.
- Incorporated references to the SADC Frequency Allocation Plan (FAP) and SADC Harmonised Guidelines

# **Appendix G : Summary of the Impact of the Proposed Frequency Migrations from 2013 included in this document**

## 1 Technical Investigation

The table below and subsequent sections include additional information on some frequency bands which were included in the study.

Item	RFSAP	GG. No.	Notice
1	75.2 to 87.5 MHz	41164	781 of 2017
2	138 to 143.6 MHz	41164	785 of 2017
3	150.5 to 153 MHz	41164	786 of 2017
4	156.4785 to 156.5625 MHz	41350	971 of 2017
5	380 to 400 MHz	41164	787 of 2017
6	403 to 406 MHz	RFSAP to be developed	
7	406 to 426 MHz	RFSAP to be developed (Destination band for Transnet)	
8	410 to 413 MHz paired with 420 to 423 MHz	RFSAP to be developed (Destination band for Transnet)	
9	426 to 430	RFSAP to be developed	
10	440 to 441 MHz	41164	788 of 2017
11	440 to 450 MHz	RFSAP to be developed	
12	450 to 470 MHz		
13	452.5 - 457.5 paired with 462.5 - 467.5	Band 31 identified for trial by Transnet. Transnet successfully applied for trial license and tests were successful.	
14	694 to 876 MHz		
15	876 to 880 MHz		
16	921 to 925 MHz		
17	880 to 960 MHz		
18	880 to 915 MHz		
19	IMT850	41082	648 of 2017
20	925 to 960 MHz		

21	942 to 960 MHz	RFSAP to be developed	
22	1350 to 1375 MHz paired with 1492 to 1517 MHz and 1375 to 1400 MHz paired 1427 to 1452 MHz	Feasibility studies to be done after WRC 15. This band is currently allocated to low capacity PTP/DF links	
23	1452 to 1492 MHz	Feasibility study to be done. Align the status of the channel arrangements in ITU-R.M1036 within Working party 5D	
24	1518 to 1525 MHz	41164	784 of 2017
25	1700 to 2290 MHz		
26	2025 to 2110 MHz	41164	782 of 2017
27	2290 to 2300 MHz	RFSAP to be developed	
28	2285 to 2300 MHz	41164	783 of 2017
29	2300 to 2400 MHz		
30	2300 to 2450 MHz	Feasibility study to be considered and RFSAP to be developed	
31	2500 to 2690 MHz		
32	3300 to 3400 MHz	Feasibility study to be done. Align the status of the channel arrangements in ITU-R.M1036 within Working party 5D	
33	3400 to 3600 MHz	38640	278

## 1.1 Applicable Frequency Allocation and Band information 69.25 MHz to 87.5 MHz

Frequency Band under investigation 69.25 MHz to 87.5 MHz

MOBILE except aeronautical mobile

Frequency Sub bands

Allocate following pairings

Mobile 1 MTX 76.175 – 76.925 MHz paired with BTX 69.25 to 70 MHz

Mobile 2 MTX 75.2 – 76.175 MHz paired with BTX 70 to 70.975 MHz

Mobile 3 MTX 76.925 – 77.975 MHz paired with BTX 71.475 to 72.525 MHz

Mobile 4 MTX 78.625 – 80 MHz paired with BTX 73.425 to 74.8 MHz

Mobile 5 MTX 82.975 – 83.625 MHz paired with BTX 77.975 to 78.625 MHz

Mobile 6 MTX 87 – 87.5 MHz paired with BTX 80 to 80.5 MHz

Mobile 7 MTX 86.375 – 87 MHz paired with BTX 81 to 81.625 MHz

Mobile 8 MTX 85.025 – 86.375 MHz paired with BTX 81.625 to 82.975 MHz

Single Frequency Mobile Allocations

80.5 to 81 MHz

83.625 – 85.025 MHz

### 1.1.1 Channel Plans for the Frequency Allocation

#### (Mobile 2) MID-BAND DUPLEX FREQUENCIES

#### CHANNEL PLAN FOR 70-70.9625/75.2-76.1625MHZ 2003 (12.5kHz)

CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
1	70	75.2		
2	70.0125	75.2125		
3	70.025	75.225		
4	70.0375	75.2375		
5	70.05	75.25		
6	70.0625	75.2625		
7	70.075	75.275		
8	70.0875	75.2875		
9	70.1	75.3		
10	70.1125	75.3125		
11	70.125	75.325		
12	70.1375	75.3375		
13	70.15	75.35		
14	70.1625	75.3625		
15	70.175	75.375		
16	70.1875	75.3875		
17	70.2	75.4		
18	70.2125	75.4125		
19	70.225	75.425		
20	70.2375	75.4375		
21	70.25	75.45		
22	70.2625	75.4625		
23	70.275	75.475		
24	70.2875	75.4875		
25	70.3	75.5		
26	70.3125	75.5125		
27	70.325	75.525		
28	70.3375	75.5375		
29	70.35	75.55		
30	70.3625	75.5625		
31	70.375	75.575		
32	70.3875	75.5875		
33	70.4	75.6		
34	70.4125	75.6125		
35	70.425	75.625		
36	70.4375	75.6375		
37	70.45	75.65		
38	70.4625	75.6625		
39	70.475	75.675		
40	70.4875	75.6875		
41	70.5	75.7		
42	70.5125	75.7125		
43	70.525	75.725		
44	70.5375	75.7375		
45	70.55	75.75		
46	70.5625	75.7625		
CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
47	70.575	75.775		
48	70.5875	75.7875		
49	70.6	75.8		
50	70.6125	75.8125		
51	70.625	75.825		
52	70.6375	75.8375		
53	70.65	75.85		
54	70.6625	75.8625		
55	70.675	75.875		
56	70.6875	75.8875		
57	70.7	75.9		
58	70.7125	75.9125		
59	70.725	75.925		
60	70.7375	75.9375		
61	70.75	75.95		
62	70.7625	75.9625		
63	70.775	75.975		
64	70.7875	75.9875		
65	70.8	76		
66	70.8125	76.0125		
67	70.825	76.025		
68	70.8375	76.0375		
69	70.85	76.05		
70	70.8625	76.0625		
71	70.875	76.075		
72	70.8875	76.0875		
73	70.9	76.1		
74	70.9125	76.1125		
75	70.925	76.125		
76	70.9375	76.1375		
77	70.95	76.15		
78	70.9625	76.1625		



**(Mobile 3) MID-BAND DUPLEX FREQUENCIES**  
**CHANNEL PLAN FOR 71.475 - 72.5125/76.925 - 77.9625MHz 2003 (12.5 kHz)**

CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
1	71.475	76.925		
2	71.4875	76.9375		
3	71.5	76.95		
4	71.5125	76.9625		
5	71.525	76.975		
6	71.5375	76.9875		
7	71.55	77		
8	71.5625	77.0125		
9	71.575	77.025		
10	71.5875	77.0375		
11	71.6	77.05		
12	71.6125	77.0625		
13	71.625	77.075		
14	71.6375	77.0875		
15	71.65	77.1		
16	71.6625	77.1125		
17	71.675	77.125		
18	71.6875	77.1375		
19	71.7	77.15		
20	71.7125	77.1625		
21	71.725	77.175		
22	71.7375	77.1875		
23	71.75	77.2		
24	71.7625	77.2125		
25	71.775	77.225		
26	71.7875	77.2375		
27	71.8	77.25		
28	71.8125	77.2625		
29	71.825	77.275		
30	71.8375	77.2875		
31	71.85	77.3		
32	71.8625	77.3125		
33	71.875	77.325		
34	71.8875	77.3375		
35	71.9	77.35		
36	71.9125	77.3625		
37	71.925	77.375		
38	71.9375	77.3875		
39	71.95	77.4		
40	71.9625	77.4125		
41	71.975	77.425		
42	71.9875	77.4375		
43	72	77.45		
44	72.0125	77.4625		
45	72.025	77.475		
46	72.0375	77.4875		
CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
47	72.05	77.5		
48	72.0625	77.5125		
49	72.075	77.525		
50	72.0875	77.5375		
51	72.1	77.55		
52	72.1125	77.5625		
53	72.125	77.575		
54	72.1375	77.5875		
55	72.15	77.6		
56	72.1625	77.6125		
57	72.175	77.625		
58	72.1875	77.6375		
59	72.2	77.65		
60	72.2125	77.6625		
61	72.225	77.675		
62	72.2375	77.6875		
63	72.25	77.7		
64	72.2625	77.7125		
65	72.275	77.725		
66	72.2875	77.7375		
67	72.3	77.75		
68	72.3125	77.7625		
69	72.325	77.775		
70	72.3375	77.7875		
71	72.35	77.8		
72	72.3625	77.8125		
73	72.375	77.825		
74	72.3875	77.8375		
75	72.4	77.85		
76	72.4125	77.8625		
77	72.425	77.875		
78	72.4375	77.8875		
79	72.45	77.9		
80	72.4625	77.9125		
81	72.475	77.925		
82	72.4875	77.9375		
83	72.5	77.95		
84	72.5125	77.9625		

**MID-BAND SIMPLEX FREQUENCIES****CHANNEL PLAN FOR 72.525 - 73.425MHz 2003 (12.5 kHz)**

CHANNEL No.	BTX	REMARKS	S/GRADE
1	72.525		
2	72.5375		
3	72.55		
4	72.5625		
5	72.575		
6	72.5875		
7	72.6		
8	72.6125		
9	72.625		
10	72.6375		
11	72.65		
12	72.6625		
13	72.675		
14	72.6875		
15	72.7		
16	72.7125		
17	72.725		
18	72.7375		
19	72.75		
20	72.7625		
21	72.775		
22	72.7875		
23	72.8		
24	72.8125		
25	72.825		
26	72.8375		
27	72.85		
28	72.8625		
29	72.875		
30	72.8875		
31	72.9		
32	72.9125		
33	72.925		
34	72.9375		
35	72.95		
36	72.9625		
37	72.975		
38	72.9875		
39	73		
40	73.0125		
41	73.025		
42	73.0375		
43	73.05		
44	73.0625		
45	73.075		
46	73.0875		
47	73.1		
48	73.1125		
49	73.125		
50	73.1375		
51	73.15		
52	73.1625		
53	73.175		
54	73.1875		
55	73.2		
56	73.2125		
57	73.225		
58	73.2375		
59	73.25		
60	73.2625		
61	73.275		
62	73.2875		
63	73.3		
64	73.3125		
65	73.325		
66	73.3375		
67	73.35		
68	73.3625		
69	73.375		
70	73.3875		
71	73.4		
72	73.4125		

**(Mobile 4) MID-BAND DUPLEX FREQUENCIES**  
**CHANNEL PLAN FOR 73.425 - 74.8/78.625 - 80MHz 2003 (12.5kHz)**

CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
1	73.425	78.625		
2	73.4375	78.6375		
3	73.45	78.65		
4	73.4625	78.6625		
5	73.475	78.675		
6	73.4875	78.6875		
7	73.5	78.7		
8	73.5125	78.7125		
9	73.525	78.725		
10	73.5375	78.7375		
11	73.55	78.75		
12	73.5625	78.7625		
13	73.575	78.775		
14	73.5875	78.7875		
15	73.6	78.8		
16	73.6125	78.8125		
17	73.625	78.825		
18	73.6375	78.8375		
19	73.65	78.85		
20	73.6625	78.8625		
21	73.675	78.875		
22	73.6875	78.8875		
23	73.7	78.9		
24	73.7125	78.9125		
25	73.725	78.925		
26	73.7375	78.9375		
27	73.75	78.95		
28	73.7625	78.9625		
29	73.775	78.975		
30	73.7875	78.9875		
31	73.8	79		
32	73.8125	79.0125		
33	73.825	79.025		
34	73.8375	79.0375		
35	73.85	79.05		
36	73.8625	79.0625		
37	73.875	79.075		
38	73.8875	79.0875		
39	73.9	79.1		
40	73.9125	79.1125		
41	73.925	79.125		
42	73.9375	79.1375		
43	73.95	79.15		
44	73.9625	79.1625		
45	73.975	79.175		
46	73.9875	79.1875		
CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
47	74	79.2		
48	74.0125	79.2125		
49	74.025	79.225		
50	74.0375	79.2375		
51	74.05	79.25		
52	74.0625	79.2625		
53	74.075	79.275		
54	74.0875	79.2875		
55	74.1	79.3		
56	74.1125	79.3125		
57	74.125	79.325		
58	74.1375	79.3375		
59	74.15	79.35		
60	74.1625	79.3625		
61	74.175	79.375		
62	74.1875	79.3875		
63	74.2	79.4		
64	74.2125	79.4125		
65	74.225	79.425		
66	74.2375	79.4375		
67	74.25	79.45		
68	74.2625	79.4625		
69	74.275	79.475		
70	74.2875	79.4875		
71	74.3	79.5		
72	74.3125	79.5125		
73	74.325	79.525		
74	74.3375	79.5375		
75	74.35	79.55		
76	74.3625	79.5625		
77	74.375	79.575		
78	74.3875	79.5875		
79	74.4	79.6		
80	74.4125	79.6125		
81	74.425	79.625		
82	74.4375	79.6375		
83	74.45	79.65		
84	74.4625	79.6625		
85	74.475	79.675		
86	74.4875	79.6875		
87	74.5	79.7		
88	74.5125	79.7125		
89	74.525	79.725		
90	74.5375	79.7375		
91	74.55	79.75		
92	74.5625	79.7625		
93	74.575	79.775		
94	74.5875	79.7875		
95	74.6	79.8		
CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
96	74.6125	79.8125		
97	74.625	79.825		
98	74.6375	79.8375		
99	74.65	79.85		
100	74.6625	79.8625		
101	74.675	79.875		
102	74.6875	79.8875		
103	74.7	79.9		
104	74.7125	79.9125		
105	74.725	79.925		
106	74.7375	79.9375		
107	74.75	79.95		
108	74.7625	79.9625		
109	74.775	79.975		
110	74.7875	79.9875		

**(Mobile 5) MID-BAND DUPLEX FREQUENCIES****CHANNEL PLAN FOR 77.975 - 78.625/82.975 - 83.625MHz 2003 (12.5 kHz)**

CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
1	77.975	82.975		
2	77.9875	82.9875		
3	78	83		
4	78.0125	83.0125		
5	78.025	83.025		
6	78.0375	83.0375		
7	78.05	83.05		
8	78.0625	83.0625		
9	78.075	83.075		
10	78.0875	83.0875		
11	78.1	83.1		
12	78.1125	83.1125		
13	78.125	83.125		
14	78.1375	83.1375		
15	78.15	83.15		
16	78.1625	83.1625		
17	78.175	83.175		
18	78.1875	83.1875		
19	78.2	83.2		
20	78.2125	83.2125		
21	78.225	83.225		
22	78.2375	83.2375		
23	78.25	83.25		
24	78.2625	83.2625		
25	78.275	83.275		
26	78.2875	83.2875		
27	78.3	83.3		
28	78.3125	83.3125		
29	78.325	83.325		
30	78.3375	83.3375		
31	78.35	83.35		
32	78.3625	83.3625		
33	78.375	83.375		
34	78.3875	83.3875		
35	78.4	83.4		
36	78.4125	83.4125		
37	78.425	83.425		
38	78.4375	83.4375		
39	78.45	83.45		
40	78.4625	83.4625		
41	78.475	83.475		
42	78.4875	83.4875		
43	78.5	83.5		
44	78.5125	83.5125		
45	78.525	83.525		
46	78.5375	83.5375		
CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
47	78.55	83.55		
48	78.5625	83.5625		
49	78.575	83.575		
50	78.5875	83.5875		
51	78.6	83.6		
52	78.6125	83.6125		

**MID-BAND SIMPLEX FREQUENCIES****CHANNEL PLAN FOR 80.5 - 81MHz 2003 (12.5kHz)**

<u>CHANNEL No.</u>	<u>BTX</u>		<u>REMARKS</u>	<u>S/GRADE</u>
1	80.5			
2	80.5125			
3	80.525			
4	80.5375			
5	80.55			
6	80.5625			
7	80.575			
8	80.5875			
9	80.6			
10	80.6125			
11	80.625			
12	80.6375			
13	80.65			
14	80.6625			
15	80.675			
16	80.6875			
17	80.7			
18	80.7125			
19	80.725			
20	80.7375			
21	80.75			
22	80.7625			
23	80.775			
24	80.7875			
25	80.8			
26	80.8125			
27	80.825			
28	80.8375			
29	80.85			
30	80.8625			
31	80.875			
32	80.8875			
33	80.9			
34	80.9125			
35	80.925			
36	80.9375			
37	80.95			
38	80.9625			
39	80.975			
40	80.9875			

**(Mobile 6) MID-BAND DUPLEX FREQUENCIES****CHANNEL PLAN FOR 80-80.5/87-87.5MHz 2003 (12.5 kHz)**

<u>CHANNEL No.</u>	<u>BTX</u>	<u>MTX</u>	<u>REMARKS</u>	<u>S/GRADE</u>
1	80	87		
2	80.0125	87.0125		
3	80.025	87.025		
4	80.0375	87.0375		
5	80.05	87.05		
6	80.0625	87.0625		
7	80.075	87.075		
8	80.0875	87.0875		
9	80.1	87.1		
10	80.1125	87.1125		
11	80.125	87.125		
12	80.1375	87.1375		
13	80.15	87.15		
14	80.1625	87.1625		
15	80.175	87.175		
16	80.1875	87.1875		
17	80.2	87.2		
18	80.2125	87.2125		
19	80.225	87.225		
20	80.2375	87.2375		
21	80.25	87.25		
22	80.2625	87.2625		
23	80.275	87.275		
24	80.2875	87.2875		
25	80.3	87.3		
26	80.3125	87.3125		
27	80.325	87.325		
28	80.3375	87.3375		
29	80.35	87.35		
30	80.3625	87.3625		
31	80.375	87.375		
32	80.3875	87.3875		
33	80.4	87.4		
34	80.4125	87.4125		
35	80.425	87.425		
36	80.4375	87.4375		
37	80.45	87.45		
38	80.4625	87.4625		
39	80.475	87.475		
40	80.4875	87.4875		

**(Mobile 8) MID-BAND DUPLEX FREQUENCIES**  
**CHANNEL PLAN FOR 81.625 - 82.975/85.025-86.375MHz 2004 (12.5kHz)**

CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
1	81.625	85.025		
2	81.6375	85.0375		
3	81.65	85.05		
4	81.6625	85.0625		
5	81.675	85.075		
6	81.6875	85.0875		
7	81.7	85.1		
8	81.7125	85.1125		
9	81.725	85.125		
10	81.7375	85.1375		
11	81.75	85.15		
12	81.7625	85.1625		
13	81.775	85.175		
14	81.7875	85.1875		
15	81.8	85.2		
16	81.8125	85.2125		
17	81.825	85.225		
18	81.8375	85.2375		
19	81.85	85.25		
20	81.8625	85.2625		
21	81.875	85.275		
22	81.8875	85.2875		
23	81.9	85.3		
24	81.9125	85.3125		
25	81.925	85.325		
26	81.9375	85.3375		
27	81.95	85.35		
28	81.9625	85.3625		
29	81.975	85.375		
30	81.9875	85.3875		
31	82	85.4		
32	82.0125	85.4125		
33	82.025	85.425		
34	82.0375	85.4375		
35	82.05	85.45		
36	82.0625	85.4625		
37	82.075	85.475		
38	82.0875	85.4875		
39	82.1	85.5		
40	82.1125	85.5125		
41	82.125	85.525		
42	82.1375	85.5375		
43	82.15	85.55		
44	82.1625	85.5625		

**CHANNEL PLAN FOR 81.625 - 82.975/85.025-86.375MHz 2004**

CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
45	82.175	85.575		
46	82.1875	85.5875		
47	82.2	85.6		
48	82.2125	85.6125		
49	82.225	85.625		
50	82.2375	85.6375		
51	82.25	85.65		
52	82.2625	85.6625		
53	82.275	85.675		
54	82.2875	85.6875		
55	82.3	85.7		
56	82.3125	85.7125		
57	82.325	85.725		
58	82.3375	85.7375		
59	82.35	85.75		
60	82.3625	85.7625		
61	82.375	85.775		
62	82.3875	85.7875		
63	82.4	85.8		
64	82.4125	85.8125		
65	82.425	85.825		
66	82.4375	85.8375		
67	82.45	85.85		
68	82.4625	85.8625		
69	82.475	85.875		
70	82.4875	85.8875		
71	82.5	85.9		
72	82.5125	85.9125		
73	82.525	85.925		
74	82.5375	85.9375		
75	82.55	85.95		
76	82.5625	85.9625		
77	82.575	85.975		
78	82.5875	85.9875		
79	82.6	86		
80	82.6125	86.0125		
81	82.625	86.025		
82	82.6375	86.0375		
83	82.65	86.05		
84	82.6625	86.0625		
85	82.675	86.075		
86	82.6875	86.0875		
87	82.7	86.1		
88	82.7125	86.1125		
89	82.725	86.125		
90	82.7375	86.1375		

**CHANNEL PLAN FOR 81.625 - 82.975/85.025-86.375MHz 2004**

CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
91	82.75	86.15		
92	82.7625	86.1625		
93	82.775	86.175		
94	82.7875	86.1875		
95	82.8	86.2		
96	82.8125	86.2125		
97	82.825	86.225		
98	82.8375	86.2375		
99	82.85	86.25		
100	82.8625	86.2625		
101	82.875	86.275		
102	82.8875	86.2875		
103	82.9	86.3		
104	82.9125	86.3125		
105	82.925	86.325		
106	82.9375	86.3375		
107	82.95	86.35		
108	82.9625	86.3625		

**(Mobile 7) MID-BAND DUPLEX FREQUENCIES****CHANNEL PLAN FOR 81 - 8.62/86.375-87MHz 2003 (12.5 kHz)**

CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
1	81	86.375		
2	81.0125	86.3875		
3	81.025	86.4		
4	81.0375	86.4125		
5	81.05	86.425		
6	81.0625	86.4375		
7	81.075	86.45		
8	81.0875	86.4625		
9	81.1	86.475		
10	81.1125	86.4875	Livestock & Wildlife protection NARC RSA	
11	81.125	86.5		
12	81.1375	86.5125		
13	81.15	86.525		
14	81.1625	86.5375		
15	81.175	86.55		
16	81.1875	86.5625	Livestock & Wildlife protection NARC RSA	
17	81.2	86.575		
18	81.2125	86.5875		
19	81.225	86.6		
20	81.2375	86.6125		
21	81.25	86.625		
22	81.2625	86.6375		
23	81.275	86.65		
24	81.2875	86.6625	Livestock & Wildlife protection NARC RSA	
25	81.3	86.675		
26	81.3125	86.6875	Livestock & Wildlife protection NARC RSA	
27	81.325	86.7		
28	81.3375	86.7125		
29	81.35	86.725		
30	81.3625	86.7375	Livestock & Wildlife protection NARC RSA	
31	81.375	86.75		
32	81.3875	86.7625		
33	81.4	86.775		
34	81.4125	86.7875		
35	81.425	86.8		
36	81.4375	86.8125		
37	81.45	86.825		
38	81.4625	86.8375		
39	81.475	86.85		
40	81.4875	86.8625		
41	81.5	86.875		
42	81.5125	86.8875		
43	81.525	86.9		
44	81.5375	86.9125		
45	81.55	86.925		
46	81.5625	86.9375		
47	81.575	86.95		
48	81.5875	86.9625		
49	81.6	86.975		
50	81.6125	86.9875		



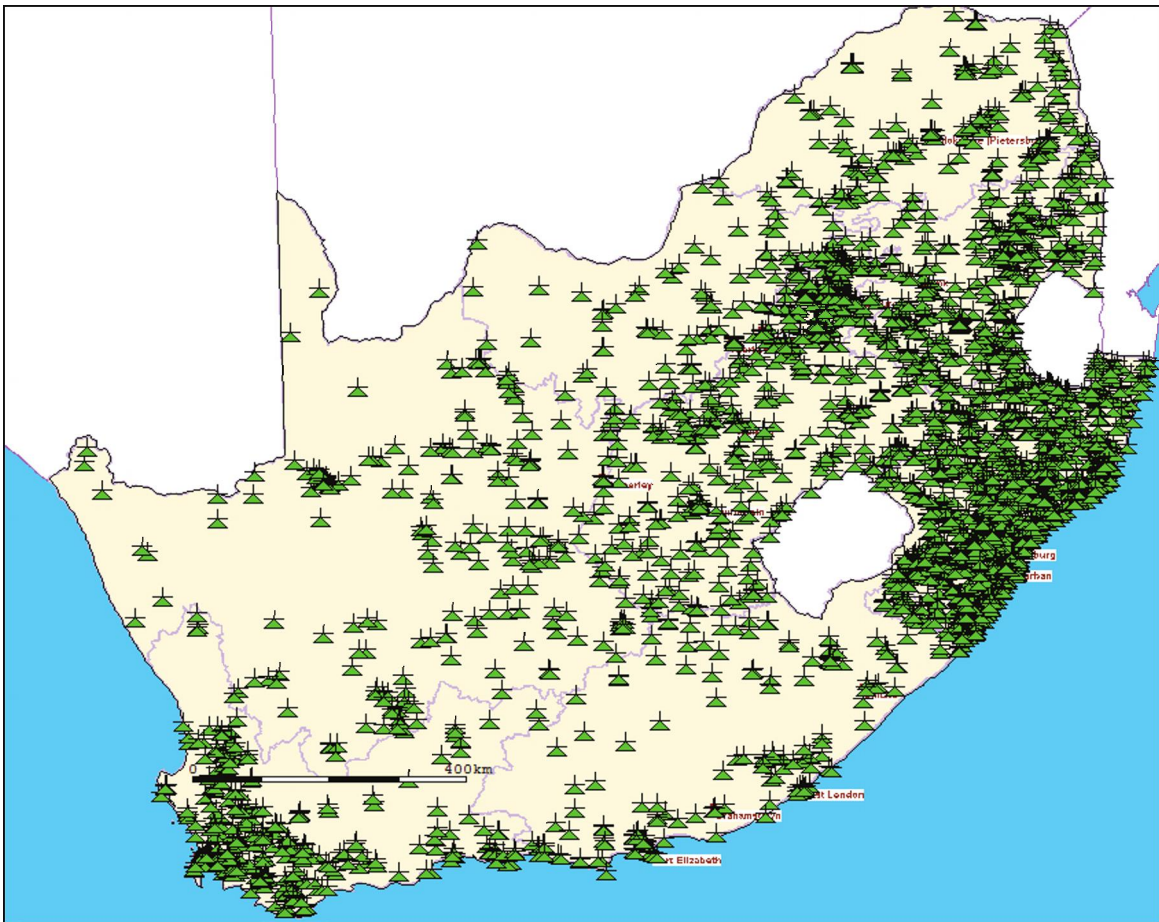
**MID-BAND SIMPLEX FREQUENCIES**  
**CHANNEL PLAN FOR 83.625 - 85.025MHz 2003 (12.5 kHz)**

CHANNEL No.	BTX	REMARKS	S/GRADE
1	83.625		
2	83.6375		
3	83.65		
4	83.6625		
5	83.675		
6	83.6875		
7	83.7		
8	83.7125		
9	83.725		
10	83.7375		
11	83.75		
12	83.7625		
13	83.775		
14	83.7875		
15	83.8		
16	83.8125		
17	83.825		
18	83.8375		
19	83.85		
20	83.8625		
21	83.875		
22	83.8875		
23	83.9		
24	83.9125		
25	83.925		
26	83.9375		
27	83.95		
28	83.9625		
29	83.975		
30	83.9875		
31	84		
32	84.0125		
33	84.025		
34	84.0375		
35	84.05		
36	84.0625		
37	84.075		
38	84.0875		
39	84.1		
40	84.1125		
41	84.125		
42	84.1375		
43	84.15		
44	84.1625		
45	84.175		
46	84.1875		
CHANNEL No.	BTX	REMARKS	S/GRADE
47	84.2		
48	84.2125		
49	84.225		
50	84.2375		
51	84.25		
52	84.2625		
53	84.275		
54	84.2875		
55	84.3		
56	84.3125		
57	84.325		
58	84.3375		
59	84.35		
60	84.3625		
61	84.375		
62	84.3875		
63	84.4		
64	84.4125		
65	84.425		
66	84.4375		
67	84.45		
68	84.4625		
69	84.475		
70	84.4875		
71	84.5		
72	84.5125		
73	84.525		
74	84.5375		
75	84.55		
76	84.5625		
77	84.575		
78	84.5875		
79	84.6		
80	84.6125		
81	84.625		
82	84.6375		
83	84.65		
84	84.6625		
85	84.675		
86	84.6875		
87	84.7		
88	84.7125		
89	84.725		
90	84.7375		
91	84.75		
92	84.7625		
93	84.775		
94	84.7875		
95	84.8		
96	84.8125		
CHANNEL No.	BTX	REMARKS	S/GRADE
97	84.825		
98	84.8375		
99	84.85		
100	84.8625		
101	84.875		
102	84.8875		
103	84.9		
104	84.9125		
105	84.925		
106	84.9375		
107	84.95		
108	84.9625		
109	84.975		
110	84.9875		
111	85		
112	85.0125		

### 1.1.2 Licensing information for the applicable frequency allocation

There are 11 777 Licenses issued in this band for both BTX and MTX including single frequency devices

### 1.1.3 Areas where licensed frequencies are operational.



## 1.2 Applicable Frequency Allocation and Band information 138 MHz to 143.6 MHz

Frequency Band under investigation 138 MHz to 143.6 MHz

FIXED

MOBILE

## Frequency Sub bands

### Pairings

Mobile 1 MTX 138 – 140.5 MHz paired with BTX 141.5 to 144 MHz

### Single Frequency Mobile Allocations

140.5 to 141 MHz

141 – 141.5 MHz

### 1.2.1 Channel Plan for the Frequency Allocation

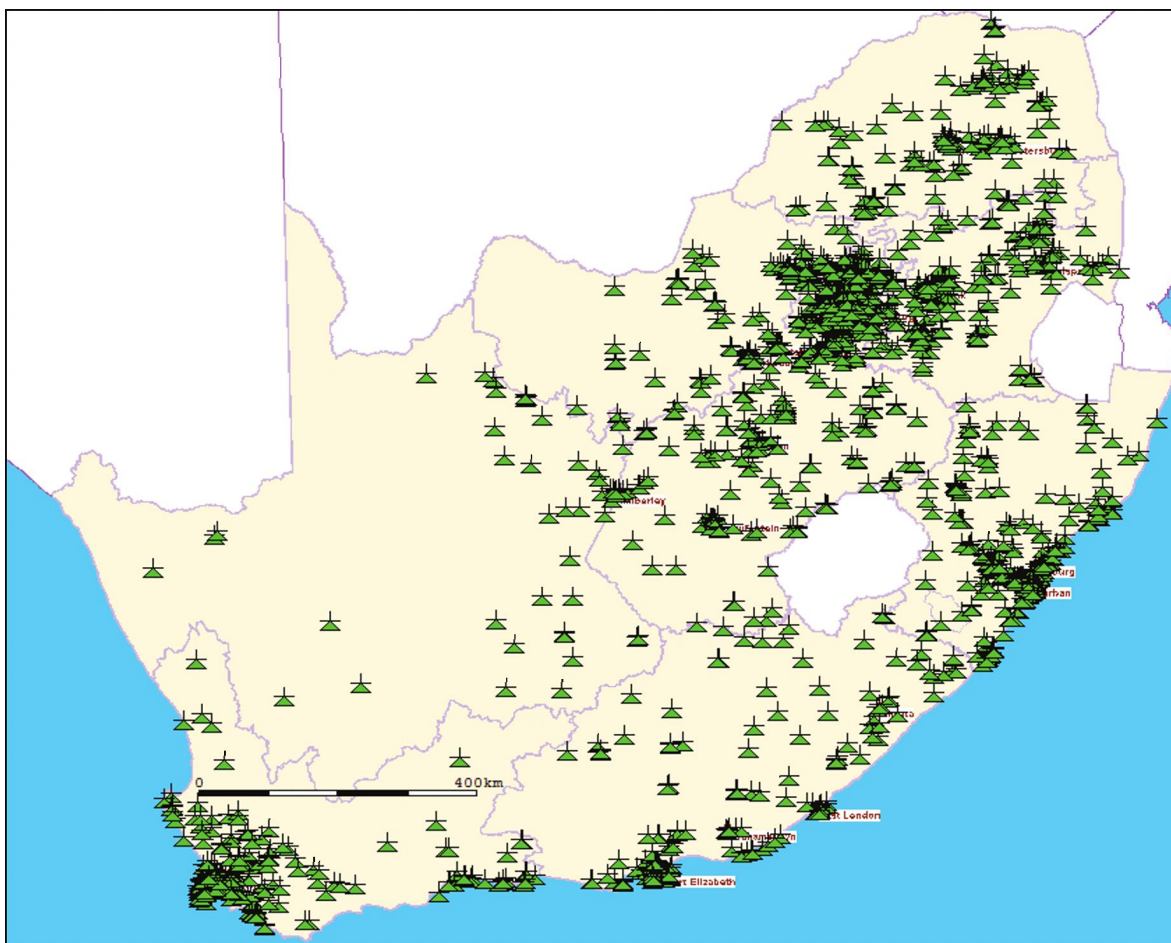
SINGLE FREQUENCY MOBILE			
CHANNEL PLAN FOR 141 - 141.5MHz 2002 (12.5kHz)			
CH. No.	SF	REMARKS	S/Gr.
1	141	NOT AVAILABLE	NON
2	141.0125	AVAILABLE	A
3	141.025	NOT AVAILABLE	NON
4	141.0375	AVAILABLE	C
5	141.05	NOT AVAILABLE	NON
6	141.0625	AVAILABLE	A
7	141.075	NOT AVAILABLE	NON
8	141.0875	AVAILABLE	C
9	141.1	NOT AVAILABLE	NON
10	141.1125	AVAILABLE	A
11	141.125	NOT AVAILABLE	NON
12	141.1375	AVAILABLE	C
13	141.15	NOT AVAILABLE	NON
14	141.1625	AVAILABLE	A
15	141.175	NOT AVAILABLE	NON
16	141.1875	AVAILABLE	C
17	141.2	NOT AVAILABLE	NON
18	141.2125	AVAILABLE	A
19	141.225	NOT AVAILABLE	NON
20	141.2375	AVAILABLE	C
21	141.25	NOT AVAILABLE	NON
22	141.2625	AVAILABLE	A
23	141.275	NOT AVAILABLE	NON
24	141.2875	AVAILABLE	C
25	141.3	NOT AVAILABLE	NON
26	141.3125	AVAILABLE	A
27	141.325	NOT AVAILABLE	NON
28	141.3375	AVAILABLE	C
29	141.35	NOT AVAILABLE	NON
30	141.3625	AVAILABLE	A
31	141.375	NOT AVAILABLE	NON
32	141.3875	AVAILABLE	C
33	141.4	NOT AVAILABLE	NON
34	141.4125	AVAILABLE	A
35	141.425	NOT AVAILABLE	NON
36	141.4375	AVAILABLE	C
37	141.45	NOT AVAILABLE	NON
38	141.4625	AVAILABLE	ROVING
39	141.475	NOT AVAILABLE	NON
40	141.4875	AVAILABLE	A/C

Channel plan for SF 140.5 to 141 is similar to this channel plan.

### 1.2.2 Licensing information for the applicable frequency allocation

There are 2974 licenses issued in the SF band between 140.5 and 141.5 MHz

**1.2.3 Areas where licensed frequencies are operational.**



### **1.3 Applicable Frequency Allocation and Band information 150.05 MHz to 153.05 MHz**

Frequency Band under investigation 150.05 MHz to 153.05 MHz

FIXED

MOBILE except aeronautical mobile

RADIO ASTRONOMY

Frequency Sub bands

FIXED

Single Frequency Alarms Allocations

152.05 to 152.55 MHz

MOBILE except aeronautical mobile

Alarms, Single Frequency Mobile and Load Shedding Allocations

148.950 – 151 MHz

PMR and PAMR

Paging

Government Services

Wildlife Telemetry Tracking

148-152 MHz

RADIO ASTRONOMY

### 1.3.1 Channel Plan for the Frequency Allocation

VHF-HIGH BAND SIMPLEX FREQUENCIES			
CHANNEL PLAN FOR 148.95 - 151MHz 2004 (12.5kHz)			
CH. No.	SF	REMARKS	S/Gr.
1	148.95		
2	148.9625		
3	148.975		
4	148.9875		
5	149		
6	149.0125		
7	149.025		
8	149.0375		
9	149.05		
10	149.0625		
11	149.075		
12	149.0875		
13	149.1		
14	149.1125		
15	149.125		
16	149.1375		
17	149.15		
18	149.1625		
19	149.175		
20	149.1875		
21	149.2		
22	149.2125		
23	149.225		
24	149.2375		
25	149.25		
26	149.2625		
27	149.275		
28	149.2875		
29	149.3		
30	149.3125		
31	149.325		
32	149.3375		
33	149.35		
34	149.3625		
35	149.375		
36	149.3875		
37	149.4		
38	149.4125		
39	149.425		
40	149.4375		
41	149.45		
42	149.4625		
43	149.475		
44	149.4875		
45	149.5		
46	149.5125		
CHANNEL PLAN FOR 148.95 - 151MHz 2004 (12.5kHz)			
CH. No.	SF	REMARKS	S/Gr.
47	149.525		
48	149.5375		
49	149.55		
50	149.5625		
51	149.575		
52	149.5875		
53	149.6		
54	149.6125		
55	149.625		
56	149.6375		
57	149.65		
58	149.6625		
59	149.675		
60	149.6875		
61	149.7		
62	149.7125		
63	149.725		
64	149.7375		
65	149.75		
66	149.7625		
67	149.775		
68	149.7875		
69	149.8		
70	149.8125		
71	149.825		
72	149.8375		
73	149.85		
74	149.8625		
75	149.875		
76	149.8875		
77	149.9		
78	149.9125		
79	149.925		
80	149.9375		
81	149.95		
82	149.9625		
83	149.975		
84	149.9875		
85	150		
86	150.0125		
87	150.025		
88	150.0375		
89	150.05		
90	150.0625		
91	150.075		
92	150.0875		
93	150.1		

CHANNEL PLAN FOR 148.95 - 151MHz 2004			
CH. No.	SF	REMARKS	S/Gr.
94	150.1125		
95	150.125		
96	150.1375		
97	150.15		
98	150.1625		
99	150.175		
100	150.1875		
101	150.2		
102	150.2125		
103	150.225		
104	150.2375		
105	150.25		
106	150.2625		
107	150.275		
108	150.2875		
109	150.3		
110	150.3125		
111	150.325		
112	150.3375		
113	150.35		
114	150.3625		
115	150.375		
116	150.3875		
117	150.4		
118	150.4125		
119	150.425		
120	150.4375		
121	150.45		
122	150.4625		
123	150.475		
124	150.4875		
125	150.5		
126	150.5125		
127	150.525		
128	150.5375		
129	150.55		
130	150.5625		
131	150.575		
132	150.5875		
133	150.6		
134	150.6125		
135	150.625		
136	150.6375		
137	150.65		
138	150.6625		
139	150.675		
140	150.6875		
141	150.7		

CHANNEL PLAN FOR 148.95 - 151MHz 2004			
CH. No.	SF	REMARKS	S/Gr.
142	150.7125		
143	150.725		
144	150.7375		
145	150.75		
146	150.7625		
147	150.775		
148	150.7875		
149	150.8		
150	150.8125		
151	150.825		
152	150.8375		
153	150.85		
154	150.8625		
155	150.875		
156	150.8875		
157	150.9		
158	150.9125		
159	150.925		
160	150.9375		
161	150.95		
162	150.9625		
163	150.975		
164	150.9875		

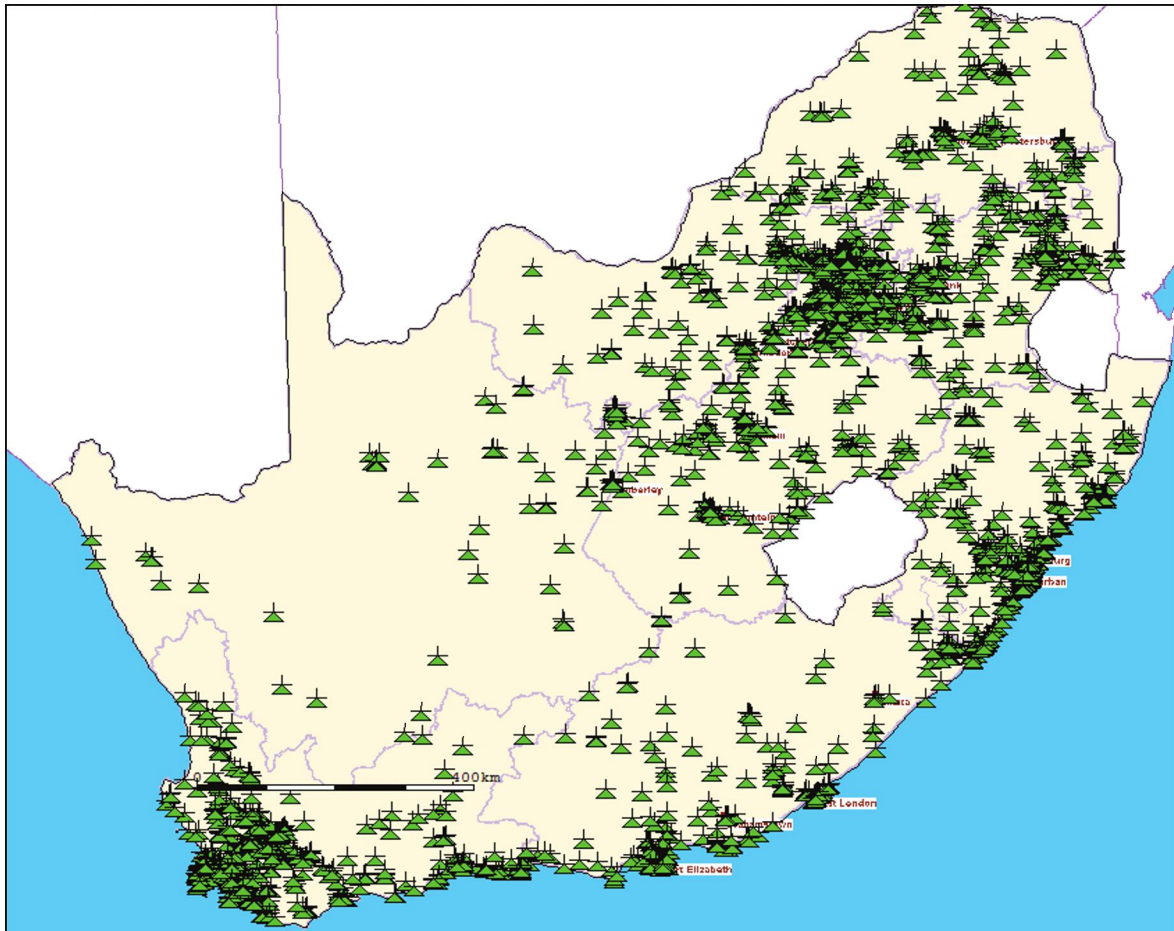


<b>VHF-HIGH BAND SIMPLEX FREQUENCIES</b>			
<b>CHANNEL PLAN FOR 151 - 152.05MHz 2007</b>			
CH. No.	SF	REMARKS	S/Gr.
1	151		
2	151.0125		
3	151.025		
4	151.0375		
5	151.05		
6	151.0625		
7	151.075		
8	151.0875		
9	151.1		
10	151.1125		
11	151.125		
12	151.1375		
13	151.15		
14	151.1625		
15	151.175		
16	151.1875		
17	151.2		
18	151.2125		
19	151.225		
20	151.2375		
21	151.25		
22	151.2625		
23	151.275		
24	151.2875		
25	151.3		
26	151.3125		
27	151.325		
28	151.3375		
29	151.35		
30	151.3625		
31	151.375		
32	151.3875		
33	151.4		
34	151.4125		
35	151.425		
36	151.4375		
37	151.45		
38	151.4625		
39	151.475		
40	151.4875		
41	151.5		
42	151.5125		
43	151.525		
44	151.5375		
45	151.55		
46	151.5625		
<b>CHANNEL PLAN FOR 151 - 152.05MHz 2007</b>			
CH. No.	SF	REMARKS	S/Gr.
47	151.575		
48	151.5875		
49	151.6		
50	151.6125		
51	151.625		
52	151.6375		
53	151.65		
54	151.6625		
55	151.675		
56	151.6875		
57	151.7		
58	151.7125		
59	151.725		
60	151.7375		
61	151.75		
62	151.7625		
63	151.775		
64	151.7875		
65	151.8		
66	151.8125		
67	151.825		
68	151.8375		
69	151.85		
70	151.8625		
71	151.875		
72	151.8875		
73	151.9		
74	151.9125		
75	151.925		
76	151.9375		
77	151.95		
78	151.9625		
79	151.975		
80	151.9875		
81	152		
82	152.0125		
83	152.025		
84	152.0375		

### 1.3.2 Licensing information for the applicable frequency allocation

There are 5 516 Licenses issued in this band for different single frequency devices

### 1.3.3 Areas where licensed frequencies are operational.



#### **1.4 Applicable Frequency Allocation and Band information 156.4785 to 156.5625 MHz**

156.4785 MHz to 156.5625 MHz

MARITIME MOBILE (distress and calling DCS)

FIXED

LAND MOBILE

Maritime mobile distress, safety and calling frequency 156.525 MHz for maritime mobile VHF radio telephone service using DSC

The bands 156.4875 to 156.5125 MHz and 156.5375 to 156.5625 MHz may also be used for land mobile services while protecting the maritime mobile service. Single frequency mobile (156.375 to 156.7625)

### 1.4.1 Channel Plan for the Frequency Allocation

#### (Mobile 3) HIGH-BAND DUPLEX FREQUENCIES

#### CHANNEL PLAN FOR 156 - 156.875\_ 160.6 - 160.975MHz 2007 (12.5kHz)

CHANNEL No.	BTX	MTX	REMARKS	S/GRADE
1	156	160.6	MARITIME SEE ITU AP 18-3	
2	156.025	160.625	MARITIME SEE ITU AP 18-3	
3	156.05	160.65	MARITIME SEE ITU AP 18-3	
4	156.075	160.675	MARITIME SEE ITU AP 18-3	
5	156.1	160.7	MARITIME SEE ITU AP 18-3	
6	156.125	160.725	MARITIME SEE ITU AP 18-3	
7	156.15	160.75	MARITIME SEE ITU AP 18-3	
8	156.175	160.775	MARITIME SEE ITU AP 18-3	
9	156.2	160.8	MARITIME SEE ITU AP 18-3	
10	156.225	160.825	MARITIME SEE ITU AP 18-3	
11	156.25	160.85	MARITIME SEE ITU AP 18-3	
12	156.275	160.875	MARITIME SEE ITU AP 18-3	
13	156.3	160.9	MARITIME SEE ITU AP 18-3	
14	156.325	160.925	MARITIME SEE ITU AP 18-3	
15	156.35	160.95	MARITIME SEE ITU AP 18-3	
16	156.375		MARITIME SEE ITU AP 18-3	
17	156.4		MARITIME SEE ITU AP 18-3	
18	156.425		MARITIME SEE ITU AP 18-3	
19	156.45		MARITIME SEE ITU AP 18-3	
20	156.475		MARITIME SEE ITU AP 18-3	
21	156.5		MARITIME SEE ITU AP 18-3	
22	156.525		MARITIME SEE ITU AP 18-3	
23	156.55		MARITIME SEE ITU AP 18-3	
24	156.575		MARITIME SEE ITU AP 18-3	
25	156.6		MARITIME SEE ITU AP 18-3	
26	156.625		MARITIME SEE ITU AP 18-3	
27	156.65		MARITIME SEE ITU AP 18-3	
28	156.675		MARITIME SEE ITU AP 18-3	
29	156.7		MARITIME SEE ITU AP 18-3	
30	156.725		MARITIME SEE ITU AP 18-3	
31	156.75		MARITIME SEE ITU AP 18-3	
32	156.7625		MARITIME SEE ITU AP 18-3	
33	156.7875		MARITIME SEE ITU AP 18-3	
34	156.8		MARITIME SEE ITU AP 18-3	
35	156.825		MARITIME SEE ITU AP 18-3	
36	156.8375		MARITIME SEE ITU AP 18-3	
37	156.8625		MARITIME SEE ITU AP 18-3	

### 1.4.2 Licensing information for the applicable frequency allocation

There are 21 Licenses issued in this band for both BTX and MTX as well as single frequency devices

**1.4.3 Areas where licensed frequencies are operational.**



## **1.5 Applicable Frequency Allocation and Band information 380 MHz to 400 MHz**

Frequency Band under investigation 380 MHz to 400 MHz

### **388 to 390 MHz**

MOBILE

Mobile-Satellite (space to Earth)

PMR and/or PAMR

Frequency Sub bands

Pairings

Mobile 1 MTX 380 – 387 MHz paired with BTX 390 to 397 MHz (Digital Trunking)

Mobile 2 MTX 387 – 390 MHz paired with BTX 397 to 399.9 MHz (PMR and/or PAMR)

### **390 to 399.9 MHz**

MOBILE

Emergency: 390 to 397 MHz paired with 380 to 387 (PPDR)

Government Services – PMR and/or PAMR: 397 to 399.9 MHz paired with 387 to 390 MHz

### 1.5.1 Channel Plan for the Frequency Allocation

**TETRA TRUNKING (EMERGENCY) WITH 25kHz.**

**CH PLAN FOR 390-399.9875 380-389.9875MHz 2006**

CH. No.	BTX	MTX	REMARKS
0	390	380	
1	390.025	380.025	SAPS DMO 1
2	390.05	380.05	
3	390.075	380.075	SAPS DMO 1
4	390.1	380.1	
5	390.125	380.125	SAPS DMO 1
6	390.15	380.15	
7	390.175	380.175	SAPS DMO 1
8	390.2	380.2	
9	390.225	380.225	SAPS DMO 1
10	390.25	380.25	
11	390.275	380.275	SAPS DMO 1
12	390.3	380.3	
13	390.325	380.325	SAPS DMO 1
14	390.35	380.35	
15	390.375	380.375	SAPS DMO 1
16	390.4	380.4	
17	390.425	380.425	SAPS DMO 1
18	390.45	380.45	
19	390.475	380.475	SAPS DMO 1
20	390.5	380.5	TETRA SAPS
21	390.525	380.525	TETRA SAPS
22	390.55	380.55	TETRA SAPS
23	390.575	380.575	TETRA SAPS
24	390.6	380.6	TETRA SAPS
25	390.625	380.625	TETRA SAPS
26	390.65	380.65	TETRA SAPS
27	390.675	380.675	TETRA SAPS
28	390.7	380.7	TETRA SAPS
29	390.725	380.725	TETRA SAPS
30	390.75	380.75	TETRA SAPS
31	390.775	380.775	TETRA SAPS
32	390.8	380.8	TETRA SAPS
33	390.825	380.825	TETRA SAPS
34	390.85	380.85	TETRA SAPS
35	390.875	380.875	TETRA SAPS
36	390.9	380.9	TETRA SAPS
37	390.925	380.925	TETRA SAPS
38	390.95	380.95	TETRA SAPS
39	390.975	380.975	TETRA SAPS
40	391	381	TETRA SAPS
41	391.025	381.025	TETRA SAPS
42	391.05	381.05	TETRA SAPS
43	391.075	381.075	TETRA SAPS
CH. No.	BTX	MTX	REMARKS

**CH PLAN FOR 390-399.9875 380-389.9875MHz 2006**

CH. No.	BTX	MTX	REMARKS
45	391.1	381.1	TETRA SAPS
46	391.125	381.125	TETRA SAPS
47	391.15	381.15	TETRA SAPS
48	391.175	381.175	TETRA SAPS
49	391.2	381.2	TETRA SAPS
50	391.225	381.225	TETRA SAPS
51	391.25	381.25	TETRA SAPS
52	391.275	381.275	TETRA SAPS
53	391.3	381.3	TETRA SAPS
54	391.325	381.325	TETRA SAPS
55	391.35	381.35	TETRA SAPS
56	391.375	381.375	TETRA SAPS
57	391.4	381.4	TETRA SAPS
58	391.425	381.425	TETRA SAPS
59	391.45	381.45	TETRA SAPS
60	391.475	381.475	TETRA SAPS
61	391.5	381.5	TETRA SAPS
62	391.525	381.525	TETRA SAPS
63	391.55	381.55	TETRA SAPS
64	391.575	381.575	TETRA SAPS
65	391.6	381.6	TETRA SAPS
66	391.625	381.625	TETRA SAPS
67	391.65	381.65	TETRA SAPS
68	391.675	381.675	TETRA SAPS
69	391.7	381.7	TETRA SAPS
70	391.725	381.725	TETRA SAPS
71	391.75	381.75	TETRA SAPS
72	391.775	381.775	TETRA SAPS
73	391.8	381.8	TETRA SAPS
74	391.825	381.825	TETRA SAPS
75	391.85	381.85	TETRA SAPS
76	391.875	381.875	TETRA SAPS
77	391.9	381.9	TETRA SAPS
78	391.925	381.925	TETRA SAPS
79	391.95	381.95	TETRA SAPS
80	391.975	381.975	TETRA SAPS
81	392	382	TETRA SAPS
82	392.025	382.025	TETRA SAPS
83	392.05	382.05	TETRA SAPS
84	392.075	382.075	TETRA SAPS
85	392.1	382.1	TETRA SAPS
86	392.125	382.125	TETRA SAPS
87	392.15	382.15	TETRA SAPS
88	392.175	382.175	TETRA SAPS
89	392.2	382.2	TETRA SAPS
CH. No.	BTX	MTX	REMARKS

CH PLAN FOR 390-399.9875 380-389.9875MHz 2006			
CH. No.	BTX	MTX	REMARKS
90	392.225	382.225	TETRA SAPS
91	392.25	382.25	TETRA SAPS
92	392.275	382.275	TETRA SAPS
93	392.3	382.3	TETRA SAPS
94	392.325	382.325	TETRA SAPS
95	392.35	382.35	TETRA SAPS
96	392.375	382.375	TETRA SAPS
97	392.4	382.4	TETRA SAPS
98	392.425	382.425	TETRA SAPS
99	392.45	382.45	TETRA SAPS
100	392.475	382.475	TETRA SAPS
101	392.5	382.5	TETRA SAPS
102	392.525	382.525	TETRA SAPS
103	392.55	382.55	TETRA SAPS
104	392.575	382.575	TETRA SAPS
105	392.6	382.6	TETRA SAPS
106	392.625	382.625	TETRA SAPS
107	392.65	382.65	TETRA SAPS
108	392.675	382.675	TETRA SAPS
109	392.7	382.7	TETRA SAPS
110	392.725	382.725	TETRA SAPS
111	392.75	382.75	TETRA SAPS
112	392.775	382.775	TETRA SAPS
113	392.8	382.8	TETRA SAPS
114	392.825	382.825	TETRA SAPS
115	392.85	382.85	TETRA SAPS
116	392.875	382.875	TETRA SAPS
117	392.9	382.9	TETRA SAPS
118	392.925	382.925	TETRA SAPS
119	392.95	382.95	TETRA SAPS
120	392.975	382.975	TETRA SAPS
121	393	383	TETRA SAPS
122	393.025	383.025	TETRA SAPS
123	393.05	383.05	TETRA SAPS
124	393.075	383.075	TETRA SAPS
125	393.1	383.1	TETRA SAPS
126	393.125	383.125	TETRA SAPS
127	393.15	383.15	TETRA SAPS
128	393.175	383.175	TETRA SAPS
129	393.2	383.2	TETRA SAPS
130	393.225	383.225	TETRA SAPS
131	393.25	383.25	TETRA SAPS
132	393.275	383.275	TETRA SAPS
133	393.3	383.3	TETRA SAPS
134	393.325	383.325	TETRA SAPS
135	393.35	383.35	TETRA SAPS
CH. No.	BTX	MTX	REMARKS
CH PLAN FOR 390-399.9875 380-389.9875MHz 2006			
CH. No.	BTX	MTX	REMARKS
136	393.375	383.375	TETRA SAPS
137	393.4	383.4	TETRA SAPS
138	393.425	383.425	TETRA SAPS
139	393.45	383.45	TETRA SAPS
140	393.475	383.475	TETRA SAPS
141	393.5	383.5	TETRA SAPS
142	393.525	383.525	TETRA SAPS
143	393.55	383.55	TETRA SAPS
144	393.575	383.575	TETRA SAPS
145	393.6	383.6	TETRA SAPS
146	393.625	383.625	TETRA SAPS
147	393.65	383.65	TETRA SAPS
148	393.675	383.675	TETRA SAPS
149	393.7	383.7	TETRA SAPS
150	393.725	383.725	TETRA SAPS
151	393.75	383.75	TETRA SAPS
152	393.775	383.775	TETRA SAPS
153	393.8	383.8	TETRA SAPS
154	393.825	383.825	TETRA SAPS
155	393.85	383.85	TETRA SAPS
156	393.875	383.875	TETRA SAPS
157	393.9	383.9	TETRA SAPS
158	393.925	383.925	TETRA SAPS
159	393.95	383.95	TETRA SAPS
160	393.975	383.975	TETRA SAPS
161	394	384	TETRA SAPS
162	394.025	384.025	TETRA SAPS
163	394.05	384.05	TETRA SAPS
164	394.075	384.075	TETRA SAPS
165	394.1	384.1	TETRA SAPS
166	394.125	384.125	TETRA SAPS
167	394.15	384.15	TETRA SAPS
168	394.175	384.175	TETRA SAPS
169	394.2	384.2	TETRA SAPS
170	394.225	384.225	TETRA SAPS
171	394.25	384.25	TETRA SAPS
172	394.275	384.275	TETRA SAPS
173	394.3	384.3	TETRA SAPS
174	394.325	384.325	TETRA SAPS
175	394.35	384.35	TETRA SAPS
176	394.375	384.375	TETRA SAPS
177	394.4	384.4	TETRA SAPS
178	394.425	384.425	TETRA SAPS
179	394.45	384.45	TETRA SAPS
180	394.475	384.475	TETRA SAPS
181	394.5	384.5	TETRA SAPS
CH. No.	BTX	MTX	REMARKS



CH PLAN FOR 390-399.9875 380-389.9875MHz 2006			
CH. No.	BTX	MTX	REMARKS
182	394.525	384.525	TETRA SAPS
183	394.55	384.55	TETRA SAPS
184	394.575	384.575	TETRA SAPS
185	394.6	384.6	TETRA SAPS
186	394.625	384.625	TETRA SAPS
187	394.65	384.65	TETRA SAPS
188	394.675	384.675	TETRA SAPS
189	394.7	384.7	TETRA SAPS
190	394.725	384.725	TETRA SAPS
191	394.75	384.75	TETRA SAPS
192	394.775	384.775	TETRA SAPS
193	394.8	384.8	TETRA SAPS
194	394.825	384.825	TETRA SAPS
195	394.85	384.85	TETRA SAPS
196	394.875	384.875	TETRA SAPS
197	394.9	384.9	TETRA SAPS
198	394.925	384.925	TETRA SAPS
199	394.95	384.95	TETRA SAPS
200	394.975	384.975	TETRA SAPS
201	395	385	TETRA SAPS
202	395.025	385.025	TETRA SAPS
203	395.05	385.05	TETRA SAPS
204	395.075	385.075	TETRA SAPS
205	395.1	385.1	TETRA SAPS
206	395.125	385.125	TETRA SAPS
207	395.15	385.15	TETRA SAPS
208	395.175	385.175	TETRA SAPS
209	395.2	385.2	TETRA SAPS
210	395.225	385.225	TETRA SAPS
211	395.25	385.25	TETRA SAPS
212	395.275	385.275	TETRA SAPS
213	395.3	385.3	TETRA SAPS
214	395.325	385.325	TETRA SAPS
215	395.35	385.35	TETRA SAPS
216	395.375	385.375	TETRA SAPS
217	395.4	385.4	TETRA SAPS
218	395.425	385.425	TETRA SAPS
219	395.45	385.45	TETRA SAPS
220	395.475	385.475	TETRA SAPS
221	395.5	385.5	TETRA SAPS
222	395.525	385.525	TETRA SAPS
223	395.55	385.55	TETRA SAPS
224	395.575	385.575	TETRA SAPS
225	395.6	385.6	TETRA SAPS
226	395.625	385.625	TETRA SAPS
227	395.65	385.65	TETRA SAPS
CH. No.	BTX	MTX	REMARKS
CH PLAN FOR 390-399.9875 380-389.9875MHz 2006			
CH. No.	BTX	MTX	REMARKS
228	395.675	385.675	TETRA SAPS
229	395.7	385.7	TETRA SAPS
230	395.725	385.725	TETRA SAPS
231	395.75	385.75	TETRA SAPS
232	395.775	385.775	TETRA SAPS
233	395.8	385.8	TETRA SAPS
234	395.825	385.825	TETRA SAPS
235	395.85	385.85	TETRA SAPS
236	395.875	385.875	TETRA SAPS
237	395.9	385.9	TETRA SAPS
238	395.925	385.925	TETRA SAPS
239	395.95	385.95	TETRA SAPS
240	395.975	385.975	TETRA SAPS
241	396	386	TETRA SAPS
242	396.025	386.025	TETRA SAPS
243	396.05	386.05	TETRA SAPS
244	396.075	386.075	TETRA SAPS
245	396.1	386.1	TETRA SAPS
246	396.125	386.125	TETRA SAPS
247	396.15	386.15	TETRA SAPS
248	396.175	386.175	TETRA SAPS
249	396.2	386.2	TETRA SAPS
250	396.225	386.225	TETRA SAPS
251	396.25	386.25	TETRA SAPS
252	396.275	386.275	TETRA SAPS
253	396.3	386.3	TETRA SAPS
254	396.325	386.325	TETRA SAPS
255	396.35	386.35	TETRA SAPS
256	396.375	386.375	TETRA SAPS
257	396.4	386.4	TETRA SAPS
258	396.425	386.425	TETRA SAPS
259	396.45	386.45	TETRA SAPS
260	396.475	386.475	TETRA SAPS
261	396.5	386.5	TETRA SAPS
262	396.525	386.525	TETRA SAPS
263	396.55	386.55	TETRA SAPS
264	396.575	386.575	TETRA SAPS
265	396.6	386.6	TETRA SAPS
266	396.625	386.625	TETRA SAPS
267	396.65	386.65	TETRA SAPS
268	396.675	386.675	TETRA SAPS
269	396.7	386.7	TETRA SAPS
270	396.725	386.725	TETRA SAPS
271	396.75	386.75	TETRA SAPS
272	396.775	386.775	TETRA SAPS
273	396.8	386.8	TETRA SAPS
CH. No.	BTX	MTX	REMARKS

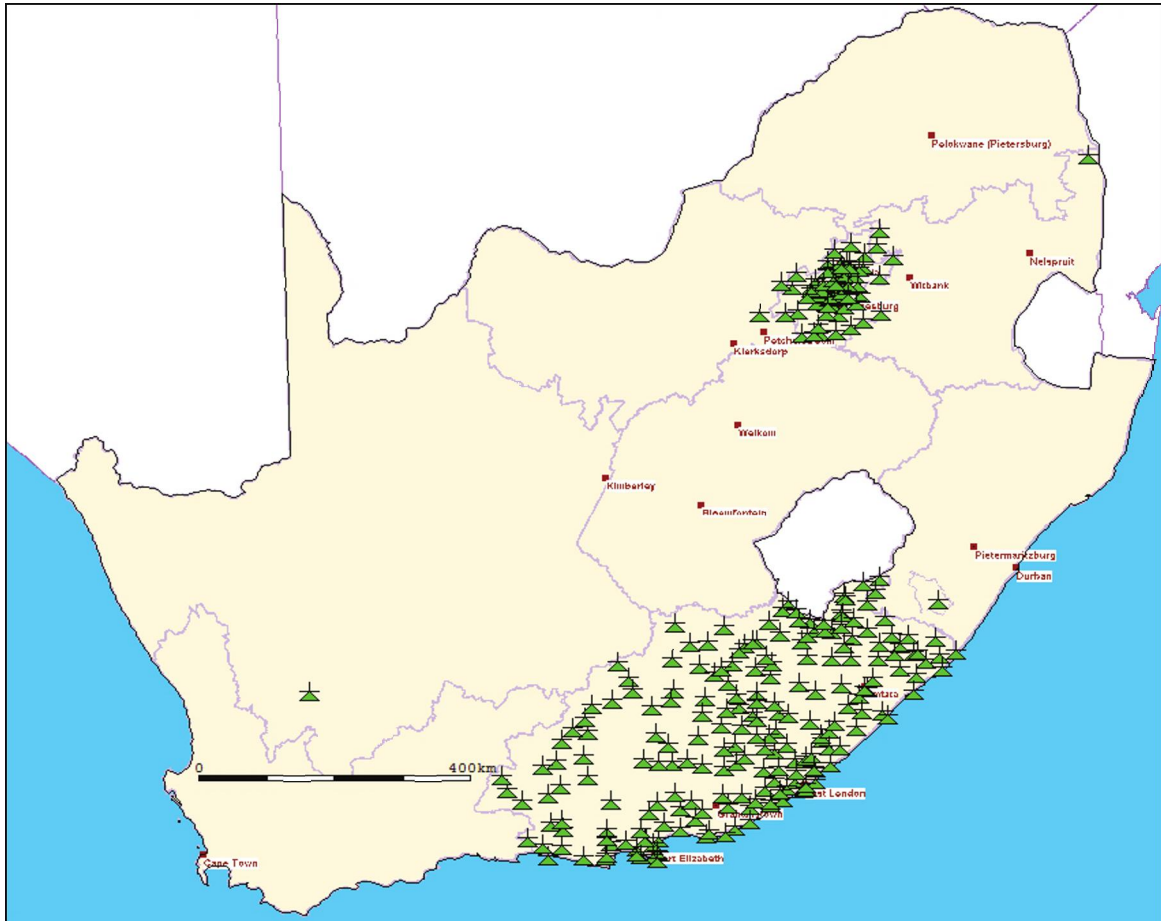
CH PLAN FOR 390-399.9875 380-389.9875MHz 2006			
CH. No.	BTX	MTX	REMARKS
274	396.825	386.825	TETRA SAPS
275	396.85	386.85	TETRA SAPS
276	396.875	386.875	TETRA SAPS
277	396.9	386.9	TETRA SAPS
278	396.925	386.925	TETRA SAPS
279	396.95	386.95	TETRA SAPS
280	396.975	386.975	TETRA SAPS
281	397	387	DOD FORMER SANDF
282	397.025	387.025	DOD FORMER SANDF
283	397.05	387.05	DOD FORMER SANDF
284	397.075	387.075	DOD FORMER SANDF
285	397.1	387.1	DOD FORMER SANDF
286	397.125	387.125	DOD FORMER SANDF
287	397.15	387.15	DOD FORMER SANDF
288	397.175	387.175	DOD FORMER SANDF
289	397.2	387.2	DOD FORMER SANDF
290	397.225	387.225	DOD FORMER SANDF
291	397.25	387.25	DOD FORMER SANDF
292	397.275	387.275	DOD FORMER SANDF
293	397.3	387.3	DOD FORMER SANDF
294	397.325	387.325	DOD FORMER SANDF
295	397.35	387.35	DOD FORMER SANDF
296	397.375	387.375	DOD FORMER SANDF
297	397.4	387.4	DOD FORMER SANDF
298	397.425	387.425	DOD FORMER SANDF
299	397.45	387.45	DOD FORMER SANDF
300	397.475	387.475	DOD FORMER SANDF
301	397.5	387.5	DOD FORMER SANDF
302	397.525	387.525	DOD FORMER SANDF
303	397.55	387.55	DOD FORMER SANDF
304	397.575	387.575	DOD FORMER SANDF
305	397.6	387.6	DOD FORMER SANDF
306	397.625	387.625	DOD FORMER SANDF
307	397.65	387.65	DOD FORMER SANDF
308	397.675	387.675	DOD FORMER SANDF
309	397.7	387.7	DOD FORMER SANDF
310	397.725	387.725	DOD FORMER SANDF
311	397.75	387.75	DOD FORMER SANDF
312	397.775	387.775	DOD FORMER SANDF
313	397.8	387.8	DOD FORMER SANDF
314	397.825	387.825	DOD FORMER SANDF
315	397.85	387.85	DOD FORMER SANDF
316	397.875	387.875	DOD FORMER SANDF
317	397.9	387.9	DOD FORMER SANDF
318	397.925	387.925	DOD FORMER SANDF
319	397.95	387.95	DOD FORMER SANDF
CH. No.	BTX	MTX	REMARKS
CH PLAN FOR 390-399.9875 380-389.9875MHz 2006			
CH. No.	BTX	MTX	REMARKS
320	397.975	387.975	DOD FORMER SANDF
321	398	388	DOD FORMER SANDF
322	398.025	388.025	DOD FORMER SANDF
323	398.05	388.05	DOD FORMER SANDF
324	398.075	388.075	DOD FORMER SANDF
325	398.1	388.1	DOD FORMER SANDF
326	398.125	388.125	DOD FORMER SANDF
327	398.15	388.15	DOD FORMER SANDF
328	398.175	388.175	DOD FORMER SANDF
329	398.2	388.2	DOD FORMER SANDF
330	398.225	388.225	DOD FORMER SANDF
331	398.25	388.25	DOD FORMER SANDF
332	398.275	388.275	DOD FORMER SANDF
333	398.3	388.3	DOD FORMER SANDF
334	398.325	388.325	DOD FORMER SANDF
335	398.35	388.35	DOD FORMER SANDF
336	398.375	388.375	DOD FORMER SANDF
337	398.4	388.4	DOD FORMER SANDF
338	398.425	388.425	DOD FORMER SANDF
339	398.45	388.45	DOD FORMER SANDF
340	398.475	388.475	DOD FORMER SANDF
341	398.5	388.5	DOD FORMER SANDF
342	398.525	388.525	DOD FORMER SANDF
343	398.55	388.55	DOD FORMER SANDF
344	398.575	388.575	DOD FORMER SANDF
345	398.6	388.6	DOD FORMER SANDF
346	398.625	388.625	DOD FORMER SANDF
347	398.65	388.65	DOD FORMER SANDF
348	398.675	388.675	DOD FORMER SANDF
349	398.7	388.7	DOD FORMER SANDF
350	398.725	388.725	DOD FORMER SANDF
351	398.75	388.75	DOD FORMER SANDF
352	398.775	388.775	DOD FORMER SANDF
353	398.8	388.8	DOD FORMER SANDF
354	398.825	388.825	DOD FORMER SANDF
355	398.85	388.85	DOD FORMER SANDF
356	398.875	388.875	DOD FORMER SANDF
357	398.9	388.9	DOD FORMER SANDF
358	398.925	388.925	DOD FORMER SANDF
359	398.95	388.95	DOD FORMER SANDF
360	398.975	388.975	DOD FORMER SANDF
361	399	389	DOD FORMER SANDF
362	399.025	389.025	DOD FORMER SANDF
363	399.05	389.05	DOD FORMER SANDF
364	399.075	389.075	DOD FORMER SANDF
365	399.1	389.1	DOD FORMER SANDF
CH. No.	BTX	MTX	REMARKS

CH PLAN FOR 390-399.9875 380-389.9875MHz 2006			
CH. No.	BTX	MTX	REMARKS
366	399.125	389.125	DOD FORMER SANDF
367	399.15	389.15	DOD FORMER SANDF
368	399.175	389.175	DOD FORMER SANDF
369	399.2	389.2	DOD FORMER SANDF
370	399.225	389.225	DOD FORMER SANDF
371	399.25	389.25	DOD FORMER SANDF
372	399.275	389.275	DOD FORMER SANDF
373	399.3	389.3	DOD FORMER SANDF
374	399.325	389.325	DOD FORMER SANDF
375	399.35	389.35	DOD FORMER SANDF
376	399.375	389.375	DOD FORMER SANDF
377	399.4	389.4	DOD FORMER SANDF
378	399.425	389.425	DOD FORMER SANDF
379	399.45	389.45	DOD FORMER SANDF
380	399.475	389.475	DOD FORMER SANDF
381	399.5	389.5	DOD FORMER SANDF
382	399.525	389.525	DOD FORMER SANDF
383	399.55	389.55	DOD FORMER SANDF
384	399.575	389.575	DOD FORMER SANDF
385	399.6	389.6	DOD FORMER SANDF
386	399.625	389.625	DOD FORMER SANDF
387	399.65	389.65	DOD FORMER SANDF
388	399.675	389.675	DOD FORMER SANDF
389	399.7	389.7	DOD FORMER SANDF
390	399.725	389.725	DOD FORMER SANDF
391	399.75	389.75	DOD FORMER SANDF
392	399.775	389.775	DOD FORMER SANDF
393	399.8	389.8	DOD FORMER SANDF
394	399.825	389.825	DOD FORMER SANDF
395	399.85	389.85	DOD FORMER SANDF
396	399.875	389.875	DOD FORMER SANDF
397	399.9	389.9	DOD FORMER SANDF
398	399.925	389.925	DOD FORMER SANDF
399	399.95	389.95	DOD FORMER SANDF
400	399.975	389.975	DOD FORMER SANDF

### 1.5.2 Licensing information for the applicable frequency allocation

There are 2 760 Licenses issued in this band for both BTX and MTX as well as single frequency devices

**1.5.3 Areas where licensed frequencies are operational.**



## **1.6 Applicable Frequency Allocation and Band information 403 MHz to 406 MHz**

Frequency Band under investigation 403 MHz to 406 MHz

METEOROLOGICAL AIDS

Mobile except aeronautical mobile

Frequency Sub bands

402 – 405 MHz – Medical Implants

402 – 406 MHz – Various SRD's

### **1.6.1 Channel Plan for the Frequency Allocation**

Not available, no channel spacing, 10 mW, 100% duty cycle

### **1.6.2 Licensing information for the applicable frequency allocation**

There are 1573 Licenses issued in this band

**1.6.3 Areas where licensed frequencies are operational.**



## **1.7 Applicable Frequency Allocation and Band information 406 MHz to 426 MHz**

Use of this Band for PPDR to be studied

Frequency Band under investigation 406 MHz to 426 MHz

Frequency Sub bands

### **406 – 410 MHz**

FIXED

MOBILE except aeronautical mobile

RADIO ASTRONOMY

Pairings

Fixed Links MTX 406.1 – 407.625 MHz paired with BTX 416.625 to 417.625 MHz

Mobile MTX 406.1 – 407.625 MHz paired with BTX 416.625 to 417.625 MHz

Fixed Links MTX 407.625 – 410 MHz paired with BTX 417.625 to 420 MHz

Mobile MTX 407.625 – 410 MHz paired with BTX 417.625 to 420 MHz

### **410 to 420 MHz & 420 to 430 MHz**

FIXED

MOBILE except aeronautical mobile

SPACE RESEARCH (space to space) in Band 410 to 420 MHz

Pairings

Mobile MTX 410 – 413 MHz paired with BTX 420 to 423 MHz

Mobile Data MTX 413 – 413.7625 MHz paired with BTX 423 to 423.7625 MHz

Digital Trunking MTX 413.7625 – 416.1 MHz paired with BTX 423.7625 to 426.1 MHz

Mobile BTX 416.1 – 417.625 MHz paired with MTX 406.1 to 407.625 MHz

FIXED Single Frequency Links 426.1 to 430 MHz



### 1.7.1 Channel Plan for the Frequency Allocation

**SOUTH AFRICAN POLICE SERVICES**

CH-PLAN FOR 417.5875\_419.9875/407.5875\_409.9875MHz 2006(12.5k

CH. No.	BTX	MTX	REMARKS
1	417.5875	407.5875	ADDITIONAL SAPS
2	417.6	407.6	ADDITIONAL SAPS
3	417.6125	407.6125	ADDITIONAL SAPS
4	417.625	407.625	SAPS
5	417.6375	407.6375	SAPS
6	417.65	407.65	SAPS
7	417.6625	407.6625	SAPS
8	417.675	407.675	SAPS
9	417.6875	407.6875	SAPS
10	417.7	407.7	SAPS
11	417.7125	407.7125	SAPS
12	417.725	407.725	SAPS
13	417.7375	407.7375	SAPS
14	417.75	407.75	SAPS
15	417.7625	407.7625	SAPS
16	417.775	407.775	SAPS
17	417.7875	407.7875	SAPS
18	417.8	407.8	SAPS
19	417.8125	407.8125	SAPS
20	417.825	407.825	SAPS
21	417.8375	407.8375	SAPS
22	417.85	407.85	SAPS
23	417.8625	407.8625	SAPS
24	417.875	407.875	SAPS
25	417.8875	407.8875	SAPS
26	417.9	407.9	SAPS
27	417.9125	407.9125	SAPS
28	417.925	407.925	SAPS
29	417.9375	407.9375	SAPS
30	417.95	407.95	SAPS
31	417.9625	407.9625	SAPS
32	417.975	407.975	SAPS
33	417.9875	407.9875	SAPS
34	418	408	SAPS
35	418.0125	408.0125	SAPS
36	418.025	408.025	SAPS
37	418.0375	408.0375	SAPS
38	418.05	408.05	SAPS
39	418.0625	408.0625	SAPS
40	418.075	408.075	SAPS
41	418.0875	408.0875	SAPS
42	418.1	408.1	SAPS
43	418.1125	408.1125	SAPS
44	418.125	408.125	SAPS
CH. No.	BTX	MTX	REMARKS

CH-PLAN FOR 417.5875\_419.9875/407.5875\_409.9875MHz 2006(12.5k

CH. No.	BTX	MTX	REMARKS
45	418.1375	408.1375	SAPS
46	418.15	408.15	SAPS
47	418.1625	408.1625	SAPS
48	418.175	408.175	SAPS
49	418.1875	408.1875	SAPS
50	418.2	408.2	SAPS
51	418.2125	408.2125	SAPS
52	418.225	408.225	SAPS
53	418.2375	408.2375	SAPS
54	418.25	408.25	SAPS
55	418.2625	408.2625	SAPS
56	418.275	408.275	SAPS
57	418.2875	408.2875	SAPS
58	418.3	408.3	SAPS
59	418.3125	408.3125	SAPS
60	418.325	408.325	SAPS
61	418.3375	408.3375	SAPS
62	418.35	408.35	SAPS
63	418.3625	408.3625	SAPS
64	418.375	408.375	SAPS
65	418.3875	408.3875	SAPS
66	418.4	408.4	SAPS
67	418.4125	408.4125	SAPS
68	418.425	408.425	SAPS
69	418.4375	408.4375	SAPS
70	418.45	408.45	SAPS
71	418.4625	408.4625	SAPS
72	418.475	408.475	SAPS
73	418.4875	408.4875	SAPS
74	418.5	408.5	SAPS
75	418.5125	408.5125	SAPS
76	418.525	408.525	SAPS
77	418.5375	408.5375	SAPS
78	418.55	408.55	SAPS
79	418.5625	408.5625	SAPS
80	418.575	408.575	SAPS
81	418.5875	408.5875	SAPS
82	418.6	408.6	SAPS
83	418.6125	408.6125	SAPS
84	418.625	408.625	SAPS
85	418.6375	408.6375	SAPS
86	418.65	408.65	SAPS
87	418.6625	408.6625	SAPS
88	418.675	408.675	SAPS
89	418.6875	408.6875	SAPS
90	418.7	408.7	SAPS
91	418.7125	408.7125	SAPS

## CH-PLAN FOR 417.5875\_419.9875/407.5875\_409.9875MHz 2006(12.5kt)

CH. No.	BTX	MTX	REMARKS
92	418.725	408.725	SAPS
93	418.7375	408.7375	SAPS
94	418.75	408.75	SAPS
95	418.7625	408.7625	SAPS
96	418.775	408.775	SAPS
97	418.7875	408.7875	SAPS
98	418.8	408.8	SAPS
99	418.8125	408.8125	SAPS
100	418.825	408.825	SAPS
101	418.8375	408.8375	SAPS
102	418.85	408.85	SAPS
103	418.8625	408.8625	SAPS
104	418.875	408.875	SAPS
105	418.8875	408.8875	SAPS
106	418.9	408.9	SAPS
107	418.9125	408.9125	SAPS
108	418.925	408.925	SAPS
109	418.9375	408.9375	SAPS
110	418.95	408.95	SAPS
111	418.9625	408.9625	SAPS
112	418.975	408.975	SAPS
113	418.9875	408.9875	SAPS
114	419	409	SAPS
115	419.0125	409.0125	SAPS
116	419.025	409.025	SAPS
117	419.0375	409.0375	SAPS
118	419.05	409.05	SAPS
119	419.0625	409.0625	SAPS
120	419.075	409.075	SAPS
121	419.0875	409.0875	SAPS
122	419.1	409.1	SAPS
123	419.1125	409.1125	SAPS
124	419.125	409.125	SAPS
125	419.1375	409.1375	SAPS
126	419.15	409.15	SAPS
127	419.1625	409.1625	SAPS
128	419.175	409.175	SAPS
129	419.1875	409.1875	SAPS
130	419.2	409.2	SAPS
131	419.2125	409.2125	SAPS
132	419.225	409.225	SAPS
133	419.2375	409.2375	SAPS
134	419.25	409.25	SAPS
135	419.2625	409.2625	SAPS
136	419.275	409.275	SAPS
137	419.2875	409.2875	SAPS
138	419.3	409.3	SAPS

## CH-PLAN FOR 417.5875\_419.9875/407.5875\_409.9875MHz 2006(12.5kt)

CH. No.	BTX	MTX	REMARKS
139	419.3125	409.3125	SAPS
140	419.325	409.325	SAPS
141	419.3375	409.3375	SAPS
142	419.35	409.35	SAPS
143	419.3625	409.3625	SAPS
144	419.375	409.375	SAPS
145	419.3875	409.3875	SAPS
146	419.4	409.4	SAPS
147	419.4125	409.4125	SAPS
148	419.425	409.425	SAPS
149	419.4375	409.4375	SAPS
150	419.45	409.45	SAPS
151	419.4625	409.4625	SAPS
152	419.475	409.475	SAPS
153	419.4875	409.4875	SAPS
154	419.5	409.5	SAPS
155	419.5125	409.5125	SAPS
156	419.525	409.525	SAPS
157	419.5375	409.5375	SAPS
158	419.55	409.55	SAPS
159	419.5625	409.5625	SAPS
160	419.575	409.575	SAPS
161	419.5875	409.5875	SAPS
162	419.6	409.6	SAPS
163	419.6125	409.6125	SAPS
164	419.625	409.625	SAPS
165	419.6375	409.6375	SAPS
166	419.65	409.65	SAPS
167	419.6625	409.6625	SAPS
168	419.675	409.675	SAPS
169	419.6875	409.6875	SAPS
170	419.7	409.7	SAPS
171	419.7125	409.7125	SAPS
172	419.725	409.725	SAPS
173	419.7375	409.7375	SAPS
174	419.75	409.75	SAPS
175	419.7625	409.7625	SAPS
176	419.775	409.775	SAPS
177	419.7875	409.7875	SAPS
178	419.8	409.8	SAPS
179	419.8125	409.8125	SAPS
180	419.825	409.825	SAPS
181	419.8375	409.8375	SAPS
182	419.85	409.85	SAPS
183	419.8625	409.8625	SAPS
184	419.875	409.875	SAPS
185	419.8875	409.8875	SAPS

## CH-PLAN FOR 417.5875\_419.9875/407.5875\_409.9875MHz 2006(12.5kt)

CH. No.	BTX	MTX	REMARKS
186	419.9	409.9	ADDITIONAL SAPS
187	419.9125	409.9125	ADDITIONAL SAPS
188	419.925	409.925	ADDITIONAL SAPS
189	419.9375	409.9375	ADDITIONAL SAPS
190	419.95	409.95	ADDITIONAL SAPS
191	419.9625	409.9625	ADDITIONAL SAPS
192	419.975	409.975	ADDITIONAL SAPS
193	419.9875	409.9875	ADDITIONAL SAPS

**DIGITAL TRUNKING (TETRA)**

**CH-PLAN FOR 420\_424.975/410\_414.975MHz 2009 (25kHz)**

CH. No.	BTX	MTX	REMARKS
1	420	410	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
2	420.025	410.025	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
3	420.05	410.05	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
4	420.075	410.075	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
5	420.1	410.1	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
6	420.125	410.125	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
7	420.15	410.15	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
8	420.175	410.175	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
9	420.2	410.2	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
10	420.225	410.225	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
11	420.25	410.25	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
12	420.275	410.275	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
13	420.3	410.3	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
14	420.325	410.325	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
15	420.35	410.35	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
16	420.375	410.375	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
17	420.4	410.4	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
18	420.425	410.425	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
19	420.45	410.45	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
20	420.475	410.475	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
21	420.5	410.5	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
22	420.525	410.525	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
23	420.55	410.55	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
24	420.575	410.575	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
25	420.6	410.6	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
26	420.625	410.625	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
27	420.65	410.65	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
28	420.675	410.675	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
29	420.7	410.7	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
30	420.725	410.725	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
31	420.75	410.75	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
32	420.775	410.775	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
33	420.8	410.8	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
34	420.825	410.825	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
35	420.85	410.85	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
36	420.875	410.875	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
37	420.9	410.9	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
38	420.925	410.925	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
39	420.95	410.95	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
40	420.975	410.975	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
41	421	411	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
42	421.025	411.025	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
43	421.05	411.05	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
44	421.075	411.075	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE

CH. No.	BTX	MTX	REMARKS
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**CH-PLAN FOR 420\_424.975/410\_414.975MHz 2009 (25kHz)**

CH. No.	BTX	MTX	REMARKS
45	421.1	411.1	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
46	421.125	411.125	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
47	421.15	411.15	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
48	421.175	411.175	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
49	421.2	411.2	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
50	421.225	411.225	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
51	421.25	411.25	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
52	421.275	411.275	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
53	421.3	411.3	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
54	421.325	411.325	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
55	421.35	411.35	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
56	421.375	411.375	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
57	421.4	411.4	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
58	421.425	411.425	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
59	421.45	411.45	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
60	421.475	411.475	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
61	421.5	411.5	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
62	421.525	411.525	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
63	421.55	411.55	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
64	421.575	411.575	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
65	421.6	411.6	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
66	421.625	411.625	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
67	421.65	411.65	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
68	421.675	411.675	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
69	421.7	411.7	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
70	421.725	411.725	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
71	421.75	411.75	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
72	421.775	411.775	TETRA - SECUNDA - RADIO ROOM 1.
73	421.8	411.8	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
74	421.825	411.825	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
75	421.85	411.85	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
76	421.875	411.875	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
77	421.9	411.9	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
78	421.925	411.925	TETRA - SECUNDA - RADIO ROOM 1.
79	421.95	411.95	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
80	421.975	411.975	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
81	422	412	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
82	422.025	412.025	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
83	422.05	412.05	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
84	422.075	412.075	TETRA - SECUNDA - RADIO ROOM 1.
85	422.1	412.1	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
86	422.125	412.125	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
87	422.15	412.15	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
88	422.175	412.175	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
89	422.2	412.2	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
90	422.225	412.225	TETRA - SECUNDA - RADIO ROOM 1.
91	422.25	412.25	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE

CH-PLAN FOR 420 424.975/410 414.975MHz 2009 (25kHz)			
CH. No.	BTX	MTX	REMARKS
92	422.275	412.275	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
93	422.3	412.3	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
94	422.325	412.325	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
95	422.35	412.35	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
96	422.375	412.375	TETRA - SECUNDA - RADIO ROOM 1.
97	422.4	412.4	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
98	422.425	412.425	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
99	422.45	412.45	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
100	422.475	412.475	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
101	422.5	412.5	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
102	422.525	412.525	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
103	422.55	412.55	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
104	422.575	412.575	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
105	422.6	412.6	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
106	422.625	412.625	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
107	422.65	412.65	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
108	422.675	412.675	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
109	422.7	412.7	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
110	422.725	412.725	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
111	422.75	412.75	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
112	422.775	412.775	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
113	422.8	412.8	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
114	422.825	412.825	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
115	422.85	412.85	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
116	422.875	412.875	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
117	422.9	412.9	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
118	422.925	412.925	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
119	422.95	412.95	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
120	422.975	412.975	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
121	423	413	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
122	423.025	413.025	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
123	423.05	413.05	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
124	423.075	413.075	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
125	423.1	413.1	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
126	423.125	413.125	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
127	423.15	413.15	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
128	423.175	413.175	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
129	423.2	413.2	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
130	423.225	413.225	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
131	423.25	413.25	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
132	423.275	413.275	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
133	423.3	413.3	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
134	423.325	413.325	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
135	423.35	413.35	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
136	423.375	413.375	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
137	423.4	413.4	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
138	423.425	413.425	TETRA - MUN-UTILITIES AND PUBLIC - COUNTRY WIDE
CH. No.	BTX	MTX	REMARKS
CH-PLAN FOR 420 424.975/410 414.975MHz 2009 (25kHz)			
CH. No.	BTX	MTX	REMARKS
139	423.45	413.45	TETRA - MUN-UTILITIES - COUNTRY WIDE
140	423.475	413.475	TETRA - MUN-UTILITIES - COUNTRY WIDE
141	423.5	413.5	TETRA - MUN-UTILITIES - COUNTRY WIDE
142	423.525	413.525	TETRA - MUN-UTILITIES - COUNTRY WIDE
143	423.55	413.55	TETRA - MUN-UTILITIES - COUNTRY WIDE
144	423.575	413.575	TETRA - MUN-UTILITIES - COUNTRY WIDE
145	423.6	413.6	TETRA - MUN-UTILITIES - COUNTRY WIDE
146	423.625	413.625	TETRA - MUN-UTILITIES - COUNTRY WIDE
147	423.65	413.65	TETRA - MUN-UTILITIES - COUNTRY WIDE
148	423.675	413.675	TETRA - MUN-UTILITIES - COUNTRY WIDE
149	423.7	413.7	TETRA - MUN-UTILITIES - COUNTRY WIDE
150	423.725	413.725	TETRA - MUN-UTILITIES - COUNTRY WIDE
151	423.75	413.75	TETRA - MUN-UTILITIES - COUNTRY WIDE
152	423.775	413.775	TETRA - MUN-UTILITIES - COUNTRY WIDE
153	423.8	413.8	TETRA - MUN-UTILITIES - COUNTRY WIDE
154	423.825	413.825	TETRA - MUN-UTILITIES - COUNTRY WIDE
155	423.85	413.85	TETRA - MUN-UTILITIES - COUNTRY WIDE
156	423.875	413.875	TETRA - MUN-UTILITIES - COUNTRY WIDE
157	423.9	413.9	TETRA - MUN-UTILITIES - COUNTRY WIDE
158	423.925	413.925	TETRA - SEE DATABASE.
159	423.95	413.95	TETRA - MUN-UTILITIES - COUNTRY WIDE
160	423.975	413.975	TETRA - MUN-UTILITIES - COUNTRY WIDE
161	424	414	TETRA - MUN-UTILITIES - COUNTRY WIDE
162	424.025	414.025	TETRA - SEE DATABASE.
163	424.05	414.05	TETRA - SEE DATABASE.
164	424.075	414.075	TETRA - SEE DATABASE.
165	424.1	414.1	TETRA - SEE DATABASE.
166	424.125	414.125	TETRA - SEE DATABASE.
167	424.15	414.15	TETRA - SEE DATABASE.
168	424.175	414.175	TETRA - SEE DATABASE.
169	424.2	414.2	TETRA - SEE DATABASE.
170	424.225	414.225	TETRA - SEE DATABASE.
171	424.25	414.25	TETRA - SEE DATABASE.
172	424.275	414.275	TETRA - SEE DATABASE.
173	424.3	414.3	TETRA - SEE DATABASE.
174	424.325	414.325	TETRA - SEE DATABASE.
175	424.35	414.35	TETRA - SEE DATABASE.
176	424.375	414.375	TETRA - SEE DATABASE.
177	424.4	414.4	TETRA - SEE DATABASE.
178	424.425	414.425	TETRA - MUN-UTILITIES - COUNTRY WIDE
179	424.45	414.45	TETRA - SEE DATABASE.
180	424.475	414.475	TETRA - SEE DATABASE.
181	424.5	414.5	TETRA - SEE DATABASE.
182	424.525	414.525	TETRA - SEE DATABASE.
183	424.55	414.55	TETRA - SEE DATABASE.
184	424.575	414.575	TETRA - MUN-UTILITIES - COUNTRY WIDE
185	424.6	414.6	TETRA - SEE DATABASE.
CH. No.	BTX	MTX	REMARKS
CH-PLAN FOR 420 424.975/410 414.975MHz 2009 (25kHz)			
CH. No.	BTX	MTX	REMARKS
186	424.625	414.625	TETRA - SEE DATABASE.
187	424.65	414.65	TETRA - SEE DATABASE.
188	424.675	414.675	TETRA - SEE DATABASE.
189	424.7	414.7	TETRA - SEE DATABASE.
190	424.725	414.725	TETRA - MUN-UTILITIES - COUNTRY WIDE
191	424.75	414.75	TETRA - SEE DATABASE.
192	424.775	414.775	TETRA - SEE DATABASE.
193	424.8	414.8	TETRA - SEE DATABASE.
194	424.825	414.825	TETRA - MUN-UTILITIES - COUNTRY WIDE
195	424.85	414.85	TETRA - MUN-UTILITIES - COUNTRY WIDE
196	424.875	414.875	TETRA - MUN-UTILITIES - COUNTRY WIDE
197	424.9	414.9	TETRA - MUN-UTILITIES - COUNTRY WIDE
198	424.925	414.925	TETRA - MUN-UTILITIES - COUNTRY WIDE
199	424.95	414.95	TETRA - SEE DATABASE.
200	424.975	414.975	TETRA - MUN-UTILITIES - COUNTRY WIDE
CH. No.	BTX	MTX	REMARKS

MOBILE DATA			
CHANNEL PLAN FOR 423-423.7625/413-413.7625MHz 2003 (12.5kHz)			
CH. No.	BTX	MTX	REMARKS
1	423	413	WBS
2	423.0125	413.0125	WBS
3	423.025	413.025	WBS
4	423.0375	413.0375	WBS
5	423.05	413.05	WBS
6	423.0625	413.0625	WBS
7	423.075	413.075	WBS
8	423.0875	413.0875	WBS
9	423.1	413.1	WBS
10	423.1125	413.1125	WBS
11	423.125	413.125	WBS
12	423.1375	413.1375	WBS
13	423.15	413.15	WBS
14	423.1625	413.1625	WBS
15	423.175	413.175	WBS
16	423.1875	413.1875	WBS AVAILABLE
17	423.2	413.2	WBS MIGRATION X2
18	423.2125	413.2125	WBS
19	423.225	413.225	WBS
20	423.2375	413.2375	WBS
21	423.25	413.25	WBS
22	423.2625	413.2625	WBS
23	423.275	413.275	SEE DATABASE.
24	423.2875	413.2875	SEE DATABASE.
25	423.3	413.3	SEE DATABASE.
26	423.3125	413.3125	SEE DATABASE.
27	423.325	413.325	SEE DATABASE.
28	423.3375	413.3375	SEE DATABASE.
29	423.35	413.35	SEE DATABASE.
30	423.3625	413.3625	SEE DATABASE.
31	423.375	413.375	SEE DATABASE.
32	423.3875	413.3875	SEE DATABASE.
33	423.4	413.4	SEE DATABASE.
34	423.4125	413.4125	SEE DATABASE.
35	423.425	413.425	SEE DATABASE.
36	423.4375	413.4375	SEE DATABASE.
37	423.45	413.45	SEE DATABASE.
38	423.4625	413.4625	SEE DATABASE.
39	423.475	413.475	SEE DATABASE.
40	423.4875	413.4875	SEE DATABASE.
41	423.5	413.5	SEE DATABASE.
42	423.5125	413.5125	SEE DATABASE.
43	423.525	413.525	SEE DATABASE.
44	423.5375	413.5375	SEE DATABASE.
CH. No.	BTX	MTX	REMARKS
CHANNEL PLAN FOR 423-423.7625/413-413.7625MHz 2003 (12.5kHz)			
CH. No.	BTX	MTX	REMARKS
45	423.55	413.55	SEE DATABASE.
46	423.5625	413.5625	SEE DATABASE.
47	423.575	413.575	SEE DATABASE.
48	423.5875	413.5875	SEE DATABASE.
49	423.6	413.6	SEE DATABASE.
50	423.6125	413.6125	SEE DATABASE.
51	423.625	413.625	SEE DATABASE.
52	423.6375	413.6375	SEE DATABASE.
53	423.65	413.65	SEE DATABASE.
54	423.6625	413.6625	SEE DATABASE.
55	423.675	413.675	SEE DATABASE.
56	423.6875	413.6875	SEE DATABASE.
57	423.7	413.7	SEE DATABASE.
58	423.7125	413.7125	SEE DATABASE.
59	423.725	413.725	SEE DATABASE.
60	423.7375	413.7375	SEE DATABASE.
61	423.75	413.75	SEE DATABASE.

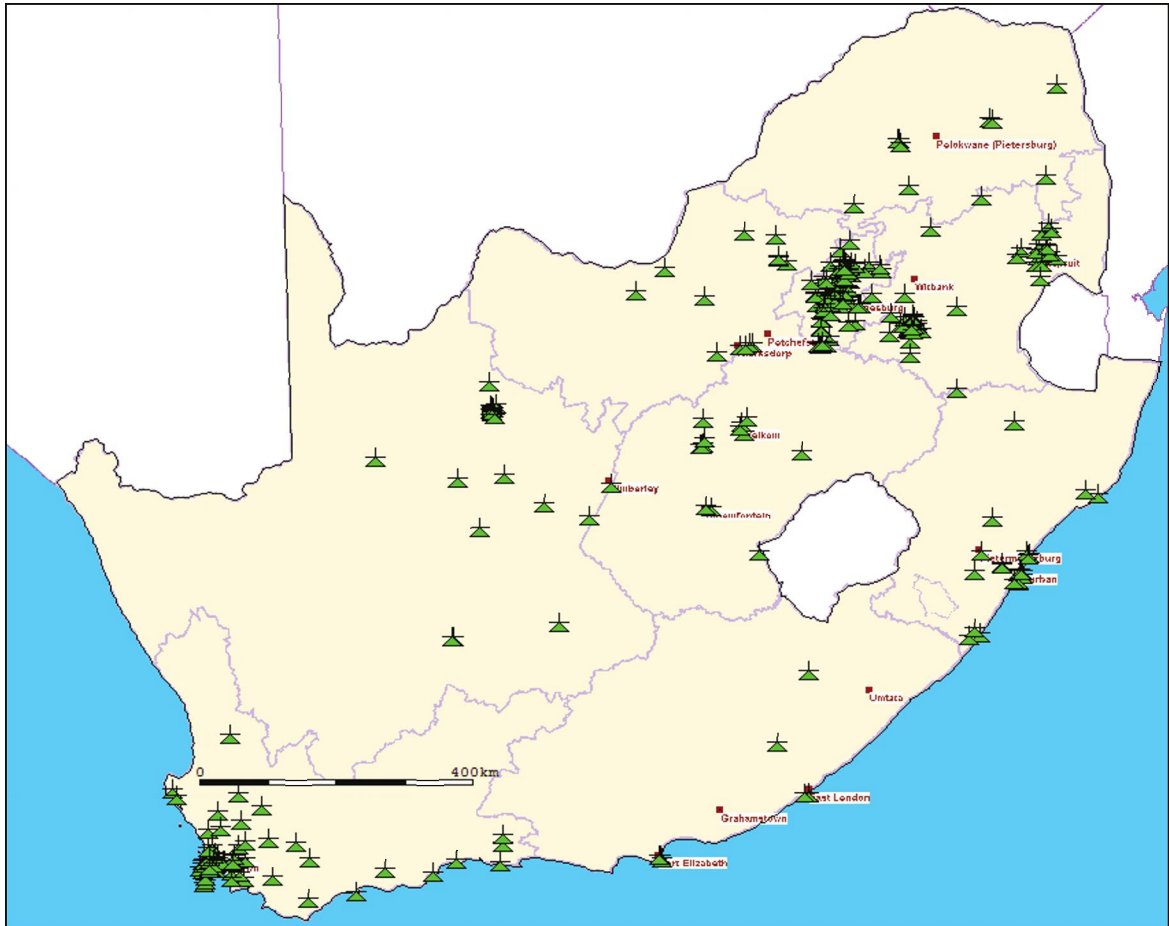
**1.7.2 Licensing information for the applicable frequency allocation**

406 to 410 MHz: There are 3326 Licenses issued in this band

410 to 420 MHz: There are 681 Licenses issued in this band

420 to 430 MHz: There are 1052 Licenses issued in this band

**1.7.3 Areas where licensed frequencies are operational.**



## **1.8 Applicable Frequency Allocation and Band information 440 MHz to 450 MHz**

Use of this band for PPDR to be studied

Frequency Band under investigation 440 MHz to 450 MHz

FIXED

MOBILE except aeronautical mobile

Frequency Sub bands

Pairings

FIXED BTX: 440 to 441.1 MHz paired with MTX 445 to 446.1 MHz

Mobile BTX 441.1 – 445 MHz paired with MTX 446.1 to 450 MHz

Single Frequency Mobile Allocations

Channels 440.0125, 440.3625, 445.0125 and 445.3625 MHz are used for Agricultural Telemetry

Channels 440 to 440.1 and 445 to 445.1 are used for simplex.

Channels 440.275, 440.2875, 445.2750, 445.2875, 440.375 and 445.375 MHz are roving simplex channels

### 1.8.1 Channel Plan for the Frequency Allocation

CHANNEL PLAN FOR UHF TELEMETRY & ALARM BANDS			
440-441 / 445-446 MHz			
CHANNEL NO	FREQUENCY A	FREQUENCY B	NOTE
1	440	445	SEE DATABASE.
2	440.0125	445.0125	SEE DATABASE.
3	440.025	445.025	SEE DATABASE.
4	440.0375	445.0375	SEE DATABASE.
5	440.05	445.05	SEE DATABASE.
6	440.0625	445.0625	SEE DATABASE.
7	440.075	445.075	SEE DATABASE.
8	440.0875	445.0875	SEE DATABASE.
9	440.1	445.1	SEE DATABASE.
10	440.1125	445.1125	SEE DATABASE.
11	440.125	445.125	SEE DATABASE.
12	440.1375	445.1375	SEE DATABASE.
13	440.15	445.15	SEE DATABASE.
14	440.1625	445.1625	SEE DATABASE.
15	440.175	445.175	SEE DATABASE.
16	440.1875	445.1875	SEE DATABASE.
17	440.2	445.2	SEE DATABASE.
18	440.2125	445.2125	SEE DATABASE.
19	440.225	445.225	SEE DATABASE.
20	440.2375	445.2375	SEE DATABASE.
21	440.25	445.25	SEE DATABASE.
22	440.2625	445.2625	SEE DATABASE.
23	440.275	445.275	SEE DATABASE.
24	440.2875	445.2875	SEE DATABASE.
25	440.3	445.3	SEE DATABASE.
26	440.3125	445.3125	SEE DATABASE.
27	440.325	445.325	SEE DATABASE.
28	440.3375	445.3375	SEE DATABASE.
29	440.35	445.35	SEE DATABASE.
30	440.3625	445.3625	SEE DATABASE.
31	440.375	445.375	SEE DATABASE.
32	440.3875	445.3875	SEE DATABASE.
33	440.4	445.4	SEE DATABASE.
34	440.4125	445.4125	SEE DATABASE.
35	440.425	445.425	SEE DATABASE.
36	440.4375	445.4375	SEE DATABASE.
37	440.45	445.45	SEE DATABASE.
38	440.4625	445.4625	SEE DATABASE.
39	440.475	445.475	SEE DATABASE.
40	440.4875	445.4875	SEE DATABASE.
41	440.5	445.5	SEE DATABASE.
42	440.5125	445.5125	SEE DATABASE.
43	440.525	445.525	SEE DATABASE.
44	440.5375	445.5375	SEE DATABASE.
45	440.55	445.55	SEE DATABASE.
46	440.5625	445.5625	SEE DATABASE.
47	440.575	445.575	SEE DATABASE.
48	440.5875	445.5875	SEE DATABASE.
49	440.6	445.6	SEE DATABASE.
50	440.6125	445.6125	SEE DATABASE.
51	440.625	445.625	SEE DATABASE.
52	440.6375	445.6375	SEE DATABASE.
53	440.65	445.65	SEE DATABASE.
54	440.6625	445.6625	SEE DATABASE.
55	440.675	445.675	SEE DATABASE.
56	440.6875	445.6875	SEE DATABASE.
57	440.7	445.7	SWIFTNET MIGRATION - NO ASSIGNMENTS
58	440.7125	445.7125	SWIFTNET MIGRATION - NO ASSIGNMENTS
59	440.725	445.725	SWIFTNET MIGRATION - NO ASSIGNMENTS
60	440.7375	445.7375	SWIFTNET MIGRATION - NO ASSIGNMENTS
61	440.75	445.75	SWIFTNET MIGRATION - NO ASSIGNMENTS
62	440.7625	445.7625	SWIFTNET MIGRATION - NO ASSIGNMENTS
63	440.775	445.775	SWIFTNET MIGRATION - NO ASSIGNMENTS
64	440.7875	445.7875	SWIFTNET MIGRATION - NO ASSIGNMENTS
65	440.8	445.8	SWIFTNET MIGRATION - NO ASSIGNMENTS
66	440.8125	445.8125	SWIFTNET MIGRATION - NO ASSIGNMENTS
67	440.825	445.825	SWIFTNET MIGRATION - NO ASSIGNMENTS
68	440.8375	445.8375	SWIFTNET MIGRATION - NO ASSIGNMENTS
69	440.85	445.85	SWIFTNET MIGRATION - NO ASSIGNMENTS
70	440.8625	445.8625	SWIFTNET MIGRATION - NO ASSIGNMENTS
71	440.875	445.875	SWIFTNET MIGRATION - NO ASSIGNMENTS
72	440.8875	445.8875	SWIFTNET MIGRATION - NO ASSIGNMENTS
73	440.9	445.9	SWIFTNET MIGRATION - NO ASSIGNMENTS
74	440.9125	445.9125	SWIFTNET MIGRATION - NO ASSIGNMENTS
75	440.925	445.925	SWIFTNET MIGRATION - NO ASSIGNMENTS
76	440.9375	445.9375	SWIFTNET MIGRATION - NO ASSIGNMENTS
77	440.95	445.95	SWIFTNET MIGRATION - NO ASSIGNMENTS
78	440.9625	445.9625	SWIFTNET MIGRATION - NO ASSIGNMENTS
79	440.975	445.975	SWIFTNET MIGRATION - NO ASSIGNMENTS
80	440.9875	445.9875	SWIFTNET MIGRATION - NO ASSIGNMENTS



### 1.8.2 Licensing information for the applicable frequency allocation

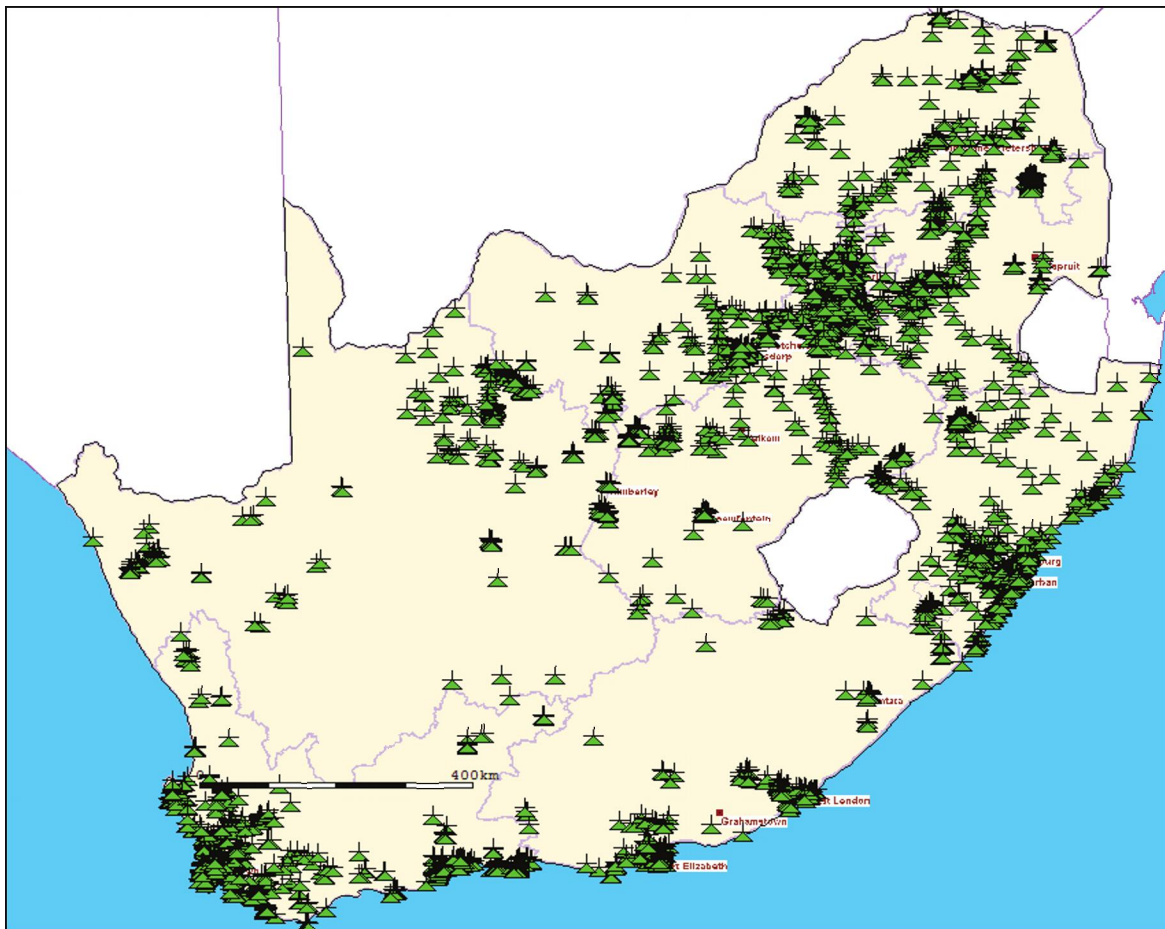
There are 3759 Licenses issued in this band 440 to 441 MHz

There are 4243 Licenses issued in this band 445 to 446 MHz

There are 1170 Licenses issued in this band 441.1 to 445 MHz

There are 1486 Licenses issued in this band 446.1 to 450 MHz

### 1.8.3 Areas where licensed frequencies are operational.



## **1.9 Applicable Frequency Allocation and Band information 450 MHz to 470 MHz**

Band is identified for IMT (450)

Frequency Band under investigation 450 MHz to 470 MHz

FIXED

MOBILE

Frequency Sub bands

Pairings

FIXED 450 to 453 MHz paired with BTX 460 to 463 MHz

Trunked Mobile 3 MTX 454.425 to 460 MHz paired with BTX 464.425 to 470 MHz

Paging MTX 454 to 454.425 MHz

Low Power Mobile: 463.975, 464.125, 464.175, 464.325, 464.375 MHz

Security Systems: 464.5375 MHz

Non Specified SRD's: 464.5 to 464.5875 MHz

Single Frequency Mobile Allocations

453 to 454 MHz

463.025 to 463.975 MHz

464.375 to 464.425

### **1.9.1 Channel Plan for the Frequency Allocation**

**FIXED LINKS**

**CH-PLAN FOR 450\_452.9875/460\_462.9875MHz 2005 (12.5 kHz)**

CH. No.	BTX	MTX	REMARKS
1	450	460	SEE DATABASE
2	450.0125	460.0125	SEE DATABASE
3	450.025	460.025	SEE DATABASE
4	450.0375	460.0375	SEE DATABASE
5	450.05	460.05	SEE DATABASE
6	450.0625	460.0625	SEE DATABASE
7	450.075	460.075	SEE DATABASE
8	450.0875	460.0875	SEE DATABASE
9	450.1	460.1	SEE DATABASE
10	450.1125	460.1125	SEE DATABASE
11	450.125	460.125	SEE DATABASE
12	450.1375	460.1375	SEE DATABASE
13	450.15	460.15	SEE DATABASE
14	450.1625	460.1625	SEE DATABASE
15	450.175	460.175	SEE DATABASE
16	450.1875	460.1875	SEE DATABASE
17	450.2	460.2	SEE DATABASE
18	450.2125	460.2125	SEE DATABASE
19	450.225	460.225	SEE DATABASE
20	450.2375	460.2375	SEE DATABASE
21	450.25	460.25	SEE DATABASE
22	450.2625	460.2625	SEE DATABASE
23	450.275	460.275	SEE DATABASE
24	450.2875	460.2875	SEE DATABASE
25	450.3	460.3	SEE DATABASE
26	450.3125	460.3125	SEE DATABASE
27	450.325	460.325	SEE DATABASE
28	450.3375	460.3375	SEE DATABASE
29	450.35	460.35	SEE DATABASE
30	450.3625	460.3625	SEE DATABASE
31	450.375	460.375	SEE DATABASE
32	450.3875	460.3875	SEE DATABASE
33	450.4	460.4	SEE DATABASE
34	450.4125	460.4125	SEE DATABASE
35	450.425	460.425	SEE DATABASE
36	450.4375	460.4375	SEE DATABASE
37	450.45	460.45	SEE DATABASE
38	450.4625	460.4625	SEE DATABASE
39	450.475	460.475	SEE DATABASE
40	450.4875	460.4875	SEE DATABASE
41	450.5	460.5	SEE DATABASE
42	450.5125	460.5125	SEE DATABASE
43	450.525	460.525	SEE DATABASE
44	450.5375	460.5375	SEE DATABASE
CH. No.	BTX	MTX	REMARKS

**CH-PLAN FOR 450\_452.9875/460\_462.9875MHz 2005 (12.5 kHz)**

CH. No.	BTX	MTX	REMARKS
45	450.55	460.55	SEE DATABASE
46	450.5625	460.5625	SEE DATABASE
47	450.575	460.575	SEE DATABASE
48	450.5875	460.5875	SEE DATABASE
49	450.6	460.6	SEE DATABASE
50	450.6125	460.6125	SEE DATABASE
51	450.625	460.625	SEE DATABASE
52	450.6375	460.6375	SEE DATABASE
53	450.65	460.65	SEE DATABASE
54	450.6625	460.6625	SEE DATABASE
55	450.675	460.675	SEE DATABASE
56	450.6875	460.6875	SEE DATABASE
57	450.7	460.7	SEE DATABASE
58	450.7125	460.7125	SEE DATABASE
59	450.725	460.725	SEE DATABASE
60	450.7375	460.7375	SEE DATABASE
61	450.75	460.75	SEE DATABASE
62	450.7625	460.7625	SEE DATABASE
63	450.775	460.775	SEE DATABASE
64	450.7875	460.7875	SEE DATABASE
65	450.8	460.8	SEE DATABASE
66	450.8125	460.8125	SEE DATABASE
67	450.825	460.825	SEE DATABASE
68	450.8375	460.8375	SEE DATABASE
69	450.85	460.85	SEE DATABASE
70	450.8625	460.8625	SEE DATABASE
71	450.875	460.875	SEE DATABASE
72	450.8875	460.8875	SEE DATABASE
73	450.9	460.9	SEE DATABASE
74	450.9125	460.9125	SEE DATABASE
75	450.925	460.925	SEE DATABASE
76	450.9375	460.9375	SEE DATABASE
77	450.95	460.95	SEE DATABASE
78	450.9625	460.9625	SEE DATABASE
79	450.975	460.975	SEE DATABASE
80	450.9875	460.9875	SEE DATABASE
81	451	461	SEE DATABASE
82	451.0125	461.0125	SEE DATABASE
83	451.025	461.025	SEE DATABASE
84	451.0375	461.0375	SEE DATABASE
85	451.05	461.05	SEE DATABASE
86	451.0625	461.0625	SEE DATABASE
87	451.075	461.075	SEE DATABASE
88	451.0875	461.0875	SEE DATABASE
89	451.1	461.1	SEE DATABASE
90	451.1125	461.1125	SEE DATABASE
91	451.125	461.125	SEE DATABASE

## CH-PLAN FOR 450 452.9875/460 462.9875MHz 2005 (12.5 kHz)

CH. No.	BTX	MTX	REMARKS
92	451.1375	461.1375	SEE DATABASE
93	451.15	461.15	SEE DATABASE
94	451.1625	461.1625	SEE DATABASE
95	451.175	461.175	SEE DATABASE
96	451.1875	461.1875	SEE DATABASE
97	451.2	461.2	SEE DATABASE
98	451.2125	461.2125	SEE DATABASE
99	451.225	461.225	SEE DATABASE
100	451.2375	461.2375	SEE DATABASE
101	451.25	461.25	SEE DATABASE
102	451.2625	461.2625	SEE DATABASE
103	451.275	461.275	SEE DATABASE
104	451.2875	461.2875	SEE DATABASE
105	451.3	461.3	SEE DATABASE
106	451.3125	461.3125	SEE DATABASE
107	451.325	461.325	SEE DATABASE
108	451.3375	461.3375	SEE DATABASE
109	451.35	461.35	SEE DATABASE
110	451.3625	461.3625	SEE DATABASE
111	451.375	461.375	SEE DATABASE
112	451.3875	461.3875	SEE DATABASE
113	451.4	461.4	SEE DATABASE
114	451.4125	461.4125	SEE DATABASE
115	451.425	461.425	SEE DATABASE
116	451.4375	461.4375	SEE DATABASE
117	451.45	461.45	SEE DATABASE
118	451.4625	461.4625	SEE DATABASE
119	451.475	461.475	SEE DATABASE
120	451.4875	461.4875	SEE DATABASE
121	451.5	461.5	SEE DATABASE
122	451.5125	461.5125	SEE DATABASE
123	451.525	461.525	SEE DATABASE
124	451.5375	461.5375	SEE DATABASE
125	451.55	461.55	SEE DATABASE
126	451.5625	461.5625	SEE DATABASE
127	451.575	461.575	SEE DATABASE
128	451.5875	461.5875	SEE DATABASE
129	451.6	461.6	SEE DATABASE
130	451.6125	461.6125	SEE DATABASE
131	451.625	461.625	SEE DATABASE
132	451.6375	461.6375	SEE DATABASE
133	451.65	461.65	SEE DATABASE
134	451.6625	461.6625	SEE DATABASE
135	451.675	461.675	SEE DATABASE
136	451.6875	461.6875	SEE DATABASE
137	451.7	461.7	SEE DATABASE
138	451.7125	461.7125	SEE DATABASE

## CH-PLAN FOR 450 452.9875/460 462.9875MHz 2005 (12.5 kHz)

CH. No.	BTX	MTX	REMARKS
139	451.725	461.725	SEE DATABASE
140	451.7375	461.7375	SEE DATABASE
141	451.75	461.75	SEE DATABASE
142	451.7625	461.7625	SEE DATABASE
143	451.775	461.775	SEE DATABASE
144	451.7875	461.7875	SEE DATABASE
145	451.8	461.8	SEE DATABASE
146	451.8125	461.8125	SEE DATABASE
147	451.825	461.825	SEE DATABASE
148	451.8375	461.8375	SEE DATABASE
149	451.85	461.85	SEE DATABASE
150	451.8625	461.8625	SEE DATABASE
151	451.875	461.875	SEE DATABASE
152	451.8875	461.8875	SEE DATABASE
153	451.9	461.9	SEE DATABASE
154	451.9125	461.9125	SEE DATABASE
155	451.925	461.925	SEE DATABASE
156	451.9375	461.9375	SEE DATABASE
157	451.95	461.95	SEE DATABASE
158	451.9625	461.9625	SEE DATABASE
159	451.975	461.975	SEE DATABASE
160	451.9875	461.9875	SEE DATABASE
161	452	462	SEE DATABASE
162	452.0125	462.0125	SEE DATABASE
163	452.025	462.025	SEE DATABASE
164	452.0375	462.0375	SEE DATABASE
165	452.05	462.05	SEE DATABASE
166	452.0625	462.0625	SEE DATABASE
167	452.075	462.075	SEE DATABASE
168	452.0875	462.0875	SEE DATABASE
169	452.1	462.1	SEE DATABASE
170	452.1125	462.1125	SEE DATABASE
171	452.125	462.125	SEE DATABASE
172	452.1375	462.1375	SEE DATABASE
173	452.15	462.15	SEE DATABASE
174	452.1625	462.1625	SEE DATABASE
175	452.175	462.175	SEE DATABASE
176	452.1875	462.1875	SEE DATABASE
177	452.2	462.2	SEE DATABASE
178	452.2125	462.2125	SEE DATABASE
179	452.225	462.225	SEE DATABASE
180	452.2375	462.2375	SEE DATABASE
181	452.25	462.25	SEE DATABASE
182	452.2625	462.2625	SEE DATABASE
183	452.275	462.275	SEE DATABASE
184	452.2875	462.2875	SEE DATABASE
185	452.3	462.3	SEE DATABASE

## CH-PLAN FOR 450 452.9875/460 462.9875MHz 2005 (12.5 kHz)

CH. No.	BTX	MTX	REMARKS
186	452.3125	462.3125	SEE DATABASE
187	452.325	462.325	SEE DATABASE
188	452.3375	462.3375	SEE DATABASE
189	452.35	462.35	SEE DATABASE
190	452.3625	462.3625	SEE DATABASE
191	452.375	462.375	SEE DATABASE
192	452.3875	462.3875	SEE DATABASE
193	452.4	462.4	SEE DATABASE
194	452.4125	462.4125	SEE DATABASE
195	452.425	462.425	SEE DATABASE
196	452.4375	462.4375	SEE DATABASE
197	452.45	462.45	SEE DATABASE
198	452.4625	462.4625	SEE DATABASE
199	452.475	462.475	SEE DATABASE
200	452.4875	462.4875	SEE DATABASE
201	452.5	462.5	SEE DATABASE
202	452.5125	462.5125	SEE DATABASE
203	452.525	462.525	SEE DATABASE
204	452.5375	462.5375	SEE DATABASE
205	452.55	462.55	SEE DATABASE
206	452.5625	462.5625	SEE DATABASE
207	452.575	462.575	SEE DATABASE
208	452.5875	462.5875	SEE DATABASE
209	452.6	462.6	SEE DATABASE
210	452.6125	462.6125	SEE DATABASE
211	452.625	462.625	SEE DATABASE
212	452.6375	462.6375	SEE DATABASE
213	452.65	462.65	SEE DATABASE
214	452.6625	462.6625	SEE DATABASE
215	452.675	462.675	SEE DATABASE
216	452.6875	462.6875	SEE DATABASE
217	452.7	462.7	SEE DATABASE
218	452.7125	462.7125	SEE DATABASE
219	452.725	462.725	SEE DATABASE
220	452.7375	462.7375	SEE DATABASE
221	452.75	462.75	SEE DATABASE
222	452.7625	462.7625	SEE DATABASE
223	452.775	462.775	SEE DATABASE
224	452.7875	462.7875	SEE DATABASE
225	452.8	462.8	SEE DATABASE
226	452.8125	462.8125	SEE DATABASE
227	452.825	462.825	SEE DATABASE
228	452.8375	462.8375	SEE DATABASE
229	452.85	462.85	SEE DATABASE
230	452.8625	462.8625	SEE DATABASE
231	452.875	462.875	SEE DATABASE
232	452.8875	462.8875	SEE DATABASE
CH. No.	BTX	MTX	REMARKS

## CH-PLAN FOR 450 452.9875/460 462.9875MHz 2005 (12.5 kHz)

CH. No.	BTX	MTX	REMARKS
233	452.9	462.9	SEE DATABASE
234	452.9125	462.9125	SEE DATABASE
235	452.925	462.925	SEE DATABASE
236	452.9375	462.9375	SEE DATABASE
237	452.95	462.95	SEE DATABASE
238	452.9625	462.9625	SEE DATABASE
239	452.975	462.975	SEE DATABASE
240	452.9875	462.9875	SEE DATABASE

UHF SIMPLEX			
CHANNEL PLAN FOR 453 - 453.9875MHz 2003 (12.5kHz)			
CH. No.	SF	REMARKS	S/Gr.
1	453	SEE DATABASE	
2	453.0125	SEE DATABASE	
3	453.025	SEE DATABASE	
4	453.0375	SEE DATABASE	
5	453.05	SEE DATABASE	
6	453.0625	SEE DATABASE	
7	453.075	SEE DATABASE	
8	453.0875	SEE DATABASE	
9	453.1	SEE DATABASE	
10	453.1125	SEE DATABASE	
11	453.125	SEE DATABASE	
12	453.1375	SEE DATABASE	
13	453.15	SEE DATABASE	
14	453.1625	SEE DATABASE	
15	453.175	SEE DATABASE	
16	453.1875	SEE DATABASE	
17	453.2	SEE DATABASE	
18	453.2125	SEE DATABASE	
19	453.225	SEE DATABASE	
20	453.2375	SEE DATABASE	
21	453.25	SEE DATABASE	
22	453.2625	SEE DATABASE	
23	453.275	SEE DATABASE	
24	453.2875	SEE DATABASE	
25	453.3	SEE DATABASE	
26	453.3125	SEE DATABASE	
27	453.325	SEE DATABASE	
28	453.3375	SEE DATABASE	
29	453.35	SEE DATABASE	
30	453.3625	SEE DATABASE	
31	453.375	SEE DATABASE	
32	453.3875	SEE DATABASE	
33	453.4	SEE DATABASE	
34	453.4125	SEE DATABASE	
35	453.425	SEE DATABASE	
36	453.4375	SEE DATABASE	
37	453.45	SEE DATABASE	
38	453.4625	SEE DATABASE	
39	453.475	SEE DATABASE	
40	453.4875	SEE DATABASE	
41	453.5	SEE DATABASE	
42	453.5125	SEE DATABASE	
43	453.525	SEE DATABASE	
44	453.5375	SEE DATABASE	
45	453.55	SEE DATABASE	
46	453.5625	SEE DATABASE	
47	453.575	SEE DATABASE	
CHANNEL PLAN FOR 453 - 453.9875MHz 2003 (12.5kHz)			
48	453.5875	SEE DATABASE	
49	453.6	SEE DATABASE	
50	453.6125	SEE DATABASE	
51	453.625	SEE DATABASE	
52	453.6375	SEE DATABASE	
53	453.65	SEE DATABASE	
54	453.6625	SEE DATABASE	
55	453.675	SEE DATABASE	
56	453.6875	SEE DATABASE	
57	453.7	SEE DATABASE	
58	453.7125	SEE DATABASE	
59	453.725	SEE DATABASE	
60	453.7375	SEE DATABASE	
61	453.75	SEE DATABASE	
62	453.7625	SEE DATABASE	
63	453.775	SEE DATABASE	
64	453.7875	SEE DATABASE	
65	453.8	SEE DATABASE	
66	453.8125	SEE DATABASE	
67	453.825	SEE DATABASE	
68	453.8375	SEE DATABASE	
69	453.85	SEE DATABASE	
70	453.8625	SEE DATABASE	
71	453.875	SEE DATABASE	
72	453.8875	SEE DATABASE	
73	453.9	SEE DATABASE	
74	453.9125	SEE DATABASE	
75	453.925	SEE DATABASE	
76	453.9375	SEE DATABASE	
77	453.95	SEE DATABASE	
78	453.9625	SEE DATABASE	
79	453.975	SEE DATABASE	
80	453.9875	SEE DATABASE	

TRUNKED MOBILE			
CH-PLAN FOR 454.425 460/464.425 470MHz 2004 (12.5 kHz)			
CH. No.	BTX	MTX	REMARKS
1	454.425	464.425	VARIOUS ASSIGNMENTS
2	454.4375	464.4375	VARIOUS ASSIGNMENTS
3	454.45	464.45	VARIOUS ASSIGNMENTS
4	454.4625	464.4625	VARIOUS ASSIGNMENTS
5	454.475	464.475	VARIOUS ASSIGNMENTS
6	454.4875	464.4875	VARIOUS ASSIGNMENTS
7	454.5	464.5	VARIOUS ASSIGNMENTS
8	454.5125	464.5125	VARIOUS ASSIGNMENTS
9	454.525	464.525	VARIOUS ASSIGNMENTS
10	454.5375	464.5375	VARIOUS ASSIGNMENTS
11	454.55	464.55	VARIOUS ASSIGNMENTS
12	454.5625	464.5625	VARIOUS ASSIGNMENTS
13	454.575	464.575	VARIOUS ASSIGNMENTS
14	454.5875	464.5875	VARIOUS ASSIGNMENTS
15	454.6	464.6	VARIOUS ASSIGNMENTS
16	454.6125	464.6125	VARIOUS ASSIGNMENTS
17	454.625	464.625	VARIOUS ASSIGNMENTS
18	454.6375	464.6375	VARIOUS ASSIGNMENTS
19	454.65	464.65	VARIOUS ASSIGNMENTS
20	454.6625	464.6625	VARIOUS ASSIGNMENTS
21	454.675	464.675	VARIOUS ASSIGNMENTS
22	454.6875	464.6875	VARIOUS ASSIGNMENTS
23	454.7	464.7	VARIOUS ASSIGNMENTS
24	454.7125	464.7125	VARIOUS ASSIGNMENTS
25	454.725	464.725	VARIOUS ASSIGNMENTS
26	454.7375	464.7375	VARIOUS ASSIGNMENTS
27	454.75	464.75	VARIOUS ASSIGNMENTS
28	454.7625	464.7625	VARIOUS ASSIGNMENTS
29	454.775	464.775	VARIOUS ASSIGNMENTS
30	454.7875	464.7875	VARIOUS ASSIGNMENTS
31	454.8	464.8	VARIOUS ASSIGNMENTS
32	454.8125	464.8125	VARIOUS ASSIGNMENTS
33	454.825	464.825	VARIOUS ASSIGNMENTS
34	454.8375	464.8375	VARIOUS ASSIGNMENTS
35	454.85	464.85	VARIOUS ASSIGNMENTS
36	454.8625	464.8625	VARIOUS ASSIGNMENTS
37	454.875	464.875	VARIOUS ASSIGNMENTS
38	454.8875	464.8875	VARIOUS ASSIGNMENTS
39	454.9	464.9	VARIOUS ASSIGNMENTS
40	454.9125	464.9125	VARIOUS ASSIGNMENTS
41	454.925	464.925	VARIOUS ASSIGNMENTS
42	454.9375	464.9375	VARIOUS ASSIGNMENTS
43	454.95	464.95	VARIOUS ASSIGNMENTS
44	454.9625	464.9625	VARIOUS ASSIGNMENTS

CH-PLAN FOR 454.425 460/464.425 470MHz 2004 (12.5 kHz)			
CH. No.	BTX	MTX	REMARKS
45	454.975	464.975	VARIOUS ASSIGNMENTS
46	454.9875	464.9875	VARIOUS ASSIGNMENTS
47	455	465	EXISTING TRANSTEL
48	455.0125	465.0125	EXISTING TRANSTEL
49	455.025	465.025	EXISTING TRANSTEL
50	455.0375	465.0375	EXISTING TRANSTEL
51	455.05	465.05	EXISTING TRANSTEL
52	455.0625	465.0625	EXISTING TRANSTEL
53	455.075	465.075	EXISTING TRANSTEL
54	455.0875	465.0875	EXISTING TRANSTEL
55	455.1	465.1	EXISTING TRANSTEL
56	455.1125	465.1125	EXISTING TRANSTEL
57	455.125	465.125	EXISTING TRANSTEL
58	455.1375	465.1375	EXISTING TRANSTEL
59	455.15	465.15	EXISTING TRANSTEL
60	455.1625	465.1625	EXISTING TRANSTEL
61	455.175	465.175	EXISTING TRANSTEL
62	455.1875	465.1875	EXISTING TRANSTEL
63	455.2	465.2	EXISTING TRANSTEL
64	455.2125	465.2125	EXISTING TRANSTEL
65	455.225	465.225	EXISTING TRANSTEL
66	455.2375	465.2375	EXISTING TRANSTEL
67	455.25	465.25	EXISTING TRANSTEL
68	455.2625	465.2625	EXISTING TRANSTEL
69	455.275	465.275	EXISTING TRANSTEL
70	455.2875	465.2875	EXISTING TRANSTEL
71	455.3	465.3	EXISTING TRANSTEL
72	455.3125	465.3125	EXISTING TRANSTEL
73	455.325	465.325	EXISTING TRANSTEL
74	455.3375	465.3375	EXISTING TRANSTEL
75	455.35	465.35	EXISTING TRANSTEL
76	455.3625	465.3625	EXISTING TRANSTEL
77	455.375	465.375	EXISTING TRANSTEL
78	455.3875	465.3875	EXISTING TRANSTEL
79	455.4	465.4	EXISTING TRANSTEL
80	455.4125	465.4125	EXISTING TRANSTEL
81	455.425	465.425	EXISTING TRANSTEL
82	455.4375	465.4375	EXISTING TRANSTEL
83	455.45	465.45	EXISTING TRANSTEL
84	455.4625	465.4625	EXISTING TRANSTEL
85	455.475	465.475	EXISTING TRANSTEL
86	455.4875	465.4875	EXISTING TRANSTEL
87	455.5	465.5	ADDITIONAL TRANSTEL (MIGRATION)
88	455.5125	465.5125	ADDITIONAL TRANSTEL (MIGRATION)
89	455.525	465.525	ADDITIONAL TRANSTEL (MIGRATION)
90	455.5375	465.5375	ADDITIONAL TRANSTEL (MIGRATION)
91	455.55	465.55	ADDITIONAL TRANSTEL (MIGRATION)

CH-PLAN FOR 454.425_460/464.425_470MHz 2004 (12.5 kHz)			
CH. No.	BTX	MTX	REMARKS
92	455.5625	465.5625	ADDITIONAL TRANSTEL (MIGRATION)
93	455.575	465.575	ADDITIONAL TRANSTEL (MIGRATION)
94	455.5875	465.5875	ADDITIONAL TRANSTEL (MIGRATION)
95	455.6	465.6	ADDITIONAL TRANSTEL (MIGRATION)
96	455.6125	465.6125	ADDITIONAL TRANSTEL (MIGRATION)
97	455.625	465.625	ADDITIONAL TRANSTEL (MIGRATION)
98	455.6375	465.6375	ADDITIONAL TRANSTEL (MIGRATION)
99	455.65	465.65	ADDITIONAL TRANSTEL (MIGRATION)
100	455.6625	465.6625	ADDITIONAL TRANSTEL (MIGRATION)
101	455.675	465.675	ADDITIONAL TRANSTEL (MIGRATION)
102	455.6875	465.6875	ADDITIONAL TRANSTEL (MIGRATION)
103	455.7	465.7	ADDITIONAL TRANSTEL (MIGRATION)
104	455.7125	465.7125	ADDITIONAL TRANSTEL (MIGRATION)
105	455.725	465.725	ADDITIONAL TRANSTEL (MIGRATION)
106	455.7375	465.7375	ADDITIONAL TRANSTEL (MIGRATION)
107	455.75	465.75	ADDITIONAL TRANSTEL (MIGRATION)
108	455.7625	465.7625	ADDITIONAL TRANSTEL (MIGRATION)
109	455.775	465.775	ADDITIONAL TRANSTEL (MIGRATION)
110	455.7875	465.7875	ADDITIONAL TRANSTEL (MIGRATION)
111	455.8	465.8	ADDITIONAL TRANSTEL (MIGRATION)
112	455.8125	465.8125	ADDITIONAL TRANSTEL (MIGRATION)
113	455.825	465.825	ADDITIONAL TRANSTEL (MIGRATION)
114	455.8375	465.8375	ADDITIONAL TRANSTEL (MIGRATION)
115	455.85	465.85	ADDITIONAL TRANSTEL (MIGRATION)
116	455.8625	465.8625	ADDITIONAL TRANSTEL (MIGRATION)
117	455.875	465.875	ADDITIONAL TRANSTEL (MIGRATION)
118	455.8875	465.8875	ADDITIONAL TRANSTEL (MIGRATION)
119	455.9	465.9	ADDITIONAL TRANSTEL (MIGRATION)
120	455.9125	465.9125	ADDITIONAL TRANSTEL (MIGRATION)
121	455.925	465.925	ADDITIONAL TRANSTEL (MIGRATION)
122	455.9375	465.9375	ADDITIONAL TRANSTEL (MIGRATION)
123	455.95	465.95	ADDITIONAL TRANSTEL (MIGRATION)
124	455.9625	465.9625	ADDITIONAL TRANSTEL (MIGRATION)
125	455.975	465.975	ADDITIONAL TRANSTEL (MIGRATION)
126	455.9875	465.9875	ADDITIONAL TRANSTEL (MIGRATION)
127	456	466	ADDITIONAL TRANSTEL (MIGRATION)
128	456.0125	466.0125	ADDITIONAL TRANSTEL (MIGRATION)
129	456.025	466.025	ADDITIONAL TRANSTEL (MIGRATION)
130	456.0375	466.0375	ADDITIONAL TRANSTEL (MIGRATION)
131	456.05	466.05	ADDITIONAL TRANSTEL (MIGRATION)
132	456.0625	466.0625	ADDITIONAL TRANSTEL (MIGRATION)
133	456.075	466.075	ADDITIONAL TRANSTEL (MIGRATION)
134	456.0875	466.0875	ADDITIONAL TRANSTEL (MIGRATION)
135	456.1	466.1	ADDITIONAL TRANSTEL (MIGRATION)
136	456.1125	466.1125	ADDITIONAL TRANSTEL (MIGRATION)
137	456.125	466.125	ADDITIONAL TRANSTEL (MIGRATION)
138	456.1375	466.1375	ADDITIONAL TRANSTEL (MIGRATION)
CH. No.	BTX	MTX	REMARKS
CH-PLAN FOR 454.425_460/464.425_470MHz 2004 (12.5 kHz)			
CH. No.	BTX	MTX	REMARKS
139	456.15	466.15	ADDITIONAL TRANSTEL (MIGRATION)
140	456.1625	466.1625	ADDITIONAL TRANSTEL (MIGRATION)
141	456.175	466.175	ADDITIONAL TRANSTEL (MIGRATION)
142	456.1875	466.1875	ADDITIONAL TRANSTEL (MIGRATION)
143	456.2	466.2	ADDITIONAL TRANSTEL (MIGRATION)
144	456.2125	466.2125	ADDITIONAL TRANSTEL (MIGRATION)
145	456.225	466.225	ADDITIONAL TRANSTEL (MIGRATION)
146	456.2375	466.2375	ADDITIONAL TRANSTEL (MIGRATION)
147	456.25	466.25	ADDITIONAL TRANSTEL (MIGRATION)
148	456.2625	466.2625	ADDITIONAL TRANSTEL (MIGRATION)
149	456.275	466.275	ADDITIONAL TRANSTEL (MIGRATION)
150	456.2875	466.2875	ADDITIONAL TRANSTEL (MIGRATION)
151	456.3	466.3	ADDITIONAL TRANSTEL (MIGRATION)
152	456.3125	466.3125	ADDITIONAL TRANSTEL (MIGRATION)
153	456.325	466.325	ADDITIONAL TRANSTEL (MIGRATION)
154	456.3375	466.3375	ADDITIONAL TRANSTEL (MIGRATION)
155	456.35	466.35	ADDITIONAL TRANSTEL (MIGRATION)
156	456.3625	466.3625	ADDITIONAL TRANSTEL (MIGRATION)
157	456.375	466.375	ADDITIONAL TRANSTEL (MIGRATION)
158	456.3875	466.3875	ADDITIONAL TRANSTEL (MIGRATION)
159	456.4	466.4	ADDITIONAL TRANSTEL (MIGRATION)
160	456.4125	466.4125	ADDITIONAL TRANSTEL (MIGRATION)
161	456.425	466.425	ADDITIONAL TRANSTEL (MIGRATION)
162	456.4375	466.4375	ADDITIONAL TRANSTEL (MIGRATION)
163	456.45	466.45	ADDITIONAL TRANSTEL (MIGRATION)
164	456.4625	466.4625	ADDITIONAL TRANSTEL (MIGRATION)
165	456.475	466.475	ADDITIONAL TRANSTEL (MIGRATION)
166	456.4875	466.4875	ADDITIONAL TRANSTEL (MIGRATION)
167	456.5	466.5	ADDITIONAL TRANSTEL (MIGRATION)
168	456.5125	466.5125	ADDITIONAL TRANSTEL (MIGRATION)
169	456.525	466.525	ADDITIONAL TRANSTEL (MIGRATION)
170	456.5375	466.5375	ADDITIONAL TRANSTEL (MIGRATION)
171	456.55	466.55	ADDITIONAL TRANSTEL (MIGRATION)
172	456.5625	466.5625	ADDITIONAL TRANSTEL (MIGRATION)
173	456.575	466.575	ADDITIONAL TRANSTEL (MIGRATION)
174	456.5875	466.5875	ADDITIONAL TRANSTEL (MIGRATION)
175	456.6	466.6	ADDITIONAL TRANSTEL (MIGRATION)
176	456.6125	466.6125	ADDITIONAL TRANSTEL (MIGRATION)
177	456.625	466.625	ADDITIONAL TRANSTEL (MIGRATION)
178	456.6375	466.6375	ADDITIONAL TRANSTEL (MIGRATION)
179	456.65	466.65	ADDITIONAL TRANSTEL (MIGRATION)
180	456.6625	466.6625	TRUNKED MOBILE
181	456.675	466.675	TRUNKED MOBILE
182	456.6875	466.6875	TRUNKED MOBILE
183	456.7	466.7	TRUNKED MOBILE
184	456.7125	466.7125	TRUNKED MOBILE
185	456.725	466.725	TRUNKED MOBILE



CH-PLAN FOR 454.425 460/464.425 470MHz 2004 (12.5 kHz)			
CH. No.	BTX	MTX	REMARKS
186	456.7375	466.7375	TRUNKED MOBILE
187	456.75	466.75	TRUNKED MOBILE
188	456.7625	466.7625	TRUNKED MOBILE
189	456.775	466.775	TRUNKED MOBILE
190	456.7875	466.7875	TRUNKED MOBILE
191	456.8	466.8	TRUNKED MOBILE
192	456.8125	466.8125	TRUNKED MOBILE
193	456.825	466.825	TRUNKED MOBILE
194	456.8375	466.8375	TRUNKED MOBILE
195	456.85	466.85	TRUNKED MOBILE
196	456.8625	466.8625	TRUNKED MOBILE
197	456.875	466.875	TRUNKED MOBILE
198	456.8875	466.8875	TRUNKED MOBILE
199	456.9	466.9	TRUNKED MOBILE
200	456.9125	466.9125	TRUNKED MOBILE
201	456.925	466.925	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
202	456.9375	466.9375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
203	456.95	466.95	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
204	456.9625	466.9625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
205	456.975	466.975	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
206	456.9875	466.9875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
207	457	467	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
208	457.0125	467.0125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
209	457.025	467.025	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
210	457.0375	467.0375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
211	457.05	467.05	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
212	457.0625	467.0625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
213	457.075	467.075	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
214	457.0875	467.0875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
215	457.1	467.1	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
216	457.1125	467.1125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
217	457.125	467.125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
218	457.1375	467.1375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
219	457.15	467.15	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
220	457.1625	467.1625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
221	457.175	467.175	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
222	457.1875	467.1875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
223	457.2	467.2	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
224	457.2125	467.2125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
225	457.225	467.225	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
226	457.2375	467.2375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
227	457.25	467.25	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
228	457.2625	467.2625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
229	457.275	467.275	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
230	457.2875	467.2875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
231	457.3	467.3	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
232	457.3125	467.3125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
CH. No.	BTX	MTX	REMARKS
CH-PLAN FOR 454.425 460/464.425 470MHz 2004 (12.5 kHz)			
CH. No.	BTX	MTX	REMARKS
233	457.325	467.325	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
234	457.3375	467.3375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
235	457.35	467.35	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
236	457.3625	467.3625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
237	457.375	467.375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
238	457.3875	467.3875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
239	457.4	467.4	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
240	457.4125	467.4125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
241	457.425	467.425	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
242	457.4375	467.4375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
243	457.45	467.45	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
244	457.4625	467.4625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
245	457.475	467.475	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
246	457.4875	467.4875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
247	457.5	467.5	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
248	457.5125	467.5125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
249	457.525	467.525	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
250	457.5375	467.5375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
251	457.55	467.55	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
252	457.5625	467.5625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
253	457.575	467.575	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
254	457.5875	467.5875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
255	457.6	467.6	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
256	457.6125	467.6125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
257	457.625	467.625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
258	457.6375	467.6375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
259	457.65	467.65	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
260	457.6625	467.6625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
261	457.675	467.675	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
262	457.6875	467.6875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
263	457.7	467.7	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
264	457.7125	467.7125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
265	457.725	467.725	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
266	457.7375	467.7375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
267	457.75	467.75	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
268	457.7625	467.7625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
269	457.775	467.775	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
270	457.7875	467.7875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
271	457.8	467.8	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
272	457.8125	467.8125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
273	457.825	467.825	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
274	457.8375	467.8375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
275	457.85	467.85	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
276	457.8625	467.8625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
277	457.875	467.875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
278	457.8875	467.8875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
279	457.9	467.9	VARIOUS ASSIGNMENTS & TRUNKED MOBILE

CH-PLAN FOR 454.425_460/464.425_470MHz 2004 (12.5 kHz)			
CH. No.	BTX	MTX	REMARKS
280	457.9125	467.9125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
281	457.925	467.925	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
282	457.9375	467.9375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
283	457.95	467.95	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
284	457.9625	467.9625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
285	457.975	467.975	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
286	457.9875	467.9875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
287	458	468	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
288	458.0125	468.0125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
289	458.025	468.025	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
290	458.0375	468.0375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
291	458.05	468.05	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
292	458.0625	468.0625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
293	458.075	468.075	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
294	458.0875	468.0875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
295	458.1	468.1	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
296	458.1125	468.1125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
297	458.125	468.125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
298	458.1375	468.1375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
299	458.15	468.15	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
300	458.1625	468.1625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
301	458.175	468.175	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
302	458.1875	468.1875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
303	458.2	468.2	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
304	458.2125	468.2125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
305	458.225	468.225	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
306	458.2375	468.2375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
307	458.25	468.25	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
308	458.2625	468.2625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
309	458.275	468.275	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
310	458.2875	468.2875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
311	458.3	468.3	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
312	458.3125	468.3125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
313	458.325	468.325	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
314	458.3375	468.3375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
315	458.35	468.35	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
316	458.3625	468.3625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
317	458.375	468.375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
318	458.3875	468.3875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
319	458.4	468.4	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
320	458.4125	468.4125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
321	458.425	468.425	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
322	458.4375	468.4375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
323	458.45	468.45	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
324	458.4625	468.4625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
325	458.475	468.475	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
CH. No.	BTX	MTX	REMARKS
CH-PLAN FOR 454.425_460/464.425_470MHz 2004 (12.5 kHz)			
CH. No.	BTX	MTX	REMARKS
326	458.4875	468.4875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
327	458.5	468.5	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
328	458.5125	468.5125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
329	458.525	468.525	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
330	458.5375	468.5375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
331	458.55	468.55	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
332	458.5625	468.5625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
333	458.575	468.575	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
334	458.5875	468.5875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
335	458.6	468.6	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
336	458.6125	468.6125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
337	458.625	468.625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
338	458.6375	468.6375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
339	458.65	468.65	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
340	458.6625	468.6625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
341	458.675	468.675	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
342	458.6875	468.6875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
343	458.7	468.7	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
344	458.7125	468.7125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
345	458.725	468.725	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
346	458.7375	468.7375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
347	458.75	468.75	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
348	458.7625	468.7625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
349	458.775	468.775	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
350	458.7875	468.7875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
351	458.8	468.8	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
352	458.8125	468.8125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
353	458.825	468.825	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
354	458.8375	468.8375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
355	458.85	468.85	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
356	458.8625	468.8625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
357	458.875	468.875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
358	458.8875	468.8875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
359	458.9	468.9	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
360	458.9125	468.9125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
361	458.925	468.925	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
362	458.9375	468.9375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
363	458.95	468.95	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
364	458.9625	468.9625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
365	458.975	468.975	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
366	458.9875	468.9875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
367	459	469	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
368	459.0125	469.0125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
369	459.025	469.025	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
370	459.0375	469.0375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
371	459.05	469.05	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
372	459.0625	469.0625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
373	459.075	469.075	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
374	459.0875	469.0875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE

## CH-PLAN FOR 454.425\_460/464.425\_470MHz 2004 (12.5 kHz)

CH. No.	BTX	MTX	REMARKS
375	459.1	469.1	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
376	459.1125	469.1125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
377	459.125	469.125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
378	459.1375	469.1375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
379	459.15	469.15	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
380	459.1625	469.1625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
381	459.175	469.175	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
382	459.1875	469.1875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
383	459.2	469.2	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
384	459.2125	469.2125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
385	459.225	469.225	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
386	459.2375	469.2375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
387	459.25	469.25	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
388	459.2625	469.2625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
389	459.275	469.275	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
390	459.2875	469.2875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
391	459.3	469.3	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
392	459.3125	469.3125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
393	459.325	469.325	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
394	459.3375	469.3375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
395	459.35	469.35	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
396	459.3625	469.3625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
397	459.375	469.375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
398	459.3875	469.3875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
399	459.4	469.4	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
400	459.4125	469.4125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
401	459.425	469.425	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
402	459.4375	469.4375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
403	459.45	469.45	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
404	459.4625	469.4625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
405	459.475	469.475	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
406	459.4875	469.4875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
407	459.5	469.5	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
408	459.5125	469.5125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
409	459.525	469.525	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
410	459.5375	469.5375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
411	459.55	469.55	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
412	459.5625	469.5625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
413	459.575	469.575	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
414	459.5875	469.5875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
415	459.6	469.6	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
416	459.6125	469.6125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
417	459.625	469.625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
418	459.6375	469.6375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
419	459.65	469.65	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
420	459.6625	469.6625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
421	459.675	469.675	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
422	459.6875	469.6875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
CH. No.	BTX	MTX	REMARKS

## CH-PLAN FOR 454.425\_460/464.425\_470MHz 2004 (12.5 kHz)

CH. No.	BTX	MTX	REMARKS
423	459.7	469.7	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
424	459.7125	469.7125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
425	459.725	469.725	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
426	459.7375	469.7375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
427	459.75	469.75	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
428	459.7625	469.7625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
429	459.775	469.775	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
430	459.7875	469.7875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
431	459.8	469.8	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
432	459.8125	469.8125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
433	459.825	469.825	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
434	459.8375	469.8375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
435	459.85	469.85	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
436	459.8625	469.8625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
437	459.875	469.875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
438	459.8875	469.8875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
439	459.9	469.9	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
440	459.9125	469.9125	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
441	459.925	469.925	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
442	459.9375	469.9375	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
443	459.95	469.95	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
444	459.9625	469.9625	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
445	459.975	469.975	VARIOUS ASSIGNMENTS & TRUNKED MOBILE
446	459.9875	469.9875	VARIOUS ASSIGNMENTS & TRUNKED MOBILE

## CHANNEL PLAN FOR 454 - 454.425MHz 2017 (12.5 kHz)

CH. No.	SF	REMARKS	S/Gr.
1	454	SEE DATABASE	
2	454.0125	SEE DATABASE	
3	454.025	SEE DATABASE	
4	454.0375	SEE DATABASE	
5	454.05	SEE DATABASE	
6	454.0625	SEE DATABASE	
7	454.075	SEE DATABASE	
8	454.0875	SEE DATABASE	
9	454.1	SEE DATABASE	
10	454.1125	SEE DATABASE	
11	454.125	SEE DATABASE	
12	454.1375	SEE DATABASE	
13	454.15	SEE DATABASE	
14	454.1625	SEE DATABASE	
15	454.175	SEE DATABASE	
16	454.1875	SEE DATABASE	
17	454.2	SEE DATABASE	
18	454.2125	SEE DATABASE	
19	454.225	SEE DATABASE	
20	454.2375	SEE DATABASE	
21	454.25	SEE DATABASE	
22	454.2625	SEE DATABASE	
23	454.275	SEE DATABASE	
24	454.2875	SEE DATABASE	
25	454.3	SEE DATABASE	
26	454.3125	SEE DATABASE	
27	454.325	SEE DATABASE	
28	454.3375	SEE DATABASE	
29	454.35	SEE DATABASE	
30	454.3625	SEE DATABASE	
31	454.375	SEE DATABASE	
32	454.3875	SEE DATABASE	
33	454.4	SEE DATABASE	
34	454.4125	SEE DATABASE	

## CHANNEL PLAN FOR 464 - 464.425MHz 2017 (12.5 kHz)

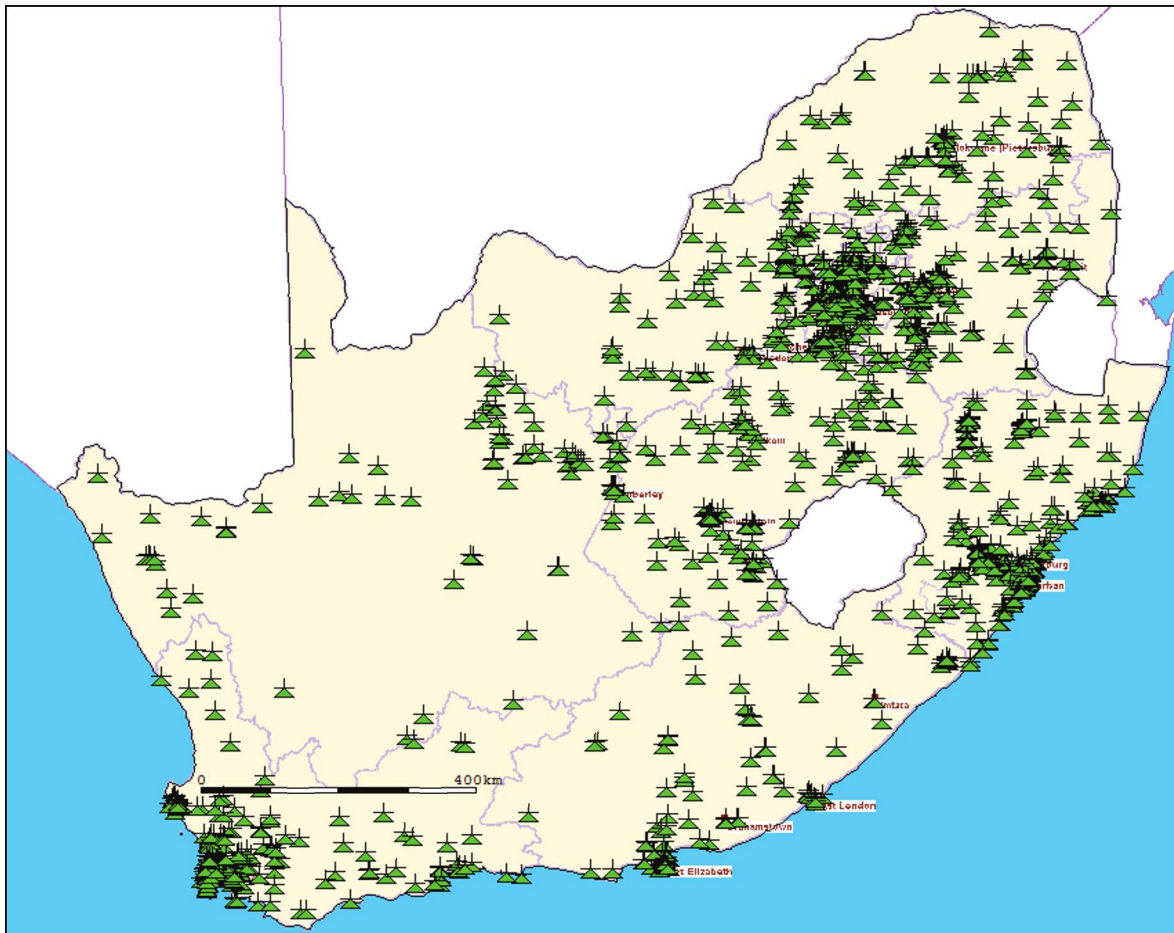
CH. No.	SF	REMARKS	S/Gr.
1	464	SEE DATABASE	
2	464.0125	SEE DATABASE	
3	464.025	SEE DATABASE	
4	464.0375	SEE DATABASE	
5	464.05	SEE DATABASE	
6	464.0625	SEE DATABASE	
7	464.075	SEE DATABASE	
8	464.0875	SEE DATABASE	
9	464.1	SEE DATABASE	
10	464.1125	SEE DATABASE	
11	464.125	SEE DATABASE	
12	464.1375	SEE DATABASE	
13	464.15	SEE DATABASE	
14	464.1625	SEE DATABASE	
15	464.175	SEE DATABASE	
16	464.1875	SEE DATABASE	
17	464.2	SEE DATABASE	
18	464.2125	SEE DATABASE	
19	464.225	SEE DATABASE	
20	464.2375	SEE DATABASE	
21	464.25	SEE DATABASE	
22	464.2625	SEE DATABASE	
23	464.275	SEE DATABASE	
24	464.2875	SEE DATABASE	
25	464.3	SEE DATABASE	
26	464.3125	SEE DATABASE	
27	464.325	SEE DATABASE	
28	464.3375	SEE DATABASE	
29	464.35	SEE DATABASE	
30	464.3625	SEE DATABASE	
31	464.375	SEE DATABASE	
32	464.3875	SEE DATABASE	
33	464.4	SEE DATABASE	
34	464.4125	SEE DATABASE	

UHF SIMPLEX			
CHANNEL PLAN FOR 463 - 463.9875MHz 2003 (12.5 kHz)			
CH. No.	SF	REMARKS	S/Gr.
1	463	SEE DATABASE	
2	463.0125	SEE DATABASE	
3	463.025	SEE DATABASE	
4	463.0375	SEE DATABASE	
5	463.05	SEE DATABASE	
6	463.0625	SEE DATABASE	
7	463.075	SEE DATABASE	
8	463.0875	SEE DATABASE	
9	463.1	SEE DATABASE	
10	463.1125	SEE DATABASE	
11	463.125	SEE DATABASE	
12	463.1375	SEE DATABASE	
13	463.15	SEE DATABASE	
14	463.1625	SEE DATABASE	
15	463.175	SEE DATABASE	
16	463.1875	SEE DATABASE	
17	463.2	SEE DATABASE	
18	463.2125	SEE DATABASE	
19	463.225	SEE DATABASE	
20	463.2375	SEE DATABASE	
21	463.25	SEE DATABASE	
22	463.2625	SEE DATABASE	
23	463.275	SEE DATABASE	
24	463.2875	SEE DATABASE	
25	463.3	SEE DATABASE	
26	463.3125	SEE DATABASE	
27	463.325	SEE DATABASE	
28	463.3375	SEE DATABASE	
29	463.35	SEE DATABASE	
30	463.3625	SEE DATABASE	
31	463.375	SEE DATABASE	
32	463.3875	SEE DATABASE	
33	463.4	SEE DATABASE	
34	463.4125	SEE DATABASE	
35	463.425	SEE DATABASE	
36	463.4375	SEE DATABASE	
37	463.45	SEE DATABASE	
38	463.4625	SEE DATABASE	
39	463.475	SEE DATABASE	
40	463.4875	SEE DATABASE	
41	463.5	SEE DATABASE	
42	463.5125	SEE DATABASE	
43	463.525	SEE DATABASE	
44	463.5375	SEE DATABASE	
45	463.55	SEE DATABASE	
46	463.5625	SEE DATABASE	
47	463.575	SEE DATABASE	
CHANNEL PLAN FOR 463 - 463.9875MHz 2003 (12.5 kHz)			
48	463.5875	SEE DATABASE	
49	463.6	SEE DATABASE	
50	463.6125	SEE DATABASE	
51	463.625	SEE DATABASE	
52	463.6375	SEE DATABASE	
53	463.65	SEE DATABASE	
54	463.6625	SEE DATABASE	
55	463.675	SEE DATABASE	
56	463.6875	SEE DATABASE	
57	463.7	SEE DATABASE	
58	463.7125	SEE DATABASE	
59	463.725	SEE DATABASE	
60	463.7375	SEE DATABASE	
61	463.75	SEE DATABASE	
62	463.7625	SEE DATABASE	
63	463.775	SEE DATABASE	
64	463.7875	SEE DATABASE	
65	463.8	SEE DATABASE	
66	463.8125	SEE DATABASE	
67	463.825	SEE DATABASE	
68	463.8375	SEE DATABASE	
69	463.85	SEE DATABASE	
70	463.8625	SEE DATABASE	
71	463.875	SEE DATABASE	
72	463.8875	SEE DATABASE	
73	463.9	SEE DATABASE	
74	463.9125	SEE DATABASE	
75	463.925	SEE DATABASE	
76	463.9375	SEE DATABASE	
77	463.95	SEE DATABASE	
78	463.9625	SEE DATABASE	
79	463.975	SEE DATABASE	
80	463.9875	SEE DATABASE	

### 1.9.2 Licensing information for the applicable frequency allocation

There are 7857 Licenses issued in this band for both BTX and MTX as well as single frequency devices

### 1.9.3 Areas where licensed frequencies are operational.



### 1.10 Applicable Frequency Allocation and Band information 452.5 MHz to 457.5 MHz and 462.5 MHz to 467.5 MHz

Band is identified for Transnet Trial License

Frequency Band under investigation 450 MHz to 470 MHz

MOBILE

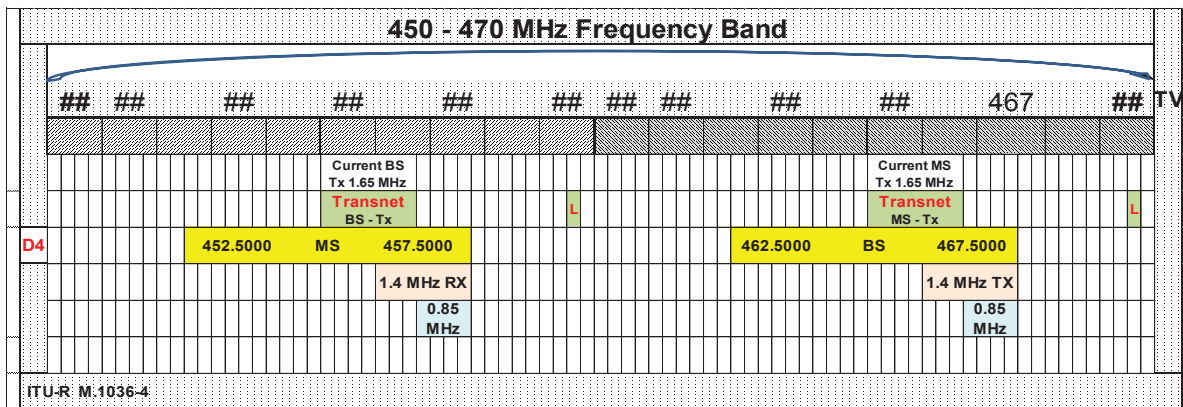
Frequency Sub bands

Pairings

MOBILE 452.5 to 457.5 MHz paired with BTX 462.5 to 467.5 MHz

See section 9 for more detail on existing licences

**1.10.1 Channel Plan for the Frequency Allocation**



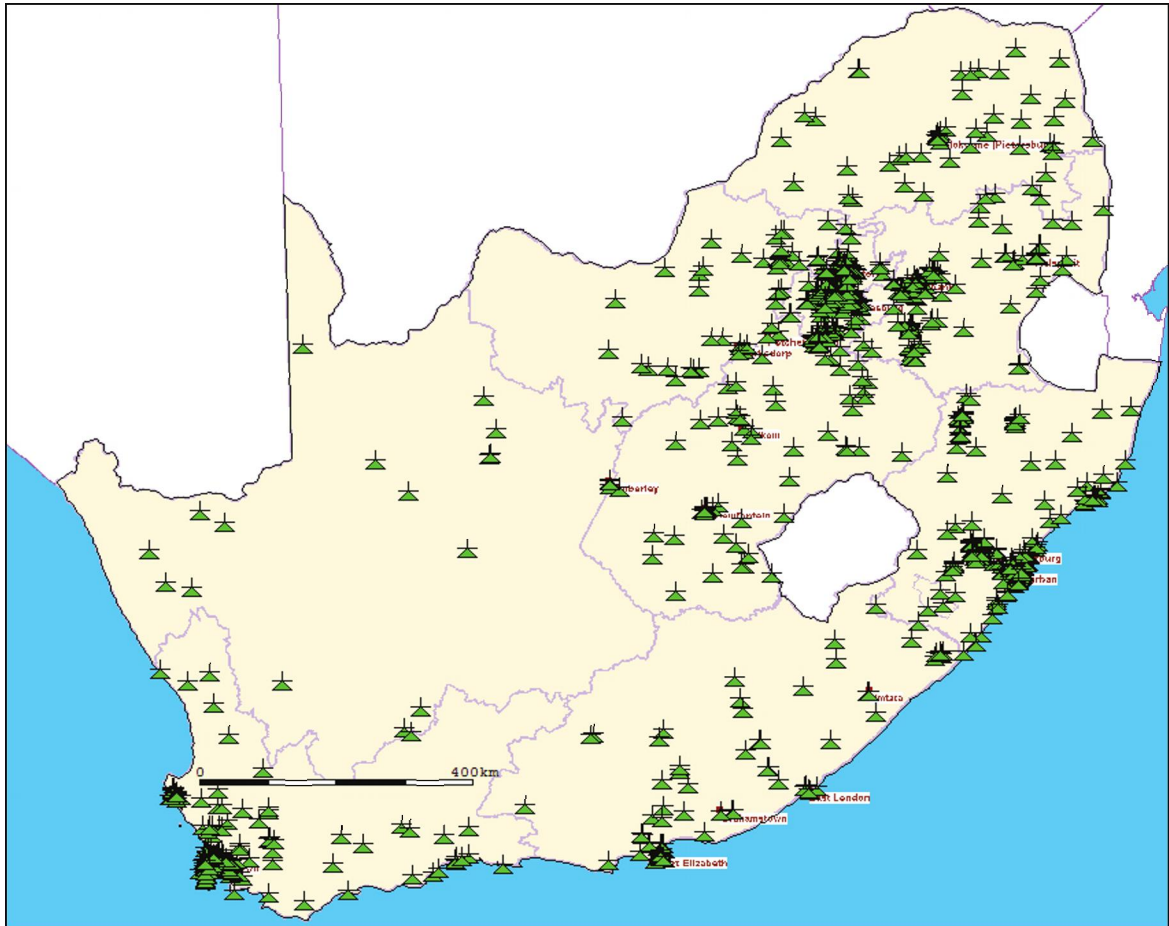
Legend	
<span style="display:inline-block; width:15px; height:10px; background-color:#90EE90; border:1px solid black;"></span>	1.65 MHz Transnet
<span style="display:inline-block; width:15px; height:10px; background-color:#FFFF00; border:1px solid black;"></span>	LTE Band 31
<span style="display:inline-block; width:15px; height:10px; background-color:#FFDAB9; border:1px solid black;"></span>	1.40 MHz Trial
<span style="display:inline-block; width:15px; height:10px; background-color:#ADD8E6; border:1px solid black;"></span>	0.85 MHz Application

**1.10.2 Licensing information for the applicable frequency allocation**

There are 2207 Licenses issued in this band 452.5 to 457.5 MHz

There are 2548 Licenses issued in this band 462.5 to 467.5 MHz

**1.10.3 Areas where licensed frequencies are operational.**





### **1.11 Applicable Frequency Allocation and Band information 694 MHz to 960 MHz**

Frequency Band under investigation 694 MHz to 960 MHz

MOBILE

BROADCASTING

FIXED (856 to 864.1 MHz)

Frequency Sub-bands

694 to 790 MHz & 790 to 862MHz & 862 to 890 & 890 to 942 & 942 to 960 MHz

Pairings

MOBILE UL 703 to 713 MHz paired with DL 758 to 768 MHz

MOBILE UL 713 to 723 MHz paired with DL 758 to 768 MHz

MOBILE UL 723 to 733 MHz paired with DL 758 to 768 MHz

MOBILE DL 791 to 801 MHz paired with UL 832 to 842 MHz

MOBILE DL 801 to 811 MHz paired with UL 842 to 852 MHz

MOBILE DL 811 to 821 MHz paired with UL 852 to 862 MHz

GSM-R (MTX) 877.695 to 880 MHz paired with (BTX) 921 to 925 MHz

IMT 900 (MTX) 880 to 915 MHz paired with (BTX) 925 to 960 MHz

FIXED Links 856 to 864.1 MHz paired with 868.1 to 876 MHz

RFID (including, passive tags and vehicle location) 915.1 to 921 MHz

Wireless Access 872.775 to 877.695 MHz paired with 827.775 to 832.695 MHz

Wireless audio systems and wireless microphones 863 to 865 MHz

CT2 Cordless phones 864.1 to 868.1 MHz

FWA 864.1 to 868.1 MHz

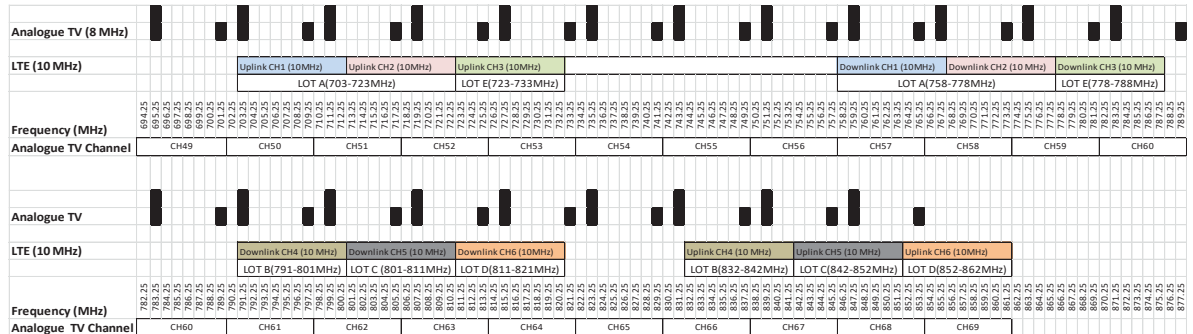
RFID 865 to 868 MHz

Non-specific SRD and RFID 869.4 to 869.65 MHz

Non-specific SRDs 868 to 868.6 MHz & 868.7 to 869.2 MHz

### 1.11.1 Channel Plan for the Frequency Allocation

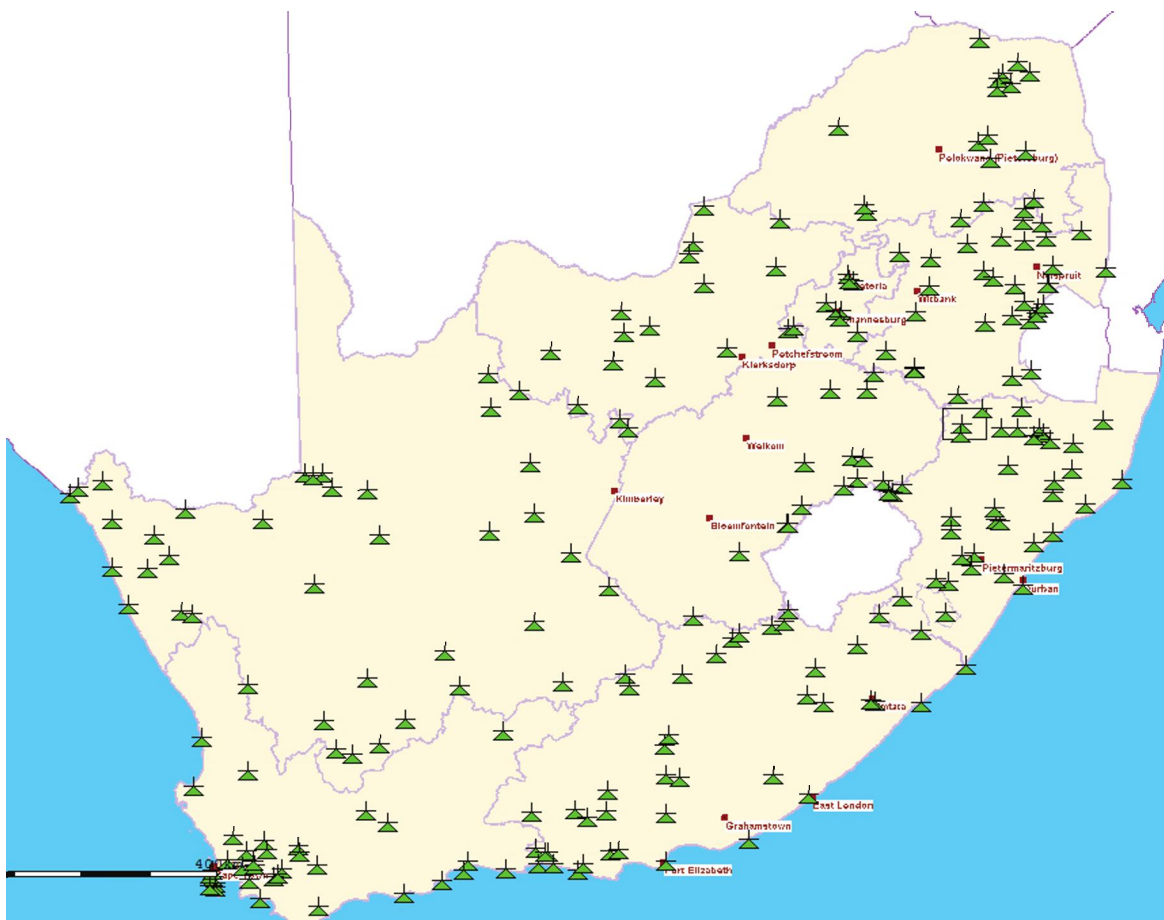
#### LTE Implementation Plan after Broadcast analogue Television switch-off



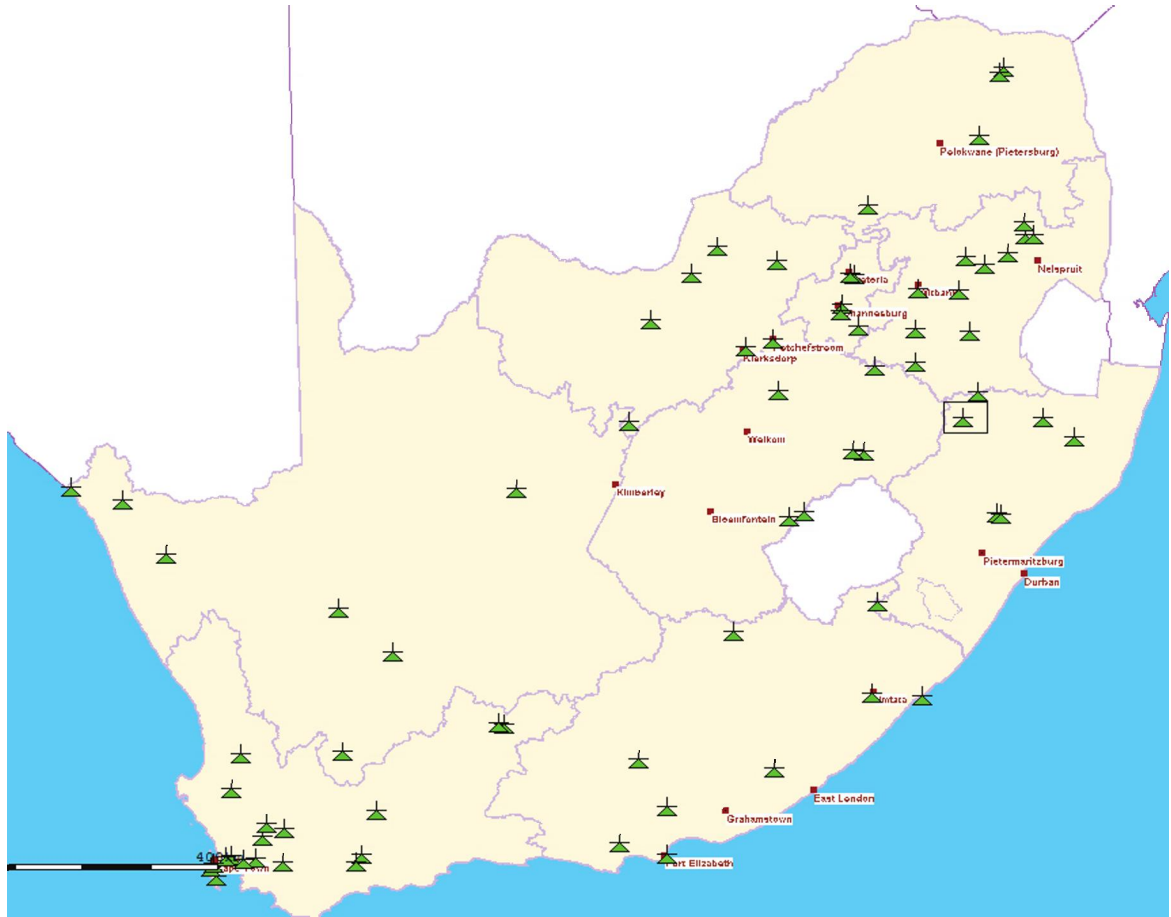
**1.11.2 Areas where licensed frequencies are operational.**

This does not include the low power self-help frequencies which are operational.

**1.11.2.1 Operational Analogue Broadcast Frequencies 694 MHz to 790 MHz**



### 1.11.2.2 Operational Analogue Broadcast Frequencies 790 MHz to 854 MHz



## **1.12 Applicable Frequency Allocation and Band information 1350 MHz to 1375 MHz & 1492 MHz to 1517 MHz**

FIXED NF 14

### **Frequency Band under investigation 1350 to 1375 MHz**

FIXED

### **Frequency Band under investigation 1492 to 1517 MHz**

FIXED

MOBILE except aeronautical mobile

Frequency Sub bands

Pairings

FIXED 1350 to 1375 MHz paired with 1492 to 1517 MHz

Fixed link (duplex)

### 1.12.1 Channel Plan for the Frequency Allocation

#### 1.12.1.1 Annexure A

1.4 GHz channel plans TR13-01(A) ITU-R F.1242																	
Annex A (new plan)																	
CEPT TR13-01(A)				CEPT TR13-01(A)				CEPT TR13-01(A)									
Band	1.4 GHz (F.S)			Band	1.4 GHz (F.S)			Band	1.4 GHz (F.S)								
Ctr.Freq	1433.5 MHz			Ctr.Freq	1433.5 MHz			Ctr.Freq	1433.5 MHz								
Ch.Width	25 kHz			Ch.Width	250 kHz			Ch.Width	500 kHz								
Separ.	142 MHz			Separ.	642 MHz			Separ.	142 MHz								
Ch.Spac.	100x25 kHz			Ch.Spac.	15x250 kHz			Ch.Spac.	35x500 kHz								
Ctr.Gap	117 MHz			Ctr.Gap	117 MHz			Ctr.Gap	117 MHz			Old plan					
Ch.	Go	Return		Go	Return	Ch.	Go	Return	Ch.	Go	Return	Ch.	Go	Return		channel nu.	
1	1350.5125	1492.5125	37	1351.4125	1493.4125	73	1352.3125	1494.3125	9	1356.1250	1497.1250	1	1357.2500	1499.2500		109	
2	1350.5375	1492.5375	38	1351.4375	1493.4375	74	1352.3375	1494.3375	10	1356.3750	1497.3750	2	1357.7500	1499.7500		110	
3	1350.5625	1492.5625	39	1351.4625	1493.4625	75	1352.3625	1494.3625	11	1356.6250	1497.6250	3	1358.2500	1500.2500		111	
4	1350.5875	1492.5875	40	1351.4875	1493.4875	76	1352.3875	1494.3875	12	1356.8750	1497.8750	4	1358.7500	1500.7500		112	
5	1350.6125	1492.6125	41	1351.5125	1493.5125	77	1352.4125	1494.4125	13	1356.1250	1498.1250	5	1359.2500	1501.2500		113	
6	1350.6375	1492.6375	42	1351.5375	1493.5375	78	1352.4375	1494.4375	14	1356.3750	1498.3750	6	1359.7500	1501.7500		114	
7	1350.6625	1492.6625	43	1351.5625	1493.5625	79	1352.4625	1494.4625	15	1356.6250	1498.6250	7	1360.2500	1502.2500		115	
8	1350.6875	1492.6875	44	1351.5875	1493.5875	80	1352.4875	1494.4875				8	1360.7500	1502.7500		116	
9	1350.7125	1492.7125	45	1351.6125	1493.6125	81	1352.5125	1494.5125				9	1361.2500	1503.2500		117	
10	1350.7375	1492.7375	46	1351.6375	1493.6375	82	1352.5375	1494.5375				10	1361.7500	1503.7500		118	
11	1350.7625	1492.7625	47	1351.6625	1493.6625	83	1352.5625	1494.5625				11	1362.2500	1504.2500		119	
12	1350.7875	1492.7875	48	1351.6875	1493.6875	84	1352.5875	1494.5875				12	1362.7500	1504.7500		120	
13	1350.8125	1492.8125	49	1351.7125	1493.7125	85	1352.6125	1494.6125				13	1363.2500	1505.2500		121	
14	1350.8375	1492.8375	50	1351.7375	1493.7375	86	1352.6375	1494.6375				14	1363.7500	1505.7500		122	
15	1350.8625	1492.8625	51	1351.7625	1493.7625	87	1352.6625	1494.6625				15	1364.2500	1506.2500		123	
16	1350.8875	1492.8875	52	1351.7875	1493.7875	88	1352.6875	1494.6875				16	1364.7500	1506.7500		124	
17	1350.9125	1492.9125	53	1351.8125	1493.8125	89	1352.7125	1494.7125				17	1365.2500	1507.2500		125	
18	1350.9375	1492.9375	54	1351.8375	1493.8375	90	1352.7375	1494.7375				18	1365.7500	1507.7500		126	
19	1350.9625	1492.9625	55	1351.8625	1493.8625	91	1352.7625	1494.7625				19	1366.2500	1508.2500		127	
20	1350.9875	1492.9875	56	1351.8875	1493.8875	92	1352.7875	1494.7875				20	1366.7500	1508.7500		128	
21	1351.0125	1493.0125	57	1351.9125	1493.9125	93	1352.8125	1494.8125				21	1367.2500	1509.2500		129	
22	1351.0375	1493.0375	58	1351.9375	1493.9375	94	1352.8375	1494.8375				22	1367.7500	1509.7500		130	
23	1351.0625	1493.0625	59	1351.9625	1493.9625	95	1352.8625	1494.8625				23	1368.2500	1510.2500		131	
24	1351.0875	1493.0875	60	1351.9875	1493.9875	96	1352.8875	1494.8875				24	1368.7500	1510.7500		132	
25	1351.1125	1493.1125	61	1352.0125	1494.0125	97	1352.9125	1494.9125				25	1369.2500	1511.2500		133 ad hoc	
26	1351.1375	1493.1375	62	1352.0375	1494.0375	98	1352.9375	1494.9375				26	1369.7500	1511.7500		134	
27	1351.1625	1493.1625	63	1352.0625	1494.0625	99	1352.9625	1494.9625				27	1370.2500	1512.2500		135 ad hoc	
28	1351.1875	1493.1875	64	1352.0875	1494.0875	100	1352.9875	1494.9875				28	1370.7500	1512.7500		136	
29	1351.2125	1493.2125	65	1352.1125	1494.1125	1	1353.1250	1495.1250				29	1371.2500	1513.2500		137 ad hoc	
30	1351.2375	1493.2375	66	1352.1375	1494.1375	2	1353.3750	1495.3750				30	1371.7500	1513.7500		138 ad hoc	
31	1351.2625	1493.2625	67	1352.1625	1494.1625	3	1353.6250	1495.6250				31	1372.2500	1514.2500		139	
32	1351.2875	1493.2875	68	1352.1875	1494.1875	4	1353.8750	1495.8750				32	1372.7500	1514.7500		140 ad hoc	
33	1351.3125	1493.3125	69	1352.2125	1494.2125	5	1354.1250	1496.1250				33	1373.2500	1515.2500		141	
34	1351.3375	1493.3375	70	1352.2375	1494.2375	6	1354.3750	1496.3750				34	1373.7500	1515.7500		142	
35	1351.3625	1493.3625	71	1352.2625	1494.2625	7	1354.6250	1496.6250				35	1374.2500	1516.2500		143	
36	1351.3875	1493.3875	72	1352.2875	1494.2875	8	1354.8750	1496.8750									
		25 kHz shared						250 kHz shared						500 kHz shared			
continue Annex B on next sheet																	
Typical users																	
Eskom																	
Transnet																	
SAPS																	
SANDF																	
Ekurhuleni																	
National Research Foundation																	

1.12.1.2 Annexure B

<b>Annex B (new plan)</b>			
	<b>CEPT TR13-01(B)</b>		
	<b>Band 1.4 GHz (F.S)</b>		
	<b>Ctr.Freq 1413.5 MHz</b>		
	<b>Ch.Width 500 kHz</b>		
	<b>Separ. 52 MHz</b>		
	<b>Ch.Spac. 48x500 kHz</b>		
	<b>Ctr.Gap 27 MHz</b>		
<b>Ch.</b>	<b>Go</b>	<b>Return</b>	
1	13 75.750 0	14 27.750 0	
2	13 76.250 0	14 28.250 0	
3	13 76.750 0	14 28.750 0	
4	13 77.250 0	14 29.250 0	
5	13 77.750 0	14 29.750 0	
6	13 78.250 0	14 30.250 0	
7	13 78.750 0	14 30.750 0	
8	13 79.250 0	14 31.250 0	
9	13 79.750 0	14 31.750 0	
10	13 80.250 0	14 32.250 0	Telkom
11	13 80.750 0	14 32.750 0	
12	13 81.250 0	14 33.250 0	Telkom
13	13 81.750 0	14 33.750 0	
14	13 82.250 0	14 34.250 0	
15	13 82.750 0	14 34.750 0	
16	13 83.250 0	14 35.250 0	
17	13 83.750 0	14 35.750 0	
18	13 84.250 0	14 36.250 0	
19	13 84.750 0	14 36.750 0	
20	13 85.250 0	14 37.250 0	
21	13 85.750 0	14 37.750 0	
22	13 86.250 0	14 38.250 0	
23	13 86.750 0	14 38.750 0	
24	13 87.250 0	14 39.250 0	
25	13 87.750 0	14 39.750 0	
26	13 88.250 0	14 40.250 0	
27	13 88.750 0	14 40.750 0	
28	13 89.250 0	14 41.250 0	
29	13 89.750 0	14 41.750 0	
30	13 90.250 0	14 42.250 0	
31	13 90.750 0	14 42.750 0	
32	13 91.250 0	14 43.250 0	
33	13 91.750 0	14 43.750 0	
34	13 92.250 0	14 44.250 0	
35	13 92.750 0	14 44.750 0	
36	13 93.250 0	14 45.250 0	
37	13 93.750 0	14 45.750 0	
38	13 94.250 0	14 46.250 0	
39	13 94.750 0	14 46.750 0	Telkom
40	13 95.250 0	14 47.250 0	Telkom
41	13 95.750 0	14 47.750 0	Telkom
42	13 96.250 0	14 48.250 0	Telkom
43	13 96.750 0	14 48.750 0	Telkom
44	13 97.250 0	14 49.250 0	Telkom
45	13 97.750 0	14 49.750 0	Telkom
46	13 98.250 0	14 50.250 0	Telkom
47	13 98.750 0	14 50.750 0	Telkom
48	13 99.250 0	14 51.250 0	Telkom

**1.12.1.3 Simplex Channels**

Single (or simplex) frequency channels (shared) [Intended for migration of links < 1 GHz]									
Based on REC ITU-R F.1242									
ITU / CEPT		1.5 GHz (F.S) Simplex							
Band									
Ctr.Freq		-							
Ch.Width		7x500 kHz & 140x25 kHz							
Separ.		-							
Ch.Spac.		7x 500 kHz & 140x 25 kHz							
Ctr.Gap		-							
Ch.		Ch.		Ch.		Ch.		Ch.	
1(IM T)	1517.75	37	1521.7375	73	1522.6375	109	1523.5375	145	1524.4375
2(IM T)	1518.25	38	1521.7625	74	1522.6625	110	1523.5625	146	1524.4625
3	1518.75	39	1521.7875	75	1522.6875	111	1523.5875	147	1524.4875
4	1519.25	40	1521.8125	76	1522.7125	112	1523.6125		
5	1519.75	41	1521.8375	77	1522.7375	113	1523.6375		
6	1520.25	42	1521.8625	78	1522.7625	114	1523.6625		
7	1520.75	43	1521.8875	79	1522.7875	115	1523.6875		
8	1521.0125	44	1521.9125	80	1522.8125	116	1523.7125		
9	1521.0375	45	1521.9375	81	1522.8375	117	1523.7375		
10	1521.0625	46	1521.9625	82	1522.8625	118	1523.7625		
11	1521.0875	47	1521.9875	83	1522.8875	119	1523.7875		
12	1521.1125	48	1522.0125	84	1522.9125	120	1523.8125		
13	1521.1375	49	1522.0375	85	1522.9375	121	1523.8375		
14	1521.1625	50	1522.0625	86	1522.9625	122	1523.8625		
15	1521.1875	51	1522.0875	87	1522.9875	123	1523.8875		
16	1521.2125	52	1522.1125	88	1523.0125	124	1523.9125		
17	1521.2375	53	1522.1375	89	1523.0375	125	1523.9375		
18	1521.2625	54	1522.1625	90	1523.0625	126	1523.9625		
19	1521.2875	55	1522.1875	91	1523.0875	127	1523.9875		
20	1521.3125	56	1522.2125	92	1523.1125	128	1524.0125		
21	1521.3375	57	1522.2375	93	1523.1375	129	1524.0375		
22	1521.3625	58	1522.2625	94	1523.1625	130	1524.0625		
23	1521.3875	59	1522.2875	95	1523.1875	131	1524.0875		
24	1521.4125	60	1522.3125	96	1523.2125	132	1524.1125		
25	1521.4375	61	1522.3375	97	1523.2375	133	1524.1375		
26	1521.4625	62	1522.3625	98	1523.2625	134	1524.1625		
27	1521.4875	63	1522.3875	99	1523.2875	135	1524.1875		
28	1521.5125	64	1522.4125	100	1523.3125	136	1524.2125		
29	1521.5375	65	1522.4375	101	1523.3375	137	1524.2375		
30	1521.5625	66	1522.4625	102	1523.3625	138	1524.2625		
31	1521.5875	67	1522.4875	103	1523.3875	139	1524.2875		
32	1521.6125	68	1522.5125	104	1523.4125	140	1524.3125		
33	1521.6375	69	1522.5375	105	1523.4375	141	1524.3375		
34	1521.6625	70	1522.5625	106	1523.4625	142	1524.3625		
35	1521.6875	71	1522.5875	107	1523.4875	143	1524.3875		
36	1521.7125	72	1522.6125	108	1523.5125	144	1524.4125		

**1.13 Applicable Frequency Allocation and Band information 1518 MHz to 1525 MHz**

FIXED

MOBILE-SATELLITE (space to Earth)

Frequency Band under investigation 1518 to 1525 MHz



This band is identified for IMT Satellite Components (Space to earth)

#### **1.13.1 Channel Plan for the Frequency Allocation**

See previous section for more details

#### **1.13.2 Licensing information for the applicable frequency allocation**

See previous section for more details

### **1.14 Applicable Frequency Allocation and Band information 1700 MHz to 2450 MHz**

Frequency Band under investigation 1700 to 2450 MHz and sub band 2025 to 2110 MHz

#### **1700 to 1710 MHz**

METEOROLOGICAL SATELLITE (space to Earth)

Fixed Links (single frequency)

#### **1710 to 1980 MHz**

FIXED

MOBILE

FWA 1880 to 1900 MHz

FWA TDD 1900 to 1920 MHz

Fixed Broadband data applications: 1785 to 1805 MHz

IMT 1800 MTX: 1710 to 1785 MHz paired with BTX 1805 to 1880 MHz

Cordless Telephones: 1880 to 1900 MHz

IMT 1900 TDD: 1900 to 1920 MHz

IMT 2100 MTX: 1920 to 1980 MHz paired with BTX 2110 to 2170 MHz

#### **1980 to 2010 MHz**

FIXED

MOBILE

MOBILE-SATELLITE

FIXED Links: 1980 to 2010 MHz paired with 2170 to 2200 MHz

CGC/ATC fixed systems: 1980 to 2010 MHz

IMT satellite: 1980 to 2010 MHz

**2010 to 2025 MHz**

FIXED

MOBILE

IMT TDD: 2010 to 2025 MHz

**2025 to 2110 MHz**

FIXED

Fixed Links: 2025 to 2110 MHz paired with 2200 to 2285 MHz

**2110 to 2170 MHz**

FIXED

MOBILE

IMT 2100 BTX 2110 to 2170 MHz paired with 1920 to 1980

**2170 to 2200 MHz**

FIXED

MOBILE

MOBILE-SATELLITE (space to Earth)

Fixed Links 2170 to 2200 MHz paired with 1980 to 2010

CGC/ATC fixed systems: 1980 to 2010 MHz

IMT satellite: 1980 to 2010 MHz

**2200 to 2300 MHz**

SPACE OPERATION (space to Earth) (space to space)

FIXED  
MOBILE

Fixed Links 2025 to 2110 MHz paired with 2200 to 2285 MHz  
BFWA 2285 to 2300 MHz

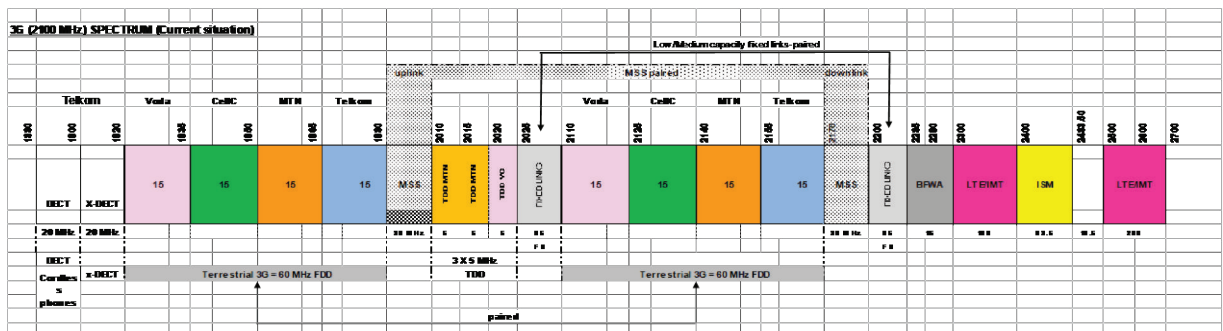
ITU-R Rec F.1098 refers

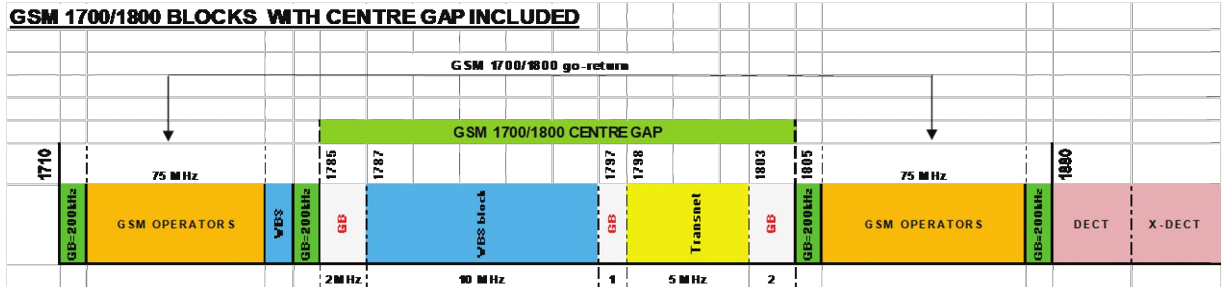
**2300 to 2450 MHz**

FIXED  
MOBILE  
Amateur

FWA (PTP/PTMP): 2307 to 2387 paired with 2401 to 2481 MHz  
FWA (PTP/PTMP): 2401 to 2481 paired with MHz 2307 to 2387  
IMT 2300 TDD: 2300 to 2400 MHz  
WLAN, FDDA and model ctrl: 2400 to 2483.5 MHz  
Non Specific SRDs and low power video surveillance: 2400 2483.5 MHz  
RFDI: 2400 2483.5 MHz  
ISM applications: 2400 2483.5 MHz

**1.14.1 Channel Plan for the Frequency Allocation**





**GSM 1800**

<b>GSM 1800</b>					
<b>Ch. No.</b>	<b>ARFCN (Fl), MHz</b>	<b>ARFCN (Fu), MHz</b>	<b>Assignment/usage current</b>	<b>Comments</b>	<b>Final assignment</b>
512	1710.2	1805.2			GB
513	1710.4	1805.4			Liquid Telecom
514	1710.6	1805.6			Liquid Telecom
515	1710.8	1805.8			Liquid Telecom
516	1711	1806			Liquid Telecom
517	1711.2	1806.2			Liquid Telecom
518	1711.4	1806.4			Liquid Telecom
519	1711.6	1806.6			Liquid Telecom
520	1711.8	1806.8			Liquid Telecom
521	1712	1807			Liquid Telecom
522	1712.2	1807.2			Liquid Telecom
523	1712.4	1807.4			Liquid Telecom
524	1712.6	1807.6			Liquid Telecom
525	1712.8	1807.8			Liquid Telecom
526	1713	1808			Liquid Telecom
527	1713.2	1808.2			Liquid Telecom
528	1713.4	1808.4			Liquid Telecom
529	1713.6	1808.6			Liquid Telecom
530	1713.8	1808.8			Liquid Telecom
531	1714	1809			Liquid Telecom
532	1714.2	1809.2			Liquid Telecom
533	1714.4	1809.4			Liquid Telecom
534	1714.6	1809.6			Liquid Telecom
535	1714.8	1809.8			Liquid Telecom
536	1715	1810			Liquid Telecom
537	1715.2	1810.2			Liquid Telecom
538	1715.4	1810.4			Liquid Telecom
539	1715.6	1810.6			Liquid Telecom
540	1715.8	1810.8			Liquid Telecom
541	1716	1811			Liquid Telecom
542	1716.2	1811.2			Liquid Telecom
543	1716.4	1811.4			Liquid Telecom
544	1716.6	1811.6			Liquid Telecom
545	1716.8	1811.8			Liquid Telecom
546	1717	1812			Liquid Telecom
547	1717.2	1812.2			Liquid Telecom
548	1717.4	1812.4			Liquid Telecom
549	1717.6	1812.6			Liquid Telecom
550	1717.8	1812.8			Liquid Telecom
551	1718	1813			Liquid Telecom
552	1718.2	1813.2			Liquid Telecom
553	1718.4	1813.4			Liquid Telecom
554	1718.6	1813.6			Liquid Telecom
555	1718.8	1813.8			Liquid Telecom
556	1719	1814			Liquid Telecom
557	1719.2	1814.2			Liquid Telecom
558	1719.4	1814.4			Liquid Telecom
559	1719.6	1814.6			Liquid Telecom
560	1719.8	1814.8			Liquid Telecom
561	1720	1815			Liquid Telecom
562	1720.2	1815.2			Liquid Telecom
563	1720.4	1815.4			Liquid Telecom
564	1720.6	1815.6			Liquid Telecom
565	1720.8	1815.8			Liquid Telecom
566	1721	1816			Liquid Telecom
567	1721.2	1816.2			Liquid Telecom
568	1721.4	1816.4			Liquid Telecom
569	1721.6	1816.6			Liquid Telecom
570	1721.8	1816.8			Liquid Telecom
571	1722	1817			Liquid Telecom
572	1722.2	1817.2			Liquid Telecom

<u>Ch. No.</u>	<u>ARFCN (F1), MHz</u>	<u>ARFCN (Fu), MHz</u>	<u>Assignment/usage current</u>	<u>Comments</u>	<u>Final assignment</u>
637	1735.2	1830.2			Telkom
638	1735.4	1830.4			Telkom
639	1735.6	1830.6			Telkom
640	1735.8	1830.8			Telkom
641	1736	1831			Telkom
642	1736.2	1831.2			Telkom
643	1736.4	1831.4			Telkom
644	1736.6	1831.6			Telkom
645	1736.8	1831.8			Telkom
646	1737	1832			Telkom
647	1737.2	1832.2			Telkom
648	1737.4	1832.4			Telkom
649	1737.6	1832.6			Telkom
650	1737.8	1832.8			Telkom
651	1738	1833			Telkom
652	1738.2	1833.2			Telkom
653	1738.4	1833.4			Telkom
654	1738.6	1833.6			Telkom
655	1738.8	1833.8			Telkom
656	1739	1834			Telkom
657	1739.2	1834.2			Telkom
658	1739.4	1834.4			Telkom
659	1739.6	1834.6			Telkom
660	1739.8	1834.8			Telkom
661	1740	1835			Telkom
662	1740.2	1835.2			Telkom
663	1740.4	1835.4			Telkom
664	1740.6	1835.6			Telkom
665	1740.8	1835.8			Telkom
666	1741	1836			Telkom
667	1741.2	1836.2			Telkom
668	1741.4	1836.4			Telkom
669	1741.6	1836.6			Telkom
670	1741.8	1836.8			Telkom
671	1742	1837			Telkom
672	1742.2	1837.2			Telkom
673	1742.4	1837.4			Telkom
674	1742.6	1837.6			Telkom
675	1742.8	1837.8			Telkom
676	1743	1838			Telkom
677	1743.2	1838.2			Telkom
678	1743.4	1838.4			Telkom
679	1743.6	1838.6			Telkom
680	1743.8	1838.8			Telkom
681	1744	1839			Telkom
682	1744.2	1839.2			Telkom
683	1744.4	1839.4			Telkom
684	1744.6	1839.6			Telkom
685	1744.8	1839.8			Telkom
686	1745	1840			Telkom
687	1745.2	1840.2			Telkom
688	1745.4	1840.4			Telkom
689	1745.6	1840.6			Telkom
690	1745.8	1840.8			Telkom
691	1746	1841			Telkom
692	1746.2	1841.2			Telkom
693	1746.4	1841.4			Telkom
694	1746.6	1841.6			Telkom
695	1746.8	1841.8			Telkom
696	1747	1842			Telkom
697	1747.2	1842.2			GB
698	1747.4	1842.4			GB
699	1747.6	1842.6			GB
700	1747.8	1842.8			GB

<u>Ch. No.</u>	<u>ARFCN (Fi), MHz</u>	<u>ARFCN (Fu), MHz</u>	<u>Assignment/usage current</u>	<u>Comments</u>	<u>Final assignment</u>
701	1748	1843			Cell C
702	1748.2	1843.2			Cell C
703	1748.4	1843.4			Cell C
704	1748.6	1843.6			Cell C
705	1748.8	1843.8			Cell C
706	1749	1844			Cell C
707	1749.2	1844.2			Cell C
708	1749.4	1844.4			Cell C
709	1749.6	1844.6			Cell C
710	1749.8	1844.8			Cell C
711	1750	1845			Cell C
712	1750.2	1845.2			Cell C
713	1750.4	1845.4			Cell C
714	1750.6	1845.6			Cell C
715	1750.8	1845.8			Cell C
716	1751	1846			Cell C
717	1751.2	1846.2			Cell C
718	1751.4	1846.4			Cell C
719	1751.6	1846.6			Cell C
720	1751.8	1846.8			Cell C
721	1752	1847			Cell C
722	1752.2	1847.2			Cell C
723	1752.4	1847.4			Cell C
724	1752.6	1847.6			Cell C
725	1752.8	1847.8			Cell C
726	1753	1848			Cell C
727	1753.2	1848.2			Cell C
728	1753.4	1848.4			Cell C
729	1753.6	1848.6			Cell C
730	1753.8	1848.8			Cell C
731	1754	1849			Cell C
732	1754.2	1849.2			Cell C
733	1754.4	1849.4			Cell C
734	1754.6	1849.6			Cell C
735	1754.8	1849.8			Cell C
736	1755	1850			Cell C
737	1755.2	1850.2			Cell C
738	1755.4	1850.4			Cell C
739	1755.6	1850.6			Cell C
740	1755.8	1850.8			Cell C
741	1756	1851			Cell C
742	1756.2	1851.2			Cell C
743	1756.4	1851.4			Cell C
744	1756.6	1851.6			Cell C
745	1756.8	1851.8			Cell C
746	1757	1852			Cell C
747	1757.2	1852.2			Cell C
748	1757.4	1852.4			Cell C
749	1757.6	1852.6			Cell C
750	1757.8	1852.8			Cell C
751	1758	1853			Cell C
752	1758.2	1853.2			Cell C
753	1758.4	1853.4			Cell C
754	1758.6	1853.6			Cell C
755	1758.8	1853.8			Cell C
756	1759	1854			Cell C
757	1759.2	1854.2			Cell C
758	1759.4	1854.4			Cell C
759	1759.6	1854.6			Cell C
760	1759.8	1854.8			Cell C
761	1760	1855			GB
762	1760.2	1855.2			GB



<u>Ch. No.</u>	<u>ARFCN (Fl), MHz</u>	<u>ARFCN (Fu), MHz</u>	<u>Assignment/usage current</u>	<u>Comments</u>	<u>Final assignment</u>
763	1760.4	1855.4			Vodacom
764	1760.6	1855.6			Vodacom
765	1760.8	1855.8			Vodacom
766	1761	1856			Vodacom
767	1761.2	1856.2			Vodacom
768	1761.4	1856.4			Vodacom
769	1761.6	1856.6			Vodacom
770	1761.8	1856.8			Vodacom
771	1762	1857			Vodacom
772	1762.2	1857.2			Vodacom
773	1762.4	1857.4			Vodacom
774	1762.6	1857.6			Vodacom
775	1762.8	1857.8			Vodacom
776	1763	1858			Vodacom
777	1763.2	1858.2			Vodacom
778	1763.4	1858.4			Vodacom
779	1763.6	1858.6			Vodacom
780	1763.8	1858.8			Vodacom
781	1764	1859			Vodacom
782	1764.2	1859.2			Vodacom
783	1764.4	1859.4			Vodacom
784	1764.6	1859.6			Vodacom
785	1764.8	1859.8			Vodacom
786	1765	1860			Vodacom
787	1765.2	1860.2			Vodacom
788	1765.4	1860.4			Vodacom
789	1765.6	1860.6			Vodacom
790	1765.8	1860.8			Vodacom
791	1766	1861			Vodacom
792	1766.2	1861.2			Vodacom
793	1766.4	1861.4			Vodacom
794	1766.6	1861.6			Vodacom
795	1766.8	1861.8			Vodacom
796	1767	1862			Vodacom
797	1767.2	1862.2			Vodacom
798	1767.4	1862.4			Vodacom
799	1767.6	1862.6			Vodacom
800	1767.8	1862.8			Vodacom
801	1768	1863			Vodacom
802	1768.2	1863.2			Vodacom
803	1768.4	1863.4			Vodacom
804	1768.6	1863.6			Vodacom
805	1768.8	1863.8			Vodacom
806	1769	1864			Vodacom
807	1769.2	1864.2			Vodacom
808	1769.4	1864.4			Vodacom
809	1769.6	1864.6			Vodacom
810	1769.8	1864.8			Vodacom
811	1770	1865			Vodacom
812	1770.2	1865.2			Vodacom
813	1770.4	1865.4			Vodacom
814	1770.6	1865.6			Vodacom
815	1770.8	1865.8			Vodacom
816	1771	1866			Vodacom
817	1771.2	1866.2			Vodacom
818	1771.4	1866.4			Vodacom
819	1771.6	1866.6			Vodacom
820	1771.8	1866.8			Vodacom
821	1772	1867			Vodacom
822	1772.2	1867.2			Vodacom
823	1772.4	1867.4			GB
824	1772.6	1867.6			GB

<u>Ch. No.</u>	<u>ARFCN (Fi). MHz</u>	<u>ARFCN (Fu). MHz</u>	<u>Assignment/usage current</u>	<u>Comments</u>	<u>Final assignment</u>
825	1772.8	1867.8			Rain
826	1773	1868			Rain
827	1773.2	1868.2			Rain
828	1773.4	1868.4			Rain
829	1773.6	1868.6			Rain
830	1773.8	1868.8			Rain
831	1774	1869			Rain
832	1774.2	1869.2			Rain
833	1774.4	1869.4			Rain
834	1774.6	1869.6			Rain
835	1774.8	1869.8			Rain
836	1775	1870			Rain
837	1775.2	1870.2			Rain
838	1775.4	1870.4			Rain
839	1775.6	1870.6			Rain
840	1775.8	1870.8			Rain
841	1776	1871			Rain
842	1776.2	1871.2			Rain
843	1776.4	1871.4			Rain
844	1776.6	1871.6			Rain
845	1776.8	1871.8			Rain
846	1777	1872			Rain
847	1777.2	1872.2			Rain
848	1777.4	1872.4			Rain
849	1777.6	1872.6			Rain
850	1777.8	1872.8			Rain
851	1778	1873			Rain
852	1778.2	1873.2			Rain
853	1778.4	1873.4			Rain
854	1778.6	1873.6			Rain
855	1778.8	1873.8			Rain
856	1779	1874			Rain
857	1779.2	1874.2			Rain
858	1779.4	1874.4			Rain
859	1779.6	1874.6			Rain
860	1779.8	1874.8			Rain
861	1780	1875			Rain
862	1780.2	1875.2			Rain
863	1780.4	1875.4			Rain
864	1780.6	1875.6			Rain
865	1780.8	1875.8			Rain
866	1781	1876			Rain
867	1781.2	1876.2			Rain
868	1781.4	1876.4			Rain
869	1781.6	1876.6			Rain
870	1781.8	1876.8			Rain
871	1782	1877			Rain
872	1782.2	1877.2			Rain
873	1782.4	1877.4			Rain
874	1782.6	1877.6			Rain
875	1782.8	1877.8			Rain
876	1783	1878			Rain
877	1783.2	1878.2			Rain
878	1783.4	1878.4			Rain
879	1783.6	1878.6			Rain
880	1783.8	1878.8			Rain
881	1784	1879			Rain
882	1784.2	1879.2			Rain
883	1784.4	1879.4			Rain
884	1784.6	1879.6			Rain
885	1784.8	1879.8			GB

**2 GHz Plan based on ITU F.10-98, Annex 1a)**

Frequency channels are assigned on a radio co-ordinated basis with other users, i.e. channels that are available on a "per link" basis

Radiocommunication Study Group 9 made editorial amendments to this Recommendation in 2002 in accordance with Resolution ITU-R 44.

Correct channelisation

f0=2155			f0=2155			f0=2155			f0=2155		
Separation = 175 MHz			Separation = 175 MHz			Separation = 175 MHz			Separation = 175 MHz		
Centre gap = 90 MHz			Centre gap = 90 MHz			Centre gap = 90 MHz			Centre gap = 90 MHz		
Ch spacing = 14 MHz			Ch spacing = 7 MHz			Ch spacing = 3.5 MHz			Ch spacing = 1.75 MHz		
Ch	Go	Return	Ch	Go	Return	Ch	Go	Return	Ch	Go	Return
1	2032.5	2207.5	1	2029	2204	1	2027.25	2202.25	1	2026.375	2201.375
2	2046.5	2221.5	2	2036	2211	2	2030.75	2205.75	2	2028.125	2203.125
3	2060.5	2235.5	3	2043	2218	3	2034.25	2209.25	3	2029.875	2204.875
4	2074.5	2249.5	4	2050	2225	4	2037.75	2212.75	4	2031.625	2206.625
5	2088.5	2263.5	5	2057	2232	5	2041.25	2216.25	5	2033.375	2208.375
6	2102.5	2277.5	6	2064	2239	6	2044.75	2219.75	6	2035.125	2210.125
			7	2071	2246	7	2048.25	2223.25	7	2036.875	2211.875
			8	2078	2253	8	2051.75	2226.75	8	2038.625	2213.625
			9	2085	2260	9	2055.25	2230.25	9	2040.375	2215.375
			10	2092	2267	10	2058.75	2233.75	10	2042.125	2217.125
			11	2099	2274	11	2062.25	2237.25	11	2043.875	2218.875
			12	2106	2281	12	2065.75	2240.75	12	2045.625	2220.625
						13	2069.25	2244.25	13	2047.375	2222.375
						14	2072.75	2247.75	14	2049.125	2224.125
						15	2076.25	2251.25	15	2050.875	2225.875
						16	2079.75	2254.75	16	2052.625	2227.625
						17	2083.25	2258.25	17	2054.375	2229.375
						18	2086.75	2261.75	18	2056.125	2231.125
						19	2090.25	2265.25	19	2057.875	2232.875
						20	2093.75	2268.75	20	2059.625	2234.625
						21	2097.25	2272.25	21	2061.375	2236.375
						22	2100.75	2275.75	22	2063.125	2238.125
						23	2104.25	2279.25	23	2064.875	2239.875
						24	2107.75	2282.75	24	2066.625	2241.625
									25	2068.375	2243.375
									26	2070.125	2245.125
									27	2071.875	2246.875
									28	2073.625	2248.625
									29	2075.375	2250.375
									30	2077.125	2252.125
									31	2078.875	2253.875
									32	2080.625	2255.625
									33	2082.375	2257.375
									34	2084.125	2259.125
									35	2085.875	2260.875
									36	2087.625	2262.625
									37	2089.375	2264.375
									38	2091.125	2266.125
									39	2092.875	2267.875
									40	2094.625	2269.625
									41	2096.375	2271.375
									42	2098.125	2273.125
									43	2099.875	2274.875
									44	2101.625	2276.625
									45	2103.375	2278.375
									46	2105.125	2280.125
									47	2106.875	2281.875
									48	2108.625	2283.625

Users:

Mbombela Local Municipality					
Richards Bay Titanium					
SANDF	?				
SAPS	?				
Sky Connect		?			
Telkom					
Transnet					
Kaltrade	ch 6 temporary		ch1 Gauteng		
SANSA					

**1.14.2 Licensing information for the applicable frequency allocation**

See above for license information on specific bands

### 1.15 Applicable Frequency Allocation and Band information 2500 MHz to 2655 MHz

MOBILE except aeronautical mobile

#### Frequency Band under investigation 2500 to 2655 MHz

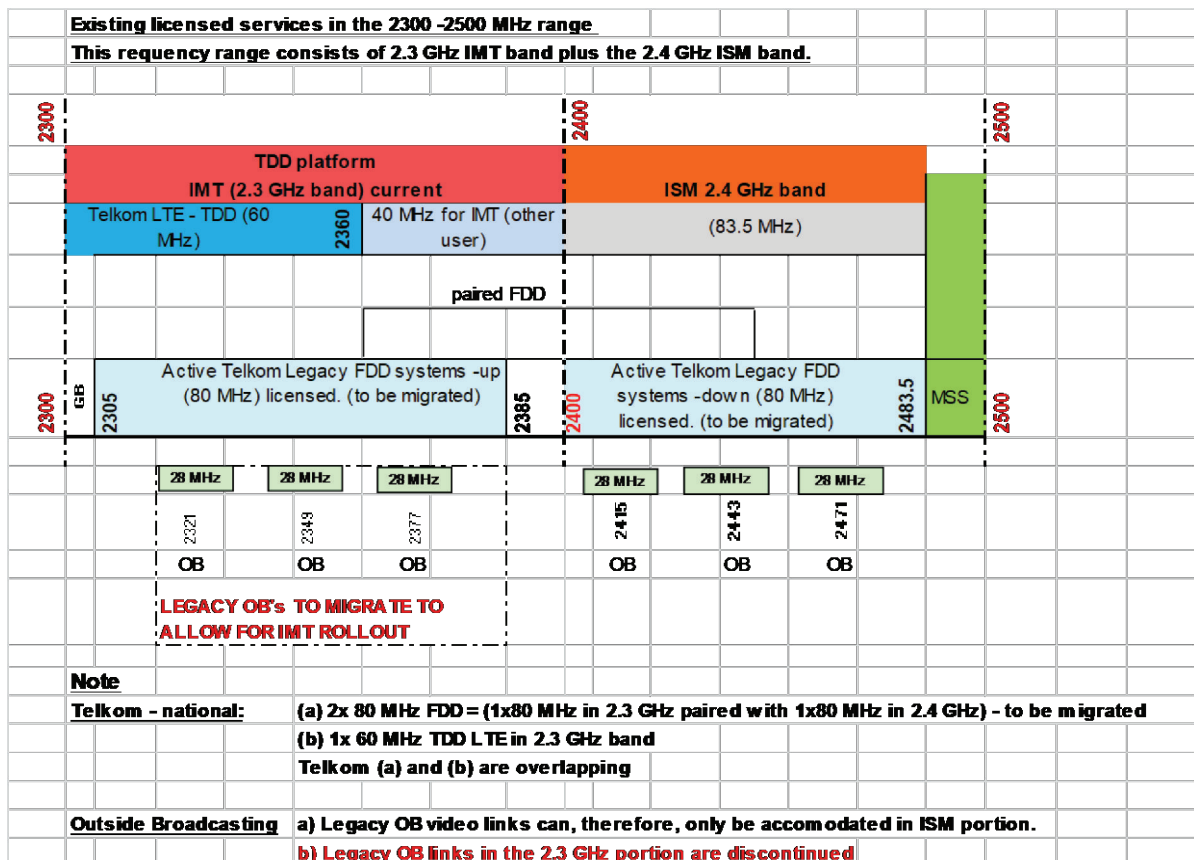
IMT 2600 MTX 2500 to 2570 MHz paired with BTX 2620 to 2690 MHz

IMT 2600 TDD: 2570 to 2620 MHz

IMT 2600 BTX 2620 to 2690 MHz paired with MTX 2500 to 2570 MHz

IMT 2500 to 2690 MHz

#### 1.15.1 Channel Plan for the Frequency Allocation



### 1.16 Applicable Frequency Allocation and Band information 2655 MHz to 2690 MHz

MOBILE except aeronautical mobile

Radio astronomy

#### Frequency Band under investigation 2655 to 2690 MHz

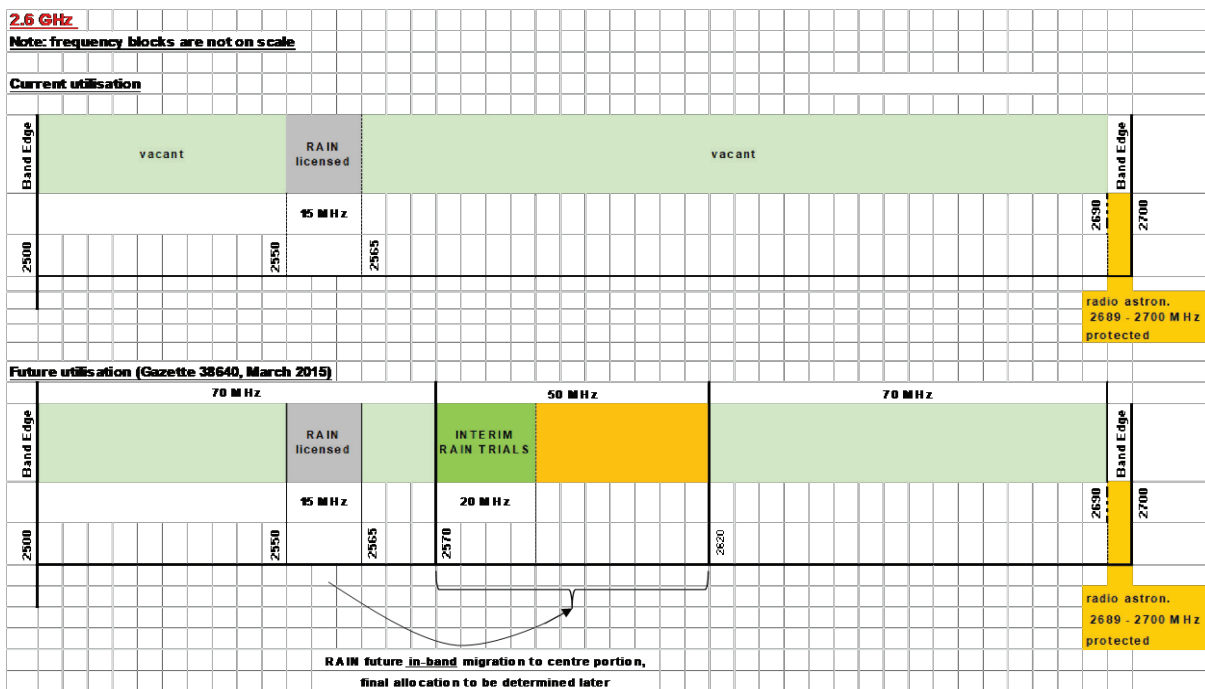
IMT 2600 BTX 2620 to 2690 MHz paired with MTX 2500 to 2570 MHz

IMT 2500 to 2690 MHz

IMT 2600 MTX 2500 to 2570 MHz paired with MTX 2620 to 2690 MHz

Telecommunication Roadmap GG No 38213 14 November 2014.

#### 1.16.1 Channel Plan for the Frequency Allocation



#### 1.16.2 Licensing information for the applicable frequency allocation

See above for more information

### **1.17 Applicable Frequency Allocation and Band information 3300 MHz to 3600 MHz**

Frequency Band under Investigation 3300 to 3400 MHz

#### **RADIOLOCATION**

Government Services

IMT Res. 223 (Rev WRC-15)

Subject to the outcome of the sharing and compatibility studies called for by Resolution 223 (WRC 15) currently underway within ITU-R, there might be a need to migrate Radars out of this band. This will be addressed through the update of the migration plan.

#### **Frequency Band under investigation 3400 to 3600 MHz**

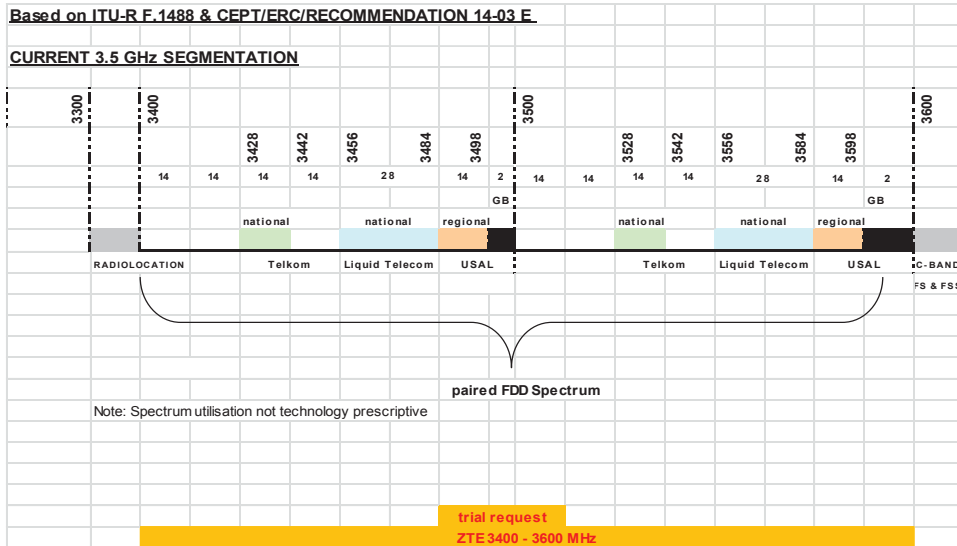
FIXED

MOBILE

IMT3500 TDD: 3400 to 3600 MHz

International Mobile Telecommunications Roadmap (Government Gazette Number 38213) 14 November 2014. Radio Frequency Assignment Plan (GG No 38640) as amended 30 March 2015. Recommendation ITU-R M. 1036. The band 3400 to 3600 MHz is also used for BFWA in some SADC countries.

### 1.17.1 Channel Plan for the Frequency Allocation



### 1.17.2 Licensing information for the applicable frequency allocation

See above for more information

# **Appendix H    Articles 31 and 52 of the ITU Radio Regulations and Rec. ITU-R SM.1603**



## ARTICLE 31 of the ITU Radio Regulations

### Frequencies for the global maritime distress and safety system (GMDSS)

#### Section I – General

**31.1** § 1 The frequencies to be used for the transmission of distress and safety information under the GMDSS are contained in Appendix **15**. In addition to the frequencies listed in Appendix **15**, ship stations and coast stations should use other appropriate frequencies for the transmission of safety messages and general radiocommunications to and from shore-based radio systems or networks. (WRC-07)

**31.2** § 2 Any emission causing harmful interference to distress and safety communications on any of the discrete frequencies identified in Appendix **15** is prohibited. (WRC-07)

**31.3** § 3 The number and duration of test transmissions shall be kept to a minimum on the frequencies identified in Appendix **15**; they should be coordinated with a competent authority, as necessary, and, wherever practicable, be carried out on artificial antennas or with reduced power. However, testing on the distress and safety calling frequencies should be avoided, but where this is unavoidable, it should be indicated that these are test transmissions. **31.4** § 4 Before transmitting for other than distress purposes on any of the frequencies identified in Appendix **15** for distress and safety, a station shall, where practicable, listen on the frequency concerned to make sure that no distress transmission is being sent. **31.5** Not used.

#### Section II – Survival craft stations

**31.6** § 5 1) Equipment for radiotelephony use in survival craft stations shall, if capable of operating on any frequency in the bands between 156 MHz and 174 MHz, be able to transmit and receive on 156.8 MHz and at least one other frequency in these bands.

**31.7** 2) Equipment for transmitting locating signals from survival craft stations shall be capable of operating in the 9 200-9 500 MHz band.

**31.8** 3) Equipment with digital selective calling facilities for use in survival craft shall, if capable of operating:

**31.9** a) in the bands between 1 606.5 kHz and 2 850 kHz, be able to transmit on 2 187.5 kHz; (WRC-03)

**31.10** *b*) in the bands between 4 000 kHz and 27 500 kHz, be able to transmit on 8 414.5 kHz;

**31.11** *c*) in the bands between 156 MHz and 174 MHz, be able to transmit on 156.525 MHz.

## **RR31-2** CHAPTER VII **Distress and safety communications**

### **Section III – Watch keeping**

#### **31.12** *A – Coast stations*

**31.13** § 6 Those coast stations assuming a watch-keeping responsibility in the GMDSS shall maintain an automatic digital selective calling watch on frequencies and for periods of time as indicated in the information published in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

#### **31.14** *B – Coast earth stations*

**31.15** § 7 Those coast earth stations assuming a watch-keeping responsibility in the GMDSS shall maintain a continuous automatic watch for appropriate distress alerts relayed by space stations.

#### **31.16** *C – Ship stations*

**31.17** § 8 1) Ship stations, where so equipped, shall, while at sea, maintain an automatic digital selective calling watch on the appropriate distress and safety calling frequencies in the frequency bands in which they are operating. Ship stations, where so equipped, shall also maintain watch on the appropriate frequencies for the automatic reception of transmissions of meteorological and navigational warnings and other urgent information to ships. (WRC-07)

**31.18** 2) Ship stations complying with the provisions of this Chapter should, where practicable, maintain a watch on the frequency 156.8 MHz (VHF channel 16). (WRC-07)

#### **31.19** *D – Ship earth stations*

**31.20** § 9 Ship earth stations complying with the provisions of this Chapter shall, while at sea, maintain watch except when communicating on a working channel.

## ARTICLE 52 of the ITU Radio Regulations

### Special rules relating to the use of frequencies

#### Section I – General provisions

##### 52.1 A – Single-sideband radiotelegraph transmissions

52.2 § 1 1) Where these provisions specify A1A emission, class A1B or J2A emissions shall be considered equivalent.

52.3 2) Where these provisions specify class F1B emission, class J2B and J2D emissions shall be considered equivalent. However, class J2D emission shall not be used with the HF distress and safety frequencies listed in Appendix 15.

##### 52.4 B – Bands between 415 kHz and 535 kHz

##### 52.5 (SUP - WRC-07)

52.6 § 3 1) In the maritime mobile service, no assignments shall be made on the frequency 518 kHz other than for transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of automatic narrow-band direct-printing telegraphy (International NAVTEX System).

52.7 2) In the maritime mobile service, the frequency 490 kHz is used exclusively for the transmission by coast stations of meteorological and navigational warnings and urgent information to ships by means of narrow-band direct-printing telegraphy. (WRC-03)

##### 52.8 C – Bands between 1 606.5 kHz and 4 000 kHz (WRC-03)

52.9 § 4 1) In Region 1, frequencies assigned to stations operating in the bands between 1 850 kHz and 3 800 kHz (see Article 5) should, whenever possible, be in accordance with the following subdivision:

- 1 850-1 950 kHz: Coast stations, single-sideband radiotelephony.
- 1 950-2 045 kHz: Ship stations, single-sideband radiotelephony.
- 2 194-2 262.5 kHz: Ship stations, single-sideband radiotelephony.
- 2 262.5-2 498 kHz: Intership, single-sideband radiotelephony.
- 2 502-2 578 kHz: Ship stations, narrow-band direct-printing telegraphy.

#### RR52-2 CHAPTER IX ☐ Maritime services

- 2578-2 850 kHz: Coast stations, narrow-band direct-printing telegraphy and single-sideband radiotelephony.
- 3 155-3 200 kHz: Ship stations, narrow-band direct-printing telegraphy.
- 3 200-3 340 kHz: Ship stations, single-sideband radiotelephony.
- 3 340-3 400 kHz: Intership, single-sideband radiotelephony.
- 3 500-3 600 kHz: Intership, single-sideband radiotelephony.
- 3 600-3 800 kHz: Coast stations, single-sideband radiotelephony.

**52.10** 2) In Region 1, frequencies assigned to stations operating in the bands listed below shall be in accordance with the following subdivision:

- 1606.5-1 625 kHz: Coast stations, narrow-band direct-printing telegraphy, digital selective calling.
- 1 635-1 800 kHz: Coast stations, single-sideband radiotelephony.
- 2 045-2 141.5 kHz: Ship stations, single-sideband radiotelephony.
- 2141.5-2 160 kHz: Ship stations, narrow-band direct-printing telegraphy, digital selective calling.

**52.11** § 5 In Regions 2 and 3, the carrier frequencies 2 635 kHz (assigned frequency 2 636.4 kHz) and 2 638 kHz (assigned frequency 2 639.4 kHz) are used as single-sideband intership radiotelephony working frequencies in addition to the frequencies prescribed for common use in certain services. The carrier frequencies 2 635 kHz and 2 638 kHz should be used with class J3E emissions only. In Region 3 these frequencies are protected by a guardband between 2 634 kHz and 2 642 kHz.

**52.12** *D – Bands between 4 000 kHz and 27 500 kHz*

**52.13** § 6 Bands exclusively allocated to the maritime mobile service between 4 000 kHz and 27 500 kHz (see Article 5) are subdivided into categories and sub-bands as indicated in Appendix 17.

**52.14** *E – Bands between 156 MHz and 174 MHz*

**52.15** § 7 The ship movement service should be operated only on frequencies allocated to the maritime mobile service in the band 156-174 MHz.

**Section II** – (Number not used)

**52.16 to 52.93** (SUP - WRC-07)

CHAPTER IX ☐ Maritime services **RR52-3****Section III – Use of frequencies for narrow-band direct-printing telegraphy****52.94 A – General**

**52.95** § 44 Frequencies assigned to coast stations for narrow-band direct-printing telegraphy shall be indicated in the List of Coast Stations and Special Service Stations (List IV). This List shall also indicate any other useful information concerning the service performed by each coast station. (WRC-07)

**52.96 B – Bands between 415 kHz and 535 kHz**

**52.97** § 45 All ship stations equipped with narrow-band direct-printing apparatus to work in the authorized bands between 415 kHz and 535 kHz shall be able to send and receive class F1B emissions as specified in No. **51.44**. Additionally, ship stations complying with the provisions of Chapter **VII** shall be able to receive class F1B emissions on 518 kHz (see No. **51.45**).

**52.98** (SUP - WRC-03)**52.99 C – Bands between 1 606.5 kHz and 4 000 kHz** (WRC-03)

**52.100** § 46 1) All ship stations equipped with narrow-band direct-printing telegraph apparatus to work in the authorized bands between 1 606.5 kHz and 4 000 kHz shall be able to send and receive class F1B or J2B emissions on at least two working frequencies. (WRC-03)

**52.101** 2) Narrow-band direct-printing telegraphy is forbidden in the band 2 170-2 194 kHz, except as provided for in Appendix **15** and Resolution **354 (WRC-07)**. (WRC-07)

**52.102 D – Bands between 4 000 kHz and 27 500 kHz**

**52.103** § 47 All ship stations equipped with narrow-band direct-printing telegraph apparatus to work in the authorized bands between 4 000 kHz and 27 500 kHz shall be able to send and receive class F1B emissions as specified in No. **51.49**. The assignable frequencies are indicated in Appendix **17**.

**52.104** § 48 Coast stations employing class F1B emissions and operating in the bands exclusively allocated to the maritime mobile service between 4 000 kHz and 27 500 kHz shall at no time use mean powers in excess of the following:

*Band Maximum*

*mean power*

4 MHz 5 kW

6 MHz 5 kW

8 MHz 10 kW

12 MHz 15 kW

16 MHz 15 kW

18/19 MHz 15 kW

22 MHz 15 kW

25/26 MHz 15 kW

#### **RR52-4** CHAPTER IX Maritime services

**52.105** 1) In all bands, the working frequencies for ship stations using narrow-band direct-printing telegraphy at speeds not exceeding 100 Bd for FSK and 200 Bed for PSK, including those paired with the working frequencies assignable to coast stations (see Appendix 17), are spaced 0.5 kHz apart. The frequencies assignable to ship stations which are paired with those used by coast stations are shown in Appendix 17. The frequencies assignable to ship stations which are not paired with those used by coast stations are shown in Appendix 17.

#### **52.106** (SUP - WRC-03)

**52.107** 2) Each administration shall, if necessary, assign to each ship station under its jurisdiction and employing non-paired narrow-band direct-printing telegraphy one or more frequencies reserved for this purpose and shown in Appendix 17.

#### **52.108** *E – Bands between 156 MHz and 174 MHz*

**52.109** § 49 All ship stations equipped with direct-printing telegraph apparatus may work in the authorized bands between 156 MHz and 174 MHz and shall conform to the provisions of Appendix 18.

#### **Section IV – Use of frequencies for digital selective-calling**

##### **52.110** *A – General*

**52.111** § 50 The provisions described in this Section are applicable to calling and acknowledgement, when digital selective-calling techniques are used, except in cases of distress, urgency and safety, to which the provisions of Chapter VII apply.

**52.112** § 51 The characteristics of the digital selective-calling equipment shall be in accordance with Recommendation ITU-R M.541-10 and should be in accordance with the most recent version of Recommendation ITU-R M.493. (WRC-15)

**52.113** § 52 The frequencies on which coast stations provide services using digital selectivecalling techniques shall be indicated in the List of Coast Stations and Special Service Stations (List IV), which shall also supply any other useful information concerning such services. (WRC-07)

**52.114 B – Bands between 415 kHz and 526.5 kHz**

B1 – Mode of operation

**52.115** § 53 1) The class of emission to be used for digital selective-calling and acknowledgement in the authorized bands between 415 kHz and 526.5 kHz shall be F1B.

CHAPTER IX ☐ Maritime services **RR52-5**

**52.116** 2) When transmitting digital selective calls and acknowledgements in the bands between 415 kHz and 526.5 kHz, coast stations should use the minimum power necessary to cover their service area.

**52.117** § 54 Transmissions of digital selective calls and acknowledgements by ship stations shall be limited to a mean power of 400 W.

B2 – Call and acknowledgement

**52.118** § 55 For call and acknowledgement by digital selective-calling techniques, an appropriate channel shall be used.

**52.119** § 56 The international digital selective-calling frequency 455.5 kHz may be assigned to any coast station. In order to reduce interference on this frequency, it may be used as a general rule by coast stations to call ships of another nationality, or in cases where it is not known on which digital selective-calling frequencies within these bands the ship station is maintaining watch.

**52.120** § 57 The international digital selective-calling frequency 458.5 kHz may be used by any ship station. In order to reduce interference on this frequency, it shall only be used when calling cannot be made on national frequencies assigned to the coast station.

**52.121** § 58 The frequency to be used for transmission of an acknowledgement shall normally be the frequency paired with the calling frequency used.

B3 – Watch

**52.122** § 59 1) A coast station providing international public correspondence service using digital selective-calling techniques within the bands between 415 kHz and 526.5 kHz should, during its hours of service, maintain automatic digital selective-calling watch on appropriate national or international calling frequencies. The hours and frequencies shall be indicated in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

**52.123** 2) Ship stations equipped with apparatus for digital selective-calling to work in the authorized bands between 415 kHz and 526.5 kHz should, when within the coverage area of coast stations providing services using digital selective-calling techniques in these bands, maintain an automatic digital selective-calling watch on one or more appropriate digital selective-calling frequencies within these bands, taking into account the digital selective-calling frequencies operated by the coast stations.

**52.124** C – Bands between 1 606.5 kHz and 4 000 kHz (WRC-03)

C1 – Mode of operation

**52.125** § 60 1) The class of emission to be used for digital selective-calling and acknowledgement in the bands between 1 606.5 kHz and 4 000 kHz shall be F1B. (WRC-03)

**RR52-6** CHAPTER IX ☐ Maritime services

**52.126** 2) Coast stations should, when transmitting digital selective calls and acknowledgements in the bands between 1 606.5 kHz and 4 000 kHz, use the minimum power necessary to cover their service area. (WRC-03)

**52.127** 3) In Region 1, transmissions of digital selective calls and acknowledgements by ship stations shall be limited to a mean power of 400 W.

C2 – Call and acknowledgement

**52.128** § 61 1) When calling a coast station by digital selective-calling techniques, ship stations should use for the call, in order of preference:

**52.129** a) a national digital selective-calling channel on which the coast station is maintaining watch;

**52.130** b) subject to the provisions of No. **52.131**, the international digital selective-calling frequency 2 189.5 kHz.

**52.131** 2) The international digital selective-calling frequency 2 189.5 kHz may be assigned to any ship station. In order to reduce interference on this frequency, it may be used as a general rule by ship stations to call coast stations of another nationality.



**52.132** 3) A ship station calling another ship station by digital selective-calling techniques should use the frequency 2 177 kHz for the call. Acknowledgements of such calls should also be made on this frequency.

**52.133** § 62 1) When calling ship stations by digital selective-calling techniques, coast stations should use for the call, in the order of preference:

**52.134** a) a national digital selective-calling channel on which the coast station is maintaining watch;

**52.135** b) subject to the provisions of No. **52.136**, the international digital selective-calling frequency 2 177 kHz.

**52.136** 2) The international digital selective-calling frequency 2 177 kHz may be assigned to any coast station. In order to reduce interference on this frequency, it may be used as a general rule by coast stations to call ships of another nationality, or in cases where it is not known on which digital selective-calling frequencies within the bands between 1 606.5 kHz and 4 000 kHz the ship station is maintaining watch. (WRC-03)

**52.137** § 63 The frequency to be used for transmission of an acknowledgement shall normally be the frequency paired with the frequency used for the call received, as indicated in the List of Coast Stations and Special Service Stations (List IV) (see also No. **52.113**). (WRC-07)

## CHAPTER IX ☐ Maritime services **RR52-7**

### C3 – Watch

**52.138** § 64 1) The provisions detailed in this Sub-section are applicable to watch-keeping by digital selective-calling, except for distress, urgency and safety purposes, to which the provisions of Section III of Article **31** apply.

**52.139** 2) A coast station providing international public correspondence service using digital selective-calling techniques within the bands between 1 606.5 kHz and 4 000 kHz should, during its hours of service, maintain automatic digital selective-calling watch on appropriate national or international calling frequencies. The hours and frequencies shall be indicated in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

**52.140** 3) Ship stations equipped with apparatus for digital selective-calling to work in the authorized bands between 1 606.5 kHz and 4 000 kHz should, when within the coverage area of coast stations providing services using digital selective-calling techniques in these

bands, maintain an automatic digital selective-calling watch on one or more appropriate digital selective-calling frequencies within these bands, taking into account the digital selective-calling frequencies operated by the coast stations. (WRC-03)

**52.141** *D – Bands between 4 000 kHz and 27 500 kHz*

D1 – Mode of operation

**52.142** § 65 1) The class of emission to be used for digital selective-calling and acknowledgement in the authorized bands between 4 000 kHz and 27 500 kHz shall be F1B.

**52.143** 2) When transmitting digital selective calls and acknowledgements in the bands between 4 000 kHz and 27 500 kHz, coast stations shall at no time use a mean power in excess of the following values:

*Band Maximum*

*mean power*

4 MHz 5 kW

6 MHz 5 kW

8 MHz 10 kW

12 MHz 15 kW

16 MHz 15 kW

18/19 MHz 15 kW

22 MHz 15 kW

25/26 MHz 15 kW

**52.144** 3) Transmissions of digital selective calls and acknowledgements by ship stations in the bands between 4 000 kHz and 27 500 kHz shall be limited to a mean power of 1.5 kW.

**RR52-8** CHAPTER IX ☐ Maritime services

D2 – Call and acknowledgement

**52.145** § 66 A station calling another station by digital selective-calling techniques within the authorized bands between 4 000 kHz and 27 500 kHz should choose an appropriate digital selective calling frequency, taking into account propagation characteristics.

**52.146** § 67 1) When calling a coast station by digital selective-calling techniques on frequencies within the authorized bands between 4 000 kHz and 27 500 kHz, ship stations should use for the call, in order of preference:

**52.147** a) a national digital selective-calling channel on which the coast station is maintaining watch;

**52.148** b) subject to the provisions of No. **52.149**, one of the international digital selective calling frequencies. (WRC-07)

**52.149** 2) The international digital selective-calling frequencies shall be as indicated in Recommendation ITU-R M.541-10 and may be used by any ship station. In order to reduce interference on these frequencies, they shall only be used when calling cannot be made on nationally assigned frequencies. (WRC-15)

**52.150** § 68 1) When calling ship stations by digital selective-calling techniques on frequencies within the bands between 4 000 kHz and 27 500 kHz coast stations should use for the call, in order of preference:

**52.151** a) a national digital selective-calling channel on which the coast station is maintaining watch;

**52.152** b) subject to the provisions of No. **52.153**, one of the international digital selective calling frequencies. (WRC-07)

**52.153** 2) The international digital selective-calling frequencies shall be as indicated in Recommendation ITU-R M.541-10 and may be assigned to any coast station. In order to reduce interference on these frequencies, they may be used as a general rule by coast stations to call ships of another nationality, or in cases where it is not known on which digital selective-calling frequencies within the frequency bands concerned the ship station is maintaining watch. (WRC-15)

D3 – Watch

**52.154** § 69 1) The provisions detailed in this Sub-section are applicable to watch-keeping by digital selective-calling, except for distress, urgency and safety purposes, to which the provisions of Section III of Article **31** apply.

**52.155** 2) A coast station providing international public correspondence service using digital selective-calling techniques within the bands between 4 000 kHz and 27 500 kHz should, during its hours of service, maintain automatic digital selective-calling watch on the appropriate digital selective-calling frequencies as indicated in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

**CHAPTER IX Maritime services RR52-9**

**52.156** 3) Ship stations equipped with apparatus for digital selective-calling to work in the authorized bands between 4 000 kHz and 27 500 kHz should maintain automatic digital selective calling watch on appropriate digital selective-calling frequencies within these bands, taking into account propagation characteristics and the calling frequencies for coast stations providing service using digital selective-calling techniques.

**52.157 E – Bands between 156 MHz and 174 MHz**

E1 – Mode of operation

**52.158** § 70 The class of emission to be used for digital selective-calling and acknowledgement in the authorized bands between 156 MHz and 174 MHz shall be G2B.

E2 – Call and acknowledgement

**52.159** § 71 1) The frequency 156.525 MHz is an international frequency in the maritime mobile service used for distress, urgency, safety and calling by digital selective-calling techniques (see Nos. **33.8** and **33.31** and Appendix **15**). (WRC-07)

**52.160** 2) Calling by digital selective-calling techniques within the authorized bands between 156 MHz and 174 MHz, from ship to coast station, from coast station to ship and from ship to ship should, as a general rule, be made on the digital selective-calling frequency 156.525 MHz. E3 – Watch

**52.161** § 72 Information concerning watch-keeping by automatic digital selective-calling on the frequency 156.525 MHz by coast stations shall be given in the List of Coast Stations and Special Service Stations (List IV) (see also No. **31.13**). (WRC-07)

**52.162** § 73 Ship stations equipped with apparatus for digital selective-calling to work in the authorized bands between 156 MHz and 174 MHz should, while at sea, maintain an automatic digital selective-calling watch on the frequency 156.525 MHz (see also No. **31.17**).

**Section V – Use of frequencies for wide-band telegraphy, facsimile, special transmission systems and oceanographic data transmissions**

**52.163** A– *Wide-band telegraphy, facsimile and special transmission systems*

**52.164** A1 – Bands between 1 606.5 kHz and 4 000 kHz (WRC-03)

**52.165** § 74 In Region 2, the frequencies in the band 2 068.5-2 078.5 kHz are assigned to ship stations using wide-band telegraphy, facsimile and special transmission systems. The provisions of No. **52.171** apply.

#### **RR52-10** CHAPTER IX Maritime services

**52.166** A2 – Bands between 4 000 kHz and 27 500 kHz

**52.167** § 75 In all bands, the working frequencies for ship stations equipped to use wide-band telegraphy, facsimile and special transmission systems are spaced 4 kHz apart. The assignable frequencies are shown in Appendix **17**.

**52.168** § 76 1) Each administration shall assign to each ship station under its jurisdiction and employing wide-band telegraphy, facsimile and special transmission systems one or more series of the working frequencies reserved for this purpose shown in Appendix **17**. The total number of series assigned to each ship station shall be determined by traffic requirements.

**52.169** 2) When ship stations employing wide-band telegraphy, facsimile and special transmission systems are assigned less than the total number of working frequencies in a band, the administration concerned shall assign working frequencies to such ships in accordance with an orderly system of rotation that will ensure approximately the same number of assignments on any one working frequency.

**52.170** 3) However, within the limits of the bands given in Appendix **17**, administrations may, to meet the needs of specific systems, assign frequencies in a different manner from that shown in Appendix **17**. Nevertheless, administrations shall take into account, as far as possible, the provisions of Appendix **17**, concerning channelling and the 4 kHz spacing.

**52.171** § 77 Ship stations equipped for wide-band telegraphy, facsimile and special transmission systems may, in the frequency bands reserved for such use, employ any class of emission provided that such emissions can be contained within the wide-band channels indicated in Appendix **17**. However, the use of A1A Morse telegraphy and telephony is excluded except for circuit alignment purposes.

**52.172** § 78 Coast radiotelegraph stations employing multichannel telegraph emissions and operating in the bands allocated exclusively to the maritime mobile service between 4 000 kHz and 27 500 kHz shall at no time use a mean power in excess of 2.5 kW per 500 Hz bandwidth.

**52.173** B – *Oceanographic data transmission systems*

**52.174** § 79 In all bands, the assignable frequencies for oceanographic data transmissions are spaced 0.3 kHz apart. The assignable frequencies are shown in Appendix 17.

**52.175** § 80 The frequency bands for oceanographic data transmission systems (see Appendix 17) may also be used by buoy stations for oceanographic data transmission and by stations interrogating these buoys.

## CHAPTER IX Maritime services **RR52-11**

### **Section VI – Use of frequencies for radiotelephony**

#### **52.176 A – General**

**52.177** § 81 Except with regard to the provisions of Article 11 concerning notification and recording of frequencies, when designating frequencies for single-sideband radiotelephony the carrier frequency is always to be designated. The assigned frequency shall be 1 400 Hz higher than the carrier frequency.

**52.178** § 82 Coast stations shall not occupy idle radiotelephone channels by emitting identification signals, such as those generated by call slips or tapes. Exceptionally, a coast station, when requested by a ship station for the purpose of establishing a radiotelephone call, may emit a receiver tuning signal of not more than 10 s duration.

**52.179** § 83 However, coast stations in automatic service in the UHF band may emit marking signals. The emission power of the signals shall however be limited to the minimum value necessary for effective operation of the signalling. Such emissions shall not cause harmful interference to the maritime mobile service in other countries.

**52.180** § 84 The frequencies of transmission (and reception when these frequencies are in pairs as in the case of duplex radiotelephony) assigned to each coast station shall be indicated in the List of Coast Stations and Special Service Stations (List IV). This List shall also indicate any other useful information concerning the service performed by each coast station. (WRC-07)

**52.181** § 85 Single-sideband apparatus in radiotelephone stations of the maritime mobile service operating in the frequency bands allocated to this service between 1 606.5 kHz and 4 000 kHz and in the frequency, bands allocated exclusively to this service between 4 000 kHz and 27 500 kHz shall satisfy the technical and operational conditions specified in Recommendation ITU-R M.1173-1. (WRC-15)

**52.182 B – Bands between 1 606.5 kHz and 4 000 kHz** (WRC-03)

**B1 – Mode of operation of stations**

**52.183** § 86 1) Unless otherwise specified in the Radio Regulations (see Nos. **51.53**, **52.188**, **52.189** and **52.199**), the class of emission to be used in the bands between 1 606.5 kHz and 4 000 kHz shall be J3E. (WRC-07)

**52.184** 2) The peak envelope power of coast radiotelephone stations operating in the authorized bands allocated between 1 606.5 kHz and 4 000 kHz shall not exceed: (WRC-03)

**52.185** – 5 kW for coast stations located north of latitude 32° N;

**52.186** – 10 kW for coast stations located south of latitude 32° N.

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**52.187** 3) The normal mode of operation for each coast station shall be indicated in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

**52.188** 4) Transmissions in the bands 2 170-2 173.5 kHz and 2 190.5-2 194 kHz with the carrier frequency 2 170.5 kHz and the carrier frequency 2 191 kHz, respectively, are limited to class J3E emissions and are limited to a peak envelope power of 400 W. (WRC-07) B2 – Call and reply

**52.189** § 87 1) The frequency 2 182 kHz<sup>1</sup> is an international distress frequency for radiotelephony (see Appendix **15** and Resolution **354 (WRC-07)**). (WRC-07)

**52.190** 2) The frequency 2 182 kHz may also be used:

**52.191** a) for call and reply in accordance with the provisions of Article **57**;

**52.192** b) by coast stations to announce the transmission, on another frequency, of traffic lists as specified in Recommendation ITU-R M.1171-0. (WRC-15)

**52.193** 3) In addition, an administration may assign to its stations other frequencies for call and reply.

**52.194** § 88 To facilitate use of the frequency 2 182 kHz for distress purposes, all transmissions on 2 182 kHz shall be kept to a minimum.

**52.195** § 89 1) Before transmitting on the carrier frequency 2 182 kHz, a station shall, in accordance with Recommendation ITU-R M.1171-0, listen on this frequency for a reasonable period to make sure that no distress traffic is being sent. (WRC-15)

**52.196** 2) The provisions of No. **52.195** do not apply to stations in distress.

**B3 – Traffic**

**52.197** § 90 1) Coast stations which use 2 182 kHz for calling shall be able to use at least one other frequency in the authorized bands between 1 606.5 kHz and 2 850 kHz. (WRC-03)

**52.198** 2) Coast stations authorized to use radiotelephony on one or more frequencies other than 2 182 kHz in the authorized bands between 1 606.5 kHz and 2 850 kHz shall use class J3E emissions on those frequencies (see also No. **52.188**). (WRC-03)

1 **52.189.1** Where administrations provide at their coast stations a watch on 2 182 kHz for receiving class J3E emissions as well as class A3E and H3E emissions, ship stations may call those coast stations for safety purposes using class H3E or J3E emissions.

#### CHAPTER IX Maritime services **RR52-**

**1352.199** 3) Coast stations open to the public correspondence service on one or more frequencies between 1 606.5 kHz and 2 850 kHz shall also be capable of transmitting class H3E and J3E emissions with a carrier frequency of 2 182 kHz, and of receiving class A3E, H3E and J3E emissions with a carrier frequency of 2 182 kHz. (WRC-03)

**52.200** 4) One of the frequencies which coast stations are required to be able to use (see No. **52.197**) is printed in heavy type in the List of Coast Stations and Special Service Stations (List IV) to indicate that it is the normal working frequency of the stations. Supplementary frequencies, if assigned, are shown in ordinary type. (WRC-07)

**52.201** 5) Working frequencies of coast stations shall be chosen in such a manner as to avoid interference with other stations. B4 – Additional provisions applying to Region 1

**52.202** § 91 The peak envelope power of ship radiotelephone stations operating in the authorized bands between 1 606.5 kHz and 2 850 kHz shall not exceed 400 W. (WRC-03)

**52.203** § 92 1) All stations on ships making international voyages should be able to use:

**52.204** a) the following ship-to-shore working frequency, if required by their service:

**52.205** – carrier frequency 2 045 kHz (assigned frequency 2 046.4 kHz) for class J3E emissions;

**52.206** b) the following intership frequency, if required by their service:

**52.207** – carrier frequency 2 048 kHz (assigned frequency 2 049.4 kHz) for class J3E emissions;

**52.208** This frequency may be used as an additional ship-to-shore frequency.



**52.209** (SUP - WRC-07)

**52.210** § 93 1) Ships frequently exchanging correspondence with a coast station of a nationality other than their own may use the same frequencies as ships of the nationality of the coast station:

**52.211** – where mutually agreed by the administrations concerned; or

**52.212** – where the facility is open to ships of all nationalities by virtue of a note against each of the frequencies concerned in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

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**52.213** 2) In exceptional circumstances, if frequency usage according to Nos. **52.203** to **52.208** or No. **52.210** is not possible, a ship station may use one of its own assigned national ship to- shore frequencies for communication with a coast station of another nationality, under the express condition that the coast station as well as the ship station shall take precautions, in accordance with Recommendation ITU-R M.1171-0, to ensure that the use of such a frequency will not cause harmful interference to the service for which the frequency in question is authorized. (WRC-15)

**52.214** § 94 The following ship-to-shore frequencies:

- carrier frequency 2 051 kHz (assigned frequency 2 052.4 kHz),
- carrier frequency 2 054 kHz (assigned frequency 2 055.4 kHz), and
- carrier frequency 2 057 kHz (assigned frequency 2 058.4 kHz),

may be assigned to coast stations as receiving frequencies. B5 – Additional provisions applying to Regions 2 and 3

**52.215** § 95 All stations on ships making international voyages should, if required by their service, be able to use the intership carrier frequencies:

2 635 kHz (assigned frequency 2 636.4 kHz) or

2 638 kHz (assigned frequency 2 639.4 kHz).

The conditions of use of these frequencies are specified in No. **52.11**.

**52.216** C – Bands between 4 000 kHz and 27 500 kHz

C1 – Mode of operation of stations

**52.217** § 96 1) The class of emission to be used for analogue radiotelephony in the bands between 4 000 kHz and 26 175 kHz shall be J3E; for digital telecommunications in those bands, the class of emission shall be J2D. (WRC-03)

**52.218** 2) The normal mode of operation of each coast station is indicated in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

**52.219** 3) Coast stations employing class J3E or J2D emissions in accordance with No. **52.217** in the bands between 4 000 kHz and 27 500 kHz shall use the minimum power necessary to cover their service area and shall at no time use a peak envelope power in excess of 10 kW per channel.

**52.220** 4) Ship stations employing class J3E or J2D emissions in accordance with No. **52.217** in the bands between 4 000 kHz and 27 500 kHz shall at no time use a peak envelope power in excess of 1.5 kW per channel.

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##### C2 – Call and reply

**52.220A** 5) Administrations should encourage the coast stations and ship stations under their jurisdiction to use digital selective calling techniques for call and reply. (WRC-2000)

**52.220B** § 96A When calling by radiotelephony is necessary, it should be done (in order of preference): (WRC-2000)

**52.220C** 1) on the working frequencies assigned to the coast stations; or (WRC-2000)

**52.220D** 2) when this is not possible, on the calling frequencies listed under No. **52.221** or **52.221A** below. (WRC-2000)

**52.221** § 97 1) Ship stations may use the following carrier frequencies for calling in radiotelephony:

4 125 kHz<sup>2, 3, 4</sup>

6 215 kHz<sup>3, 4</sup>

8 255 kHz

8 291 kHz<sup>4</sup> (see also No. **52.221A**)

12 290 kHz<sup>4</sup> (see also No. **52.221A**)

16 420 kHz<sup>4</sup> (see also No. **52.221A**)

18 795 kHz

22 060 kHz

25 097 kHz (WRC-15)

**52.221A** 2) The carrier frequency 8 291 kHz is authorized on a simplex basis for distress and safety traffic only (see also Appendix **15**). Calling on the carrier frequencies 12 290 kHz and 16 420 kHz shall be permitted only to and from rescue coordination centres (see No. **30.6.1**), subject to the safeguards of Resolution **352 (WRC-03)**. The alternative carrier frequencies 12 359 kHz and 16 537 kHz may be used by ship stations and coast stations for calling on a simplex basis, provided that the peak envelope power does not exceed 1 kW. (WRC-15)

2 **52.221.1** In the United States, the carrier frequency 4 125 kHz is also authorized for common use by coast and ship stations for single-sideband radiotelephony on a simplex basis, provided the peak envelope power of such stations does not exceed 1 kW (see also No. **52.222.2**).

3 **52.221.2** The carrier frequencies 4 125 kHz and 6 215 kHz are also authorized for common use by coast and ship stations for single-sideband radiotelephony on a simplex basis for call and reply purposes, provided that the peak envelope power of such stations does not exceed 1 kW. The use of these frequencies for working purposes is not permitted (see also No. **52.221.1**). (WRC-07)

4 **52.221.3** The carrier frequencies 4 125 kHz, 6 215 kHz, 8 291 kHz, 12 290 kHz and 16 420 kHz are also authorized for common use by coast and ship stations for single-sideband radiotelephony on a simplex basis for distress and safety traffic.

#### **RR52-16** CHAPTER IX Maritime services

**52.222** 3) Coast stations may use the following carrier frequencies for calling in radiotelephony:

4 417 kHz<sup>5</sup>

6 516 kHz<sup>5</sup>

8 779 kHz

13 137 kHz (see No. **52.222A**)

17 302 kHz (see No. **52.222A**)

19 770 kHz

22 756 kHz

26 172 kHz (WRC-2000)

**52.222A** 4) The carrier frequencies 13 137 kHz and 17 302 kHz shall not be used as calling frequencies after 31 December 2003. The alternative carrier frequencies 12 359 kHz and 16 537 kHz may be used by ship stations and coast stations for calling on a simplex basis, provided that the peak envelope power does not exceed 1 kW. (WRC-2000)

**52.223** § 98 The hours of service of coast stations open to public correspondence and the frequency or frequencies on which watch is maintained shall be indicated in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

**52.224** § 99 1) Before transmitting on the carrier frequencies 4 125 kHz, 6 215 kHz, 8 291 kHz, 12 290 kHz or 16 420 kHz a station shall, in accordance with Recommendation ITU-R M.1171-0, listen on the frequency for a reasonable period to make sure that no distress traffic is being sent (see No. **52.221A**). (WRC-15)

**52.225** 2) The provisions of No. **52.224** do not apply to stations in distress.

C3 – Traffic

**52.226** § 100 1) For the conduct of duplex telephony, the transmitting frequencies of the coast stations and of the corresponding ship stations shall be associated in pairs, as indicated in Appendix 17, except temporarily in cases where working conditions prohibit the use of paired frequencies in order to meet operational needs.

**52.227** 2) The frequencies to be used for the conduct of simplex radiotelephony are shown in Appendix 17, Section B. In these cases, the peak envelope power of the coast station transmitter shall not exceed 1 kW.

**52.222.1** (SUP - WRC-07)

5 **52.222.2** The carrier frequencies 4 417 kHz and 6 516 kHz are also authorized for common use by coast and ship stations for single-sideband radiotelephony on a simplex basis, provided that the peak envelope power of such stations does not exceed 1 kW. The use of 6 516 kHz for this purpose should be limited to daytime operation (see also No. **52.221.1**).

CHAPTER IX Maritime services **RR52-17**

**52.228** 3) The frequencies indicated in Appendix 17 for ship station transmissions may be used by ships of any category according to traffic requirements.

**52.229** 4) Transmitters used for radiotelephony in the frequency bands between 4 000 kHz and 27 500 kHz shall comply with technical characteristics specified in Recommendation ITU-R M.1173-1. (WRC-15)

**52.230** *D – Bands between 156 MHz and 174 MHz*

D1 – Call and reply

**52.231** § 101 1) The frequency 156.8 MHz is the international frequency for distress traffic and for calling by radiotelephony when using frequencies in the authorized bands between 156 MHz and 174 MHz. The class of emission to be used for radiotelephony on the frequency 156.8 MHz shall be G3E (as specified in Recommendation ITU-R M.489-2). (WRC-07)

**52.232** 2) The frequency 156.8 MHz may also be used:

**52.233** a) by coast and ship stations for call and reply in accordance with the provisions of Articles 54 and 57;

**52.234** b) by coast stations to announce the transmission on another frequency of traffic lists, in accordance with Recommendation ITU-R M.1171-0, and important maritime information. (WRC-15)

**52.235** (SUP - WRC-07)

**52.236** 3) Any one of the channels designated in Appendix 18 for public correspondence may be used as a calling channel if an administration so desires. Such use shall be indicated in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

**52.237** 5) Ship and coast stations in the public correspondence service may use a working frequency, for calling purposes, as provided in Articles 54 and 57.

**52.238** 6) All emissions in the band 156.7625-156.8375 MHz capable of causing harmful interference to the authorized transmissions of stations of the maritime mobile service on 156.8 MHz are forbidden.

**52.239** 7) To facilitate the reception of distress calls and distress traffic, all transmissions on 156.8 MHz shall be kept to a minimum and shall not exceed one minute.

**52.240** 8) Before transmitting on the frequency 156.8 MHz, a station shall, in accordance with Recommendation ITU-R M.1171-0, listen on this frequency for a reasonable period to make sure that no distress traffic is being sent. (WRC-15)

**52.241** 9) The provisions of No. **52.240** do not apply to stations in distress.

**RR52-18** CHAPTER IX Maritime services

**52.241A** 10) The frequency 156.525 MHz is the international distress, safety and calling frequency for the maritime mobile VHF radiotelephone service using digital selective calling (DSC) when using frequencies in the authorized bands between 156 MHz and 174 MHz. (WRC-07)

**52.241B** 11) All emissions in the band 156.4875-156.5625 MHz capable of causing harmful interference to the authorized transmissions of stations of the maritime mobile service on 156.525 MHz are forbidden. (WRC-07)

**52.241C** 12) To facilitate the reception of distress calls and distress traffic, all transmissions on 156.525 MHz shall be kept to a minimum. (WRC-07) D2 – Watch

**52.242** § 102 1) A coast station open to the international public correspondence service should, during its hours of service, maintain watch on its receiving frequency or frequencies indicated in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

**52.243** 2) The method of watch on a working frequency shall be no less efficient than watch by an operator.

**52.244** 3) Ship stations should, where practicable, maintain watch on 156.8 MHz when within the service area of a coast station providing international maritime mobile radiotelephone service in the band 156-174 MHz. Ship stations fitted only with VHF radiotelephone equipment operating in the authorized bands between 156 MHz and 174 MHz should maintain watch on 156.8 MHz when at sea.

**52.245** 4) Ship stations, when in communication with a port station, may, on an exceptional basis and subject to the agreement of the administration concerned, continue to maintain watch on the appropriate port operations frequency only, provided that watch on 156.8 MHz is being maintained by the port station.

**52.246** 5) Ship stations, when in communication with a coast station in the ship movement service and subject to the agreement of the administration concerned, may continue to

maintain watch on the appropriate ship movement service frequency only, provided that watch on 156.8 MHz is being maintained by that coast station.

**52.247** § 103 A coast station in the port operations service in an area where 156.8 MHz is being used for distress, urgency or safety shall, during its working hours, keep an additional watch on 156.6 MHz or another port operations frequency indicated in heavy type in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

**52.248** § 104 A coast station in the ship movement service in an area where 156.8 MHz is being used for distress, urgency and safety shall, during its working hours, keep an additional watch on the ship movement frequencies indicated in heavy type in the List of Coast Stations and Special Service Stations (List IV). (WRC-07)

#### CHAPTER IX Maritime services **RR52-19**

##### D3 – Traffic

**52.249** § 105 1) Where practicable, coast stations open to the international public correspondence service shall be capable of working with ship stations equipped for duplex or semi duplex operation.

**52.250** 2) The method of working (single-frequency or two-frequency) specified in Appendix **18** for each channel should be used in the international services.

**52.251** § 106 Communications in the port operations service shall be restricted to those relating to operational handling, the movement and the safety of ships and, in emergency, to the safety of persons. Messages of a public correspondence nature shall be excluded from this service.

**52.252** § 107 Communications in the ship movement service shall be restricted to those relating to the movement of ships. Messages of a public correspondence nature shall be excluded from this service.

**52.253** § 108 1) Coast stations which use 156.8 MHz for calling shall be able to use at least one other authorized channel in the international maritime mobile radiotelephone service in the band 156-174 MHz.

**52.254** 2) In the band 156-174 MHz administrations shall, where practicable, assign frequencies to coast and ship stations in accordance with the Table of transmitting frequencies given in Appendix **18** for such international services as administrations consider necessary.

**52.255** (SUP - WRC-03)

**52.256** 3) In assigning frequencies to their coast stations, administrations should collaborate in cases where harmful interference might occur.

**52.257** 4) Channels are designated by numbers in the Table of transmitting frequencies given in Appendix 18.

**52.258** § 109 1) In assigning frequencies to stations of authorized services, other than maritime mobile, administrations shall avoid the possibility of interference to international maritime services in the bands between 156 MHz and 174 MHz.

**52.259** 2) The use of channels for maritime mobile purposes other than those indicated in the Table of transmitting frequencies given in Appendix 18 shall not cause harmful interference to services which operate in accordance with that table and shall not prejudice the future development of such services.

**52.260** § 110 The carrier power of ship station transmitters shall not exceed 25 W.

**RR52-20** CHAPTER IX Maritime services**Section VII – Use of frequencies for data transmissions** (WRC-12)**52.261** A – *General* (WRC-12)

**52.262** Frequencies assigned to coast stations for data transmissions shall be indicated in the List of Coast Stations and Special Service Stations (List IV). This List shall also indicate any other useful information concerning the service performed by each coast station. (WRC-12)

**52.263** B – *Bands between 4 000 kHz and 27 500 kHz* (WRC-12)

## B1 – Mode of operation of stations (WRC-12)

**52.264** The class of emissions to be used for data transmissions in this section should be in accordance with the most recent version of Recommendation ITU-R M.1798. Coast stations as well as ship stations should use radio systems specified in the most recent version of

Recommendation ITU-R M.1798. (WRC-15)

**52.265** Coast stations employing the class of emissions in accordance with No. **52.264** in the frequency bands between 4 000 kHz and 27 500 kHz shall not exceed a peak envelope power of 10 kW. (WRC-12)



**52.266** Ship stations employing the class of emissions in accordance with No. **52.264** in the frequency bands between 4 000 kHz and 27 500 kHz shall not exceed a peak envelope power of 1.5 kW. (WRC-12)

## Rec. ITU-R SM.1603

### Spectrum redeployment\* as a method of national spectrum management

(Question ITU-R 216/1)

(2003-2012-2014)

#### Scope

This Recommendation gives guidelines for spectrum redeployment issues.

#### Keywords

Guidelines, national spectrum management, spectrum redeployment, spectrum refarming.

#### Related ITU Recommendations, Reports

Reports ITU-R SM.2015, ITU-R SM.2012 and ITU-R SM.2153.

NOTE – In every case the latest edition of the Recommendation/Report in force should be used.

The ITU Radiocommunication Assembly,

*considering*

- a) that all administrations need to make spectrum available for new radio applications and for increased use of existing applications;
- b) that as the use of the spectrum increases it may become progressively more difficult for administrations to find suitable spectrum for radio applications;
- c) that making spectrum available for some new applications may require redeployment to other frequency bands or redeployment to new technologies (i.e. to decreased bandwidth or analogue to digital);
- d) that redeploying licence-exempt bands will be complicated by lack of records of users;

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\* Also referred to as “refarming”.

e) the experiences of administrations in spectrum redeployment techniques would provide information on the practice;

f) that frequency management and thus redeployment of spectrum is a national responsibility and there is a need for guidelines by collating the experiences of administrations in spectrum redeployment techniques,

*recommends*

**1** that the following definition for spectrum redeployment be recognized as:

“Spectrum redeployment (spectrum refarming) is a combination of administrative, financial and technical measures aimed at removing users or equipment of the existing frequency assignments either completely or partially from a particular frequency band. The frequency band may then be allocated to the same or different service(s). These measures may be implemented in short, medium or long time-scales.”;

**2** that Annex 1 should be used as a guide for national consideration of redeployment issues.

**Annex 1**  
**Redeployment issues**

## 1 Introduction

The radio spectrum is a finite, but reusable resource that can benefit each administration by providing a medium to assist communications and economic development. In order to maximize the benefits to an administration the radio spectrum needs to be efficiently and effectively managed. Part of efficient and effective spectrum management is planning the development of radio services in advance of their requirement; this may include extending the coverage of existing services, enhancing the performance of existing services and introducing new services. This type of spectrum planning is considered to be associated with the development of a national spectrum strategy and the strategy is normally expected to cover a period of 5 to 10 years. Report ITU-R SM.2015 – Methods for determining national long-term strategies for spectrum utilization provides details on the planning process, evaluation of scenarios and appropriate procedures for transition from present spectrum utilization to long-term objectives.

To improve existing services or introduce new services, it may be necessary to move existing users of the radio spectrum to more modern technologies or new frequency bands. This movement of existing spectrum users, or as it is otherwise known, spectrum redeployment, needs to be planned. Spectrum redeployment should be included in the administration's national spectrum strategy together with the mechanism identified to assist implementation of redeployment. It should be considered equally with all other options, i.e. sharing, removing restrictions, and not as a last resort.

Spectrum redeployment is not necessarily a simple task and an administration may face a number of difficulties that can complicate, delay and even disrupt the process. The administration is encouraged to use spectrum monitoring data to supplement other data when considering redeployment. The level of difficulty experienced and options of implementations available may subsequently influence an administration's approach to spectrum redeployment. The following text examines the process of spectrum redeployment and the various factors that are associated with its use.

## 2 The requirement for spectrum redeployment

All administrations are compelled to introduce new radio services and for some this may include the need to move existing users of the radio spectrum to new technologies or new frequency bands. This prerequisite to move existing users of spectrum can arise for a number of reasons, for example:

- a) a spectrum allocation may have been in operation for a considerable period of time and currently no longer matches the demands of users, or the capabilities of modern systems;
- b) an allocation within a specific range of frequencies is required for a new radio service but where sharing with existing incumbent equipment is not possible or compatible ;
- c) a decision by a WRC to allocate a currently-occupied frequency band to a different service on a regional or global basis.

If, as in the case of b) above, the spectrum allocation is not being used efficiently, there may be a requirement to re-engineer the band to improve spectral efficiency and this can include the following options:

- increasing the level of spectrum sharing;
- reducing the channel bandwidth to increase the number of channels;
- changing to more efficient modulation techniques that permit greater sharing;
- reducing the frequency reuse distance.

Any of the above options may initiate a spectrum redeployment process in order to change existing users' current equipment and/or their frequency assignment, even though any change in frequency may be limited to the same frequency band. In some cases, while the spectrum sharing criteria between services on a co-primary basis is already detailed the national requirements may compel the assignment of such frequencies to one of the new radio services and may require the redeployment of other radio services from the same band.

Where an administration is able to move existing users to unused spectrum, the spectrum redeployment process may be simple. However, resistance to change amongst radio users regarding the type or technology of equipment used, or to changes in frequency allocation, limits an administration's flexibility to make spectrum available for new users and services. In addition, delays in the introduction of new services are undesirable as it can render a proposed solution obsolete before it is even implemented. Where a proposed change

effects one or more frequency bands, a delay with a single service<sup>1</sup> may impact on several other bands and services.

These delays, as studies have shown, are capable of causing significant financial losses to a country's economy. If a solution is not achieved, this may lead in the long term to impairment in spectrum use and a reduction in radiocommunication development. Hence, it is important to avoid any unnecessary delays in the process once an administration has decided on spectrum redeployment.

Countries will continue to implement the transition from analogue to digital broadcasting with different time-scales according to their national priorities as well as, where applicable, the deadlines set by the ITU Regional Radiocommunication Conference (RRC-06) and its associated plan and agreement. During the period of this strategic plan, there will be a continuing need, as a high priority, to assist administrators, regulators, broadcasters and other stakeholders in developing countries in researching and supporting the introduction of digital broadcasting

The extent of spectrum redeployment will depend on the demand for spectrum and the level of spectrum congestion within the administration. For those administrations with limited available spectrum where the level of demand for spectrum causes spectrum congestion, the need for an effective spectrum redeployment policy is self-evident. However, there are benefits in identifying a suitable spectrum redeployment mechanism for the longer term. Benefits can apply even to countries where spectrum congestion is not a problem, as the necessity to make spectrum available to take advantage of new services is an issue that faces all administrations, e.g. providing spectrum to take advantage of the global growth in mobile services.

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<sup>1</sup> Whether delays occur will depend on the difficulty an administration has in getting users to agree to the change. Assessment of the difficulty experienced by administrations should be based on their ability to make all users, both public and private, large and small release spectrum when it is required.

### 3 Spectrum redeployment

Spectrum redeployment is a national spectrum management tool and therefore, in theory, any frequency band and any system could be subjected to some form of spectrum redeployment. In practice, spectrum redeployment might be limited by practical consideration such as international agreements and sharing criteria. Such criteria should be well workshopped and concisely agreed on

If properly implemented the administration should derive a range of technical, economic and social benefits aspects from the redeployment of spectrum.

A clear example of the benefit of more efficient spectrum use is the possibility to provide a wider range of modern telecommunication services directly impacting the quality of life of citizens and generating new business opportunities thus promoting employment.

It is important to note that the issues associated with applying spectrum redeployment in bands where use is exempt from licences are more complex than for licensed use, as there is no record of users of the service. The ramifications of these issues are described in § 3.2.2.

#### 3.1 Time-scales

The approach an administration takes on spectrum redeployment depends on the time-scale in which the spectrum needs to be made available. For some services a change in spectrum use may be associated with a new international allocation. In such a case, the period for planning the introduction for the particular service may take place over a 10 to 20-year period and be subject to a long-term plan with detailed market predictions of the possible technology developments to justify the allocation process.

For services where the change in spectrum use is based on a change in the end user service, for example mobile data, the demand for spectrum access can arise in a short time span due to the rapid change of market requirements and the availability of the end user technology. These services may require a more flexible system for the national designation of spectrum for a particular service and typically would be characterized by a shorter planning cycle (i.e. less than five years) where spectrum needs to be made available over a much shorter time period.

Reasonable advance notice of proposed spectral changes should be provided to existing or new users to allow them a fair planning and implementation period. The spectrum manager should factor lead times and notice periods into its implementation schedule.



In all cases, redeployment decisions should be taken at an early stage to allow the maximum time for the migration of existing services and systems. An early decision on spectrum redeployment is desirable, although not always possible, as it provides a clear basis on which existing and new users can develop their implementation plans and for larger systems may include establishing the necessary financial backing. To avoid leaving spectrum unused for any lengthy period, it is also desirable to have a flexible transition period with optimized transition dates for existing and new incumbents. However, this approach may require a compromise on technical decisions on the structure of the assignments in the frequency band and may not produce the most efficient use of the spectrum.

### **3.2 Voluntary and regulatory spectrum redeployment**

Spectrum redeployment may be used in a number of different ways but there are only two basic types: voluntary spectrum redeployment and spectrum redeployment by regulation.

#### **3.2.1 Voluntary spectrum redeployment**

This method of spectrum redeployment represents the case when an administration decides to implement spectrum redeployment and to use methods to encourage an existing spectrum user to voluntarily return the frequencies in use to the spectrum manager for re-assignment.

This process tends to occur when an existing user recognizes that the benefits/costs to be derived from the transition is more compelling than the continued use of it.

The decision of existing incumbents to follow this route will almost always be based on its business case projections.

Factors such as technology progression, licence fees, maintenance costs, customer take-up, strategic reasons and ultimately regulatory direction will determine the operators eagerness to voluntary migrate This process is normally slow but can never be excluded as a component of the migration process.

When this spectrum redeployment method is to be used as part of an identified administrative policy then it may need to be linked to a charging mechanism, e.g. licence fees. To provide the greatest flexibility the charging mechanism also needs to be flexible. Hence this spectrum redeployment method may be suitable for charging mechanisms like spectrum pricing, where the cost of the licence can be linked to a wide variety of factors, e.g. coverage area, extent of sharing, bandwidth, hours of operation.

### **3.2.2 Regulatory spectrum redeployment**

Regulatory spectrum redeployment is the approach associated with an administrative policy to redeploy spectrum. This method basically consists of the administration either terminating the licence or refusing to renew the licence. Early notification/publicity of the administration's plans for the frequency band is essential to ensure that those affected will have the optimum time to plan alternative arrangements.

#### **3.2.2.1 Spectrum redeployment at the expiration of the current licence**

This approach currently appears to be the most common way of achieving spectrum redeployment. The difficulty faced by the administration in applying the policy will depend on the length of the licence term and the speed with which the administration wishes to recover the frequency band. If the period of the licence is short (e.g. one or two years) or the administration knows sufficiently far in advance that it requires this spectrum, then recovering the spectrum may not be a problem. However, if the administration wants to recover the spectrum quickly, it may face claims for compensation depending on the terms and conditions of the licence, if:

- the existing licence period is long (e.g. 10-15 years); or
- the licensee has purchased radio equipment based on an understanding that, even though the licence period is short, the licence will be renewed automatically.

#### **3.2.2.2 Spectrum redeployment at the end of the equipment's lifetime or before the expiration of the licence**

This approach requires that the administration announce its intentions to redeploy the spectrum sufficiently far in advance of the date on which they propose to reclaim the frequency band. To minimize difficulties, the administration could wait until the end of the equipment's lifetime. However, the lifetime of equipment differs from service to service and for some systems, such as military equipment, updating technologies are used which further prolong the lifetime of equipment. For cases where the operational lifetime of the equipment is unacceptable, compared to the period the administration has set to recover the spectrum, it may be necessary for the administration to agree with the users a fixed lifetime for the equipment or impose a cut-off date; potentially giving rise to claims for compensation.

#### **3.2.2.3 Redeployment of spectrum in licence-exempt bands**

By definition there are no records of users and their application of services used in license-exempt bands. It would be impossible to contact all users to notify them of redeployment bands, and this prevents the band from being emptied of incumbent users.

Considerations for new assignments or allocations of licence-exempt bands should take account of the legacy from assigning license-exempt services if the bands are later to be the subject of redeployment plans.

Most users of licence-exempt devices for short-range radiocommunication devices (SRD) (refer to Report ITU-R SM.2153) are reluctant to pay any costs caused by spectrum policy change. However, it is difficult to establish the spectrum policy plan in the licence-exempt bands because of life time of the products, which is between 3 and 10 years on the average depending on the product type.

In the case of redeployment of licence-exempt bands, the administrations may review the potential infringement of people's property rights because most licence-exempt users are unspecified. In order to judge the property infringement for existing users, it needs to consider the relationship between the government authority and the property loss.

	<b>Government</b>	<b>User</b>	<b>Maker</b>
Role	– Permit licence-exempt bands	– Pay cost	– Type approval
Responsibility limits	– Support	– Guideline	– Type approval is a procedure of the public benefit protection from interference.

For the protection of unspecified users' property rights in the licence-exempt bands, the items to be considered for spectrum redeployment policy are as follows:

- public relation (advertising nationwide newspapers for 6 months etc.);
- compensation guideline for applying the product life cycle;
- replacement of parts (simple engineering technique, which may unintentionally increase the lifetime of the product);
- extension of grace period.

### **3.3 Cost of implementation**

Redeployment can impact on the budgets of administrations and existing users of the spectrum. The administration can lose revenue from licence fees if the period allowed to move existing users out of a particular frequency band is too long. It is the existing users who initially incur the cost of implementing spectrum redeployment, as they will need to purchase new equipment in addition to the new licence fee. The level of costs incurred by users will depend on the amount of equipment used, how much time they have had to amortize its costs and how much of their existing equipment they can reuse. Taking three typical examples can provide an indication of the range of costs, and while the costs may

be associated with regulatory redeployment they could equally apply to voluntary redeployment:

### **3.3.1 Migration to frequency bands within the tuning range of the equipment used**

This option assumes that all the equipment associated with spectrum redeployment process can be re-tuned. In this case, the costs may be limited to those associated with the re-tuning and testing of the equipment. If the costs of operating in the new frequency band were lower (e.g. a lower licence fee), the cost of re-tuning would be offset by the reduced operating costs. This approach is reasonably simple and therefore suitable for short-term implementation.

### **3.3.2 Migration into other frequency bands outside the tuning range of the equipment used**

This option is potentially more technically and economically difficult to implement. For some services it may be impossible to move to other bands, e.g. science services using physically specific frequencies. For other services it may require a general change of the radio infrastructure, which could be costly. However, it should not be assumed that the costs are always high. If redeployment is part of a move to a new technology that is already available (e.g. a taxi company moving from two-way radio to a cellular phone) the cost to the end user may be low, providing they have had time to amortize the cost of their original equipment. In addition, the increased flexibility and performance could over a short period of time outweigh the costs. Depending on the extent of the operator's infrastructure, migration to a higher frequency band may require a long transition period, due to the consequences of shorter propagation paths, e.g. re-designed infrastructure, acquisition of new transmission sites and equipment; this does not necessarily fit with the general desire for rapid changes in the telecommunication environment.

It should be noted that the consequences of migration to a lower frequency band can also lead to a longer transition period, because a greater propagation range may require international coordination.

### **3.3.3 Migration to achieve greater spectral efficiency**

This option would almost certainly require the purchase of some new equipment (e.g. a move from equipment with a 12.5 kHz bandwidth to a 6.25 kHz bandwidth). However, it is unlikely that this option would require any change in the transmission/reception infrastructure (i.e. antennas and masts) and so again the costs would be limited. If the costs of operating in the new frequency band are lower (e.g. a lower licence fee), then the costs of new equipment would be offset by the reduced operating costs.

Administrations may consider the existing market situation in terms of number of users and number of equipment using a particular equipment specification set, availability of the new equipment from different manufacturers and then decide on the realistic time-scales with costs impact while mandating the reduction in channel bandwidth. In digital radios, enhanced data rate support requires higher channel bandwidths and even channel aggregation as compared to the legacy analogue 12.5 kHz channels. These digital radios offer higher spectral efficiency per communication path even though using higher bandwidth. The digital radios offer many more data and multimedia services than the voice-only service offered by the analogue radios.

### **3.4 Regional coordination for redeployment**

Redeployment in certain frequency bands may require regional coordination. The implementation of GE06 Agreement involved digital switchover from analogue terrestrial broadcasting. To use the digital dividend for the mobile service, the analogue switch-off needed regional coordination because of the higher transmission powers of analogue terrestrial broadcasting.

### **3.5 Global/regional harmonization for redeployment**

Redeployment in certain frequency bands may require regional harmonization to achieve economies of scale. This has been experienced by recent examples of redeployments undertaken for IMT in different bands. Significant costs are involved in deploying IMT networks. Availability of equipment, propagation, bandwidth and harmonization across major markets are the key factors considered by service providers and therefore must be considered for spectrum redeployment.

## **4 Relationship between spectrum redeployment and spectrum pricing**

From the above text, it can be seen that the effects of redeployment on existing spectrum users may vary from minimal, e.g. slight frequency adjustment in same band, to major, e.g. new transmission infrastructure in different bands. Incumbents that are subjected to major system changes may, in some cases, seek some form of compensation, based on administrative policies. Hence it is useful for the administration to have a range of spectrum management tools or mechanisms to encourage existing users to change frequency bands, particularly if the administration requires spectrum redeployment to be implemented speedily. Two mechanisms for encouraging spectrum users to vacate a frequency band are spectrum pricing on the one hand and some form of compensation for vacating on the other.

### **4.1 Spectrum pricing**

As previously noted, spectrum pricing can be used to encourage spectrum users to voluntarily vacate a frequency band. The use of spectrum pricing to promote rapid migration in cases of spectrum redeployment, can take three to five years to be materialise, and in certain instances such a time-frame could be acceptable for the administration. Spectrum pricing has the benefit that it is fully flexible and can be applied to a variety of situations, as it enables a pricing structure to be created that provides spectrum users with the financial incentives to change equipment or frequency bands. In addition, spectrum pricing can also be applied progressively to promote spectrum redeployment on an area-by-area basis. This aspect of spectrum pricing is particularly helpful for addressing localised spectrum congestion or cases where a new service or new operating condition (e.g. reduced bandwidth, reduced power) would be introduced.

However, spectrum pricing may have the undesirable consequence of increasing illegal spectrum use, i.e. users that are not prepared to pay for a licence and require that more resources have to be provided on spectrum monitoring and spectrum enforcement activities.

## 4.2 Compensation

The radio spectrum is an asset that belongs to the country and not to individual spectrum users. Payment of compensation should not be *de facto* policy, but if it is to be considered administrations should provide the appropriate policies for compensation and competition restrictions that comply with national legislation and international bodies such as the World Trade Organization (WTO).

In determining whether compensation is justified, deciding on the compensation and how it should be provided shall consider:

- the terms and spectrum rights provided by the administration on issuance of the licence;
- the spectrum rights retained by the administration;
- the time-scales for completion of spectrum redeployment;
- the proposed method of compensation.

It should be noted that compensation does not only have to be given in the form of a direct financial payment; for example, it could take the form of licensing assistance (trial licences) or equipment subsidies.

The following subsections consider the potential sources of any compensation (see Report ITU-R SM.2012 for discussions on the issue of spectrum rights).

### 4.2.1 The new entrant compensates existing spectrum users

This approach has been used in some countries, e.g. Bulgaria, Finland, France, Israel, Italy, Jordan, the United Kingdom and the United States of America, where it was considered necessary to speed up the process of spectrum redeployment. Basically, it consists of the new entrant(s) compensating the existing spectrum users for early vacation of the frequency band.

The advantages of this approach are that the administration does not have to fund any compensation and, if properly managed, it can speed up the release of spectrum only when the new entrant requires it. However, there are several potential disadvantages; the new entrants may have to pay less or more than the market value for the spectrum or equipment/infrastructure unless a fund has been established through an auction mechanism or there is some form of spectrum trading, i.e. the user of the spectrum sells on the rights to use the spectrum. Furthermore, without a clear mechanism for trading or handling payments the process could raise issues of transparency. To avoid these concerns an administration may have to maintain strict oversight of the process, which may require considerable effort.

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There are different ways this approach can be implemented:

- the spectrum may be suitable for some form of spectrum trading;
- a fund could be established against which each existing user either makes a claim or is given a set level of compensation;
- existing spectrum users are directly compensated by the new entrants.

An administration may provide legislation that allows payment of the expenses of relocating the incumbents' operations from one or more frequencies to another frequency or frequencies, including the costs of any modification, replacement, or re-issuance of equipment, facilities, operating manuals, or national regulations incurred, e.g. pre-auction notices.

Where spectrum is to be auctioned the administration should make known, before the auction, the marginal costs anticipated to be associated with such relocation or with modifications necessary to accommodate prospective licensees. The administration's procedures may include a process for resolving any differences that arise between the incumbent and new licensees regarding estimates of relocation or modification costs.

#### **4.2.2 Redeployment funds**

Some countries have introduced the concept of a redeployment fund to compensate spectrum users for having to hand back spectrum. This approach provides a number of possibilities for implementing redeployment in a shorter time-scale than waiting for the expiry of a licence. Redeployment funds raise a number of issues that need careful consideration, not least the concern that the very existence of such a fund raises the idea that any user of the radio spectrum should receive compensation if required to change some aspect of their operation. Hence it is necessary to clearly identify the conditions under which any compensation may be paid and to establish a transparent mechanism that can be used to determine the level of compensation.

A redeployment fund can be funded from a number of different sources, for example:

- The new entrants could pay into the fund collectively.
- All licence holders could pay via part of the licence fee.
- Spectrum pricing fees could be transferred to the redeployment fund.
- Fees from auctioning of licences or frequency bands could be transferred to the redeployment fund.

While a redeployment fund can provide a convenient means to speed up the spectrum redeployment process, it is not a universal panacea. Redeployment funds may not be sufficiently strong to pay for redeployment in other than limited cases. The fund will need to

be managed and there may be concerns over transparency, which is likely to increase the effort and costs. In addition, the existence of the fund, its size, the frequency with which compensation is paid and the levels of any payments, could lead to an assumption by spectrum users that payment of compensation is guaranteed, distorting the market value of the spectrum and generating the type of negotiations that actually prolong the redeployment process rather than shorten it. In addition, in some countries, the concept that individuals or companies that do not use the radio spectrum, or the frequency band concerned, should compensate others may raise political or judicial issues.

#### **4.2.3 Compensation for loss by redeployment of licence-exempt band**

Since the frequency redeployed in the licence-exempt band is changing from dedicated form to sharing one to increase spectrum efficiency, government support by frequency redeployment needs to be considered.

Object of the compensation is applied to radio station with licence of government such as permission, report, approval of use.

It is difficult to confer property right to licence-exempt devices because they are legally used without licence and any right acquisition activities from the administration. Even though property right of the licence-exempt devices is recognized, it is difficult to compensate its loss, because it is not regarded as invasion of property right under the law.

It is necessary to protect user by, for example, through a government service centre for replacement of an existing device, remodelling, money support, etc.

## 5 Conclusions

Spectrum redeployment is a spectrum management tool, which can be used to satisfy new market demands, increase spectrum efficiency or to respond to changes in international frequency allocations. In many cases, spectrum redeployment is a natural process as existing users change their radio operations based on new technologies and changing operational requirements. The main problems relating to spectrum redeployment occur when insufficient time is available for introducing a change in spectrum use, and it is necessary to use a supporting mechanism to speed up the redeployment process. However, the use of such supporting mechanisms can lead to objections from new or existing users about the consequent expenditure and inconvenience; it may require as much, if not more, management effort than the redeployment process.

While spectrum planning and the monitoring of spectrum requirements will not solve all redeployment problems, building these processes into the development of a national spectrum strategy may be a simpler way to limit problems associated with implementing spectrum redeployment.

Technical issues such as frequency usage plans and equipment characteristics are important considerations for administrations and users that need to be available for efficient and successful spectrum redeployment within the appropriate time-frames.

Reference the reports by the Electronic Communications Committee (ECC) within the European Conference of Postal and Telecommunications Administrations (CEPT) and the Permanent Consultative Committee III (PCC III): Radiocommunications of the Inter-American Telecommunication Commission (CITEL) could provide further information on the issues from a regional perspective and also include lessons from the experiences of other countries.

Attachments 1 to 6 provide examples of administrations' experiences.

## **Attachment 1 to Annex 1**

### **An example of the spectrum redeployment process based on the French experience**

This Attachment is based on the French experience. However, the general principles identified may well apply to other countries.

Redeployment is a spectrum management tool which makes it possible to observe the timetable laid down for the availability of frequencies to newcomers.

## 1 Interests driving the decision to redeploy spectrum

The community as a whole must derive sufficient benefit from a redeployment of radio-frequency bands to merit the granting of authorization. This benefit is reflected, in economic terms, through a maximization of the community surplus. In other words, one must reach an equilibrium point such that no other use of the spectrum can improve the community surplus, according to the Pareto optimality criterion.

In seeking this equilibrium point, it is useful to compare the preferences (utilities) of the various players involved. Their utility functions are expressed in terms of private value and social value for the community. Private value corresponds to the profits they can derive from the use of the frequency bands, whereas the social value corresponds to the importance of the service to society at large. The calculation of private value is fairly simple, whereas quantifying the social value is relatively complex. It is possible to call on the notion of “opportunity” in trying to evaluate the social value of the service. In other words, by calculating what the absence of the service would cost the community.

As regards the process of spectrum redeployment, it is necessary to compare the utilities in terms of private value and social value of the agent being asked to relinquish the frequency bands and of the incoming agent.

Let  $U_{outgoer}$  and  $U_{incomer}$  denote the respective utilities (comprising the private and social values) of the operator leaving the spectrum and the operator who replaces him. Let  $C_{removal}$  denote the spectrum redeployment cost for the outgoer:

- if  $U_{incomer} > U_{outgoer} + C_{removal}$  then the removal is socially and economically optimal;
- if  $U_{incomer} < U_{outgoer}$  then the removal is not socially and economically optimal; and
- if  $U_{outgoer} < U_{incomer} < U_{outgoer} + C_{removal}$  then a choice has to be made.

## 2 The cost of redeployment

It is assumed that, as the result of spectrum redeployment, the user of a frequency band is obliged to relinquish the band and to pursue his activity in a different frequency band or to use a non-radio solution where this is possible. For this user, the obligation to leave the frequency band may induce an additional cost that he would not have incurred in the absence of this obligation. In what follows, this additional cost will be known as the “redemption cost”. The removal cost  $C_{removal}$  discussed earlier forms part of the redeployment cost.

In the telecommunication sector in particular, the resale value of the equipment involved in the move is in most cases unknown. Investments made in these networks are often so-called “sunk costs” for the users. This means that if the activity ceases the users cannot recoup their investments. Calculation of the residual value makes it possible to determine the theoretical value of this equipment when it cannot be resold. It is useful to distinguish the residual book value and the residual economic value. For this reason, two methods are envisaged and presented below for the calculation of the redeployment cost:

- calculation using residual book value;
- calculation using residual economic value.

### 3 Calculation of the redeployment cost using the residual book value

The book value method is applied in particular when the outgoer keeps normal accounts. Moreover, in the case of commercial activity, this method takes into account the tax advantages that the outgoer has enjoyed relating to the depreciation of his equipment.

#### 3.1 Evaluation of the cost incurred by the user on leaving the frequency band

##### 3.1.1 Move to another part of the spectrum or exit from the spectrum

It must first be determined whether the outgoing user is obliged to use radio frequencies if he is to pursue his activity. If this is the case (as, for example, for an operator of mobile services), the outgoing user is moved to another frequency band and the cost,  $Cd$ , of this move to another part of the spectrum is evaluated. If this is not the case (as for example, for an organism owning fixed radio links), the two following hypotheses must be envisaged:

- the user is moved to a different frequency band and the cost  $Cd$  is evaluated;
- the user gives up the use of frequencies in favour of an alternative wire-based system and an evaluation is made of the cost,  $Cs$ , corresponding to the exit from the radio spectrum.

The choice between these two hypotheses, taking only the economic criterion, leads to adopting the least costly of the two.

Let  $Ci$  be the cost incurred by the user on leaving the frequency band.  $Ci$  is equal either to  $Cd$  if the user is obliged to occupy a different frequency band, or to the smaller of  $Cd$  and  $Cs$  if the user has the possibility of adopting a wire-based solution.

#### 3.2 The residual book value, $Vcr$

This method makes allowance for the age of the outgoing user's equipment, taking the residual book value  $Vcr$  of this equipment. The usual definition of the residual book value of an item of equipment is obtained as follows:

$$Vcr = \text{purchase price of the equipment ready for use minus depreciation}$$

$Vcr$  represents the value of the fraction of equipment remaining to be depreciated. If at this stage in the depreciation, its owner can no longer use the equipment, the latter, according to accounting theory, would incur a loss equal to  $Vcr$ .



### 3.3 Renewal costs

Because of technological evolution and the ageing of equipment, the occupier of a frequency band is called upon to renew his equipment even in the absence of any change of band. Let  $C_r$  be this cost of renewal of equipment, with identical properties and the same frequency band.  $C_r$  in this case represents the cost this occupant would incur even in the absence of any spectrum redeployment.

### 3.4 Calculation of the redeployment cost

Take the user of a frequency band whose present equipment has a residual book value  $V_{cr}$  and who has to evacuate this band by reason of redeployment. Leaving the band means that he has to spend a sum equal to  $C_i$  (see § 3.1) in order to be able to pursue his activities. The fact of evacuating the band will probably mean that it is impossible for him to use his present equipment, hence causing a loss equal to  $V_{cr}$  (see § 3.2). If he were to stay in the band, he would have to spend a sum equal to  $C_r$  (see § 3.3). We therefore have the following relationship:

Redeployment cost = additional cost for the user obliged to leave the frequency band

$$C_i = V_{cr} - C_r$$

Remarks:

- if the calculation results in a negative redeployment cost, this means that the user has an interest in leaving of his own accord the frequency band he currently occupies;
- calculating the redeployment cost of a frequency band requires, in each case, an expert appraisal to establish the actual costs of the existing network and the new network.

The results of the calculation are highly sensitive to the level of depreciation and the architecture of the existing network.

## 4 Calculation of the redeployment cost using residual economic value

The economic approach makes it possible, among other things, to leave aside the following two aspects:

- the fact that the actual service life of the equipment may be different from the life used for accounting purposes<sup>2</sup> (determined on the basis of depreciation periods);
- the possibility that the outgoing user does not apply a depreciation regime.

### 4.1 Analysis of the value of networks

Once the incomer has recognized his interest in using radio waves to provide his service and when it is established that the value to the incomer is greater than the value to the outgoer plus the cost of moving (in other words  $U_{incomer} > U_{outgoer} + C_{removal}$ ), the outgoer has five options:

*Option 1: The outgoer ceases activity:* the outgoer provides a service whose value to society is small, whose technology is obsolete, or which no longer has any justification; all these are cases in which it is preferable that the outgoer cease his activity.

*Option 2: Sharing frequency bands for a single service:* the existing operator uses frequencies but in an inefficient manner or is unable to justify the quantity at his disposal; in this case, he could, without technical handicap, agree to another operator being installed to provide the same service.

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<sup>2</sup> Depreciation for bookkeeping purposes is different from economic depreciation. Equipment that has been completely depreciated can often go on being used for several years before being replaced. In concrete terms, economic depreciation is the sum of a depreciation term (the loss of nominal value of the equipment in the course of a year) and the term representing the remuneration of fixed capital at discount rate  $k$  (or cost of capital). Only the remuneration of that portion of capital that is financed by borrowing (debt) is included in the financial charges recorded in the accounts. As a result, the depreciation for bookkeeping purposes corresponding to the cost of constant use (investment divided by the life of the equipment used in the accounts) and decreasing financial charges, presents a difference in coverage compared with economic depreciation. For the latter, the remuneration is applied to the total capital value of the investment in question, given that part of the financing is in fact obtained internally. It therefore covers both the equivalent of the financial charges and the remuneration of the investment out of own resources (remuneration of shareholders, etc.).

- Option 3: Sharing frequency bands between different services:* the incomer may exploit the host frequency band without the existing operator having to move and the latter can also continue exploiting the spectrum without interference from the incomer. This is the solution of sharing frequency bands for the provision of different uses.
- Option 4: The outgoer moves his activity to another host frequency band:* the incomer has the exclusive use of the whole frequency band and the existing operator must move his activity to another frequency band.
- Option 5: The outgoer moves his activity to a totally different platform:* the incomer wishes to benefit from the exclusive use of the whole frequency band and the existing operator must move his activity. On examination, it turns out that the development cost of the activity of the outgoer on other frequency bands is higher than the development cost of the same activity on a wire-based support (cable, optical fibre, etc.). It is preferable, for an unchanged service, that the outgoer evacuate the frequency bands and move to an alternative platform.

Each of these cases can be tackled by an economic study of the different investment options.

Referring to the work carried out in France on the unbundling of the local loop and the calculation of network costs, the spectrum redeployment cost is examined by comparing different options (again referred to in terms of "configurations"). Take the case of the operator who has to evacuate his frequency band (totally or partially) and move to a different frequency band or a different platform (or simply adjust his use of the frequency band in order to accommodate another operator). The removal of the operator (called the outgoer) must not be to his detriment. The move must involve an incentive for the outgoer. Otherwise, he will not evacuate the frequency band or will try to delay his departure. Equally, the move by the operator must not give rise to the constitution of profits. As a result, an equilibrium point has to be found through the calculation of "fair" compensation. This is done through a comparison between the situation of the outgoer who has to bear the costs of the move and the situation of this same operator if he had not had to move and if he had only incurred the costs of renewing his equipment.

## **5 The redeployment fund and redeployment procedures**

### **5.1 The redeployment fund**

The fund is managed by the body responsible for managing the spectrum (Agence nationale des fréquences (ANFR)) with a specific budget that is kept strictly separate from the ANFR's general budget. It can be financed in several ways, including contributions from public entities for the requirements of redeployment. So far, the only contributions have come from the Ministry of Finance.

The Ministry of Finance supplies the initial share of the fund, on an annual basis of 3 million euros, increased by an additional amount determined each year on a case-by-case basis in the light of the cases dealt with. From 1997 to 2001, the contributions emanating from the Ministry of Finance have amounted to 65 million euros because of the moves required to accommodate GSM 1800, IMT-2000 and SRD applications (including BlueTooth). At a later stage, contributions will also come from private persons. Users may be called on to pay their contributions into the fund at the time they obtain the new frequency band. For example, GSM operators will contribute in 2002 for additional frequencies in the 1.8 GHz band and IMT-2000 operators will pay the contribution just after the granting of the authorizations, i.e. in September 2001.

The ministries and the independent authorities (or the entities delegated for the purpose) benefiting from the redeployment fund sign a redeployment convention with the ANFR.

The Board of the ANFR, on which all the ministries and authorities concerned are represented, approves these conventions. The cumulative total of conventions signed as of 30 June 2002 is 59 million euros. The entities that have already benefited from the redeployment fund are mainly the operator France Telecom and the Defence Ministry. Other beneficiaries are notably Electricité de France (EDF) and Société nationale des chemins de fer (SNCF).

### **5.2 The redeployment procedures**

The procedures are launched by the part of the administration responsible for assigning frequencies before the re-attribution of the frequency band. In France, the bodies in charge of assigning frequencies are known as "affectataires".

At their request, the tasks delegated by the State to the ANFR are as follows:

- to prepare the evaluation of the various cost elements and redeployment principles;
- to propose a schedule for the redeployment operation;
- to organize the supervision of the procedure;

- to manage the redeployment fund.

To carry out these tasks, the ANFR relies on a number of commissions within which consensus is sought and found.

The Commission pour la planification des fréquences (CPF) receives, examines and coordinates the demands for frequencies emanating from “affectataires”.

It has the following tasks:

- to draw up and keep up to date the national Table of Frequency Allocations and to harmonize, as necessary, the use of frequency bands;
- to examine all issues relating to the use and allocation of frequencies having national or international implications;
- to issue directives to the Commission d’assignation des fréquences (CAF), which is accountable to it and for which it acts as the appeals body.

Other commissions are involved in synthesis and prospective in order to:

- contribute to prospective analyses of the radio-frequency spectrum with a view to optimizing its use by public and private users;
- make proposals regarding the rules for electromagnetic compatibility, spectrum engineering and the standards needed to ensure proper use of radio systems;
- bring together representatives of the departments concerned, as well as those of operators of networks open to the public and the industries concerned.

Usually, all decisions are taken by consensus. However, when this is not possible, the decision is taken by the ANFR Board, which is the highest decision-making body on matters related to the frequency spectrum. An appeals procedure can then be launched with the Prime Minister’s office at the request of a member of the ANFR Board.

To date, all redeployment cases have been handled using the usual procedure, with consensus obtained in the commissions concerned and with full transparency guaranteed.

## **Attachment 2 to Annex 1**

### **Examples of the spectrum redeployment process based on the UAE experience**

This Attachment is based on the UAE experience of spectrum redeployment which may be of use for some of the developing countries.

## 1 The change in channel plan for private mobile radio

The Telecommunications Regulatory Authority (TRA) of the UAE follows a transparent mechanism for the development of the spectrum regulatory framework whereby all regulations undergo a public consultation procedure. The private mobile radio regulations cover the channel plans for the VHF and the UHF bands where the TRA proposed to reduce the channel size from 12.5 kHz to 6.25 kHz for doubling the number of channels available for assignment. Majority of the respondents informed that very few vendors are manufacturing equipment supporting 6.25 kHz. The digital mobile radio works on 12.5 kHz and delivers spectrum efficiency of 6.25 kHz per communication channel by making use of two-slot time division multiple access (TDMA) to provide a doubling of capacity compared to analogue systems by accommodating two simultaneous and independent calls within the same 12.5 kHz channel. There are two FDMA-based systems offering 6.25 kHz but the challenge is that one standard is proprietary and for the other only one vendor is manufacturing the equipment. Therefore, the decision has to be made in such cases based on the following principles:

- Consumer benefit by access to low cost equipment available from variety of manufacturers.
- Not to create market disruption by stopping a certain category of equipment on channel size.
- Use of spectrum pricing as a tool for incentivizing use of 6.25 kHz.
- Adopt channel plan which caters for both 6.25 kHz and 12.5 kHz channels.

## **2 The use of 8.33 kHz channelling for VHF aeronautical mobile**

The UAE TRA initiated consultations with the stakeholders to implement 8.33 kHz channelling in the VHF aeronautical mobile band. Although the majority of the UAE aircraft are fitted with equipment which supports this channelling, very few old aircraft do not have compliant radios. This example is quoted as the challenge in this band cannot be addressed by a single country and has to be taken at a regional level. ICAO EUR Region enforced mandatory carriage of 8.33 kHz radios above FL245 in 1999 to alleviate the congestion in the VHF. The European Commission decided to regulate on the implementation of VHF 8.33 kHz to the European airspace above FL195. Several studies were conducted and the implementation was done in phases and the details are available on the [EUROCONTROL](#) website. The issue will now be dealt at the ICAO MID region level through consensus of all participating countries.



### **3 The digital switchover planning in the VHF and UHF bands**

The UAE TRA initiated its digital broadcast switch-over plan after the conclusion of the GE06 Agreement. This planning involved the following:

- Evaluation of existing penetration of terrestrial analogue TV;
- Requirements of existing analogue TV broadcasters;
- Business modelling for switch over of existing operators to digital broadcast;
- Planning of national frequency layers for the operators with reservation of digital dividend spectrum for mobile service;
- Decision to use VHF TV band III for introducing digital audio broadcasting (DAB);
- Use of SFN as the choice based on planning;
- Decision to adopt more spectrum efficient system (DVB-T2);
- Selection of most viable business model based on number of possible frequency layers;
- Decision to give spectrum rights to broadcasters;
- Dialog with broadcasters to use existing infrastructure to deploy digital transmission;
- Encourage site sharing to operate multiple MUX from the same site to reduce transmission costs;
- Regional harmonization of system and switch-over dates as both will contribute towards economies of scale;
- Regional harmonization for an earlier analogue switch-off date to make the digital dividend band available for mobile at an earlier date.

### **Attachment 3 to Annex 1**

#### **An example of the spectrum redeployment process at the regional level**

This Attachment is based on the experience of redeployment at the regional level for the aeronautical mobile.

Communications for air-traffic control use the aeronautical mobile (R) between 117.975-137 MHz. The number of available VHF assignments was increased by optimizing frequency reuse (improved coordination and possibly confining VHF assignments to smaller areas), using more spectrum (118 to 132 MHz increased to 117.975-137 MHz), and splitting the radio spectrum into narrower bandwidths. This example shows the challenges associated with redeployment on a regional basis.

In 1947, VHF assignments for aeronautical mobile (R) in 118-132 MHz used 200 kHz spacing, providing just 70 channels. In 1958, the spacing was reduced to 100 kHz, doubling the number of channels to 140. In 1959 the upper limit of the aviation band was expanded to 136 MHz, giving another 40 channels, bringing the total to 180. In 1964, the channel spacing was halved again to 50 kHz, resulting in 360 channels being available. The channel spacing was further cut to 25 kHz in 1972, doubling the available channels to 720. Seven years later, in 1979, the upper limit of the aviation band was once again expanded to 137 MHz, bringing the total number of channels to 760.

In 1995, the proposal was made to reduce the channel spacing to 8.33 kHz, resulting in 2 280 channels. With each iteration of the improvements in number of channels by reducing the channel size, a much higher number of radios required replacement and the time-scales for the implementation also increased.

Following consultations with the stakeholders concerned, the European Commission, in January 2006, decided to address the scope of the mandate in two phases. The first phase, aimed at the deployment of 8.33 kHz channel spacing in the airspace above flight level 195 (FL195), was completed with the adoption and publication of Commission Regulation (EC) No. 1265/2007, with below FL195 (Second Phase) to be managed through a later amendment. Eurocontrol has published a Close-Out report ([http://www.eurocontrol.int/vhf833/public/standard\\_page/above\\_fl195.html](http://www.eurocontrol.int/vhf833/public/standard_page/above_fl195.html)) detailing to what extent the original planning and assumptions have been satisfied by the actual execution of the above FL195 phase. The report discusses the lessons learned, with equal emphasis given to successes and failures.



## **Attachment 4 to Annex 1**

### **An example of spectrum redeployment process based on the Benin experience**

The redeployment of the spectrum is a complex task which can become harder when implemented in a developing country because of the immaturity of the national framework for spectrum management and especially the lack of a national strategy shared by all stakeholders (government, regulatory authority, operators ...).

However, these reasons should not be taken as an obstacle for developing countries as a redeployment may represent a real opportunity for effective and efficient use of the spectrum. Indeed, due to the lack of a national strategy for spectrum management, various technologies from various regions have often been deployed in inadequate frequency bands, so a spectrum redeployment usually put things in order and allow the introduction of appropriate technologies and services.

This Attachment is based on the Benin experience of spectrum redeployment of the 790-890 MHz frequency band, which may be useful for some of the developing countries.

## 1 Issues and objectives of the redeployment

The Benin telecommunications sector is driven by three main actors offering various services:

- a public operator offering fixed telephony (wired and wireless) and internet access services;
- five private operators offering mobile telephony and internet services;
- five internet access providers through wireless access networks.

The 790-890 MHz frequency band was previously occupied by the public operator for its CDMA 2000 network as fixed internet wireless access system. Due to the decision of the Government of the Republic of Benin to grant licences for new generations networks, it has been necessary to carry out a redeployment of this band.

The main objective of this redeployment was to make the 790-890 MHz frequency band available for the promotion of broadband, and by doing so, to enable the efficient use of the band.

## 2 Methodology

The regulatory authority of Benin is the structure responsible for the management and control of the radio spectrum. As such, it could lead the redeployment process, from design to implementation, but in order to be impartial and due to the short time given, it was decided to hire a consulting company to carry out the redeployment.

The selection of the company was made according to criteria such as expertise in radio engineering, planning and deployment of CDMA and UMTS networks and knowledge of associated costs.

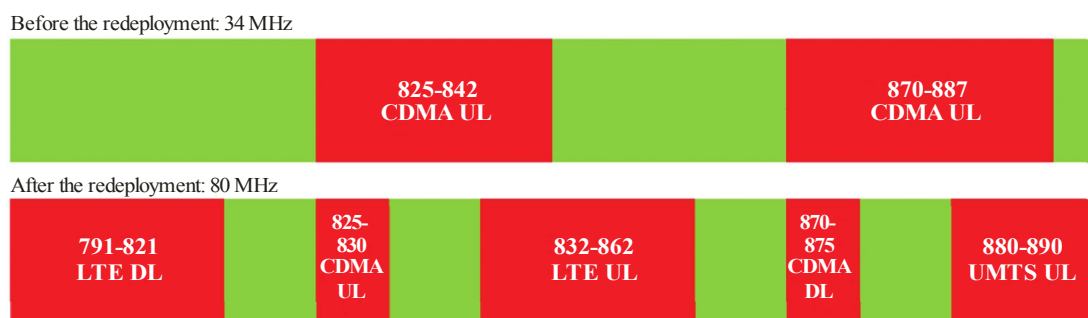
A committee was appointed to monitor the redeployment process, with members from the regulatory authority, the Ministry of ICT, and operators involved. The study mission lasted five months and required regular meetings with all the operators involved. At the end of the mission, the following deliverables were developed:

- a document detailing three options for the outgoing operator with the frequency plan, the benefits and the technical constraints of each option;
- the schedule of implementation of each option;
- the cost of the redeployment regarding each option with the detailed elements associated costs;
- a detailed communication plan to address the subscribers of the outgoing operator.

### 3 Results of the redeployment

– First digital dividend made available and improvement of the spectral efficiency  
This redeployment has achieved the main goal consisting on making available the 790-890 MHz frequency band for the promotion of broadband in Benin.

Figure 1 shows the evolution of the occupation of the spectrum before and after the redeployment:



SM.1603-01

– Economic and social benefits

The redeployment of the 790-890 MHz frequency band offer both economic and social advantages. Indeed, the CDMA network operated by the public operator has 93,012 voice subscribers and 48,890 data subscribers (Population of Benin: 9,500,000 inhabitants in 2012) with limited coverage and services.

It is therefore obvious that the introduction of mobile broadband in the band will lead to important economic benefits (new licences, operators' contribution, payment of fees, etc.), as well as social benefits (universal service, job creation, access to mobile broadband for everyone, etc.).

## 4 Conclusion

This redeployment was a very good thing for Benin because it has helped achieving an important aim, which is making available the first digital dividend for the deployment of third generation networks, in line with international trends. This has led to better use of spectrum resources.

Moreover, this redeployment allowed to experience the main difficulties of a redeployment and find appropriate solutions. Special attention should be given to the following points during an operation of redeployment in a developing country:

- The involvement of all stakeholders in the redeployment:  
This is an elementary precaution that will guarantee success. Indeed, it is essential all stakeholders be actively involved in the redeployment to ensure that their needs and constraints are taken into account.
- Service continuity:  
Redeployment should not in any case lead to services disruption for subscribers; service continuity must then be ensured. To do so, it should be necessary to make a clear and detailed communication plan to subscribers, as well as a detailed schedule of changing customer equipment when necessary.
- Financial assessments:  
Validation of financial assessments was one of the most difficult tasks of the study because of the lack of documentation to determine the depreciation of the equipment and the residual value of the equipment. The outgoing operator was not able to provide purchase invoices, so the evaluations were based on estimations collected from suppliers.
- Redeployment funding:  
As there is usually no redeployment funding in developing countries, it is crucial to determine early source of funds to finance the implementation of the redeployment and to ensure that these funds will be available when required, so that the effective implementation of the redevelopment will not be delayed.



## **Attachment 5 to Annex 1**

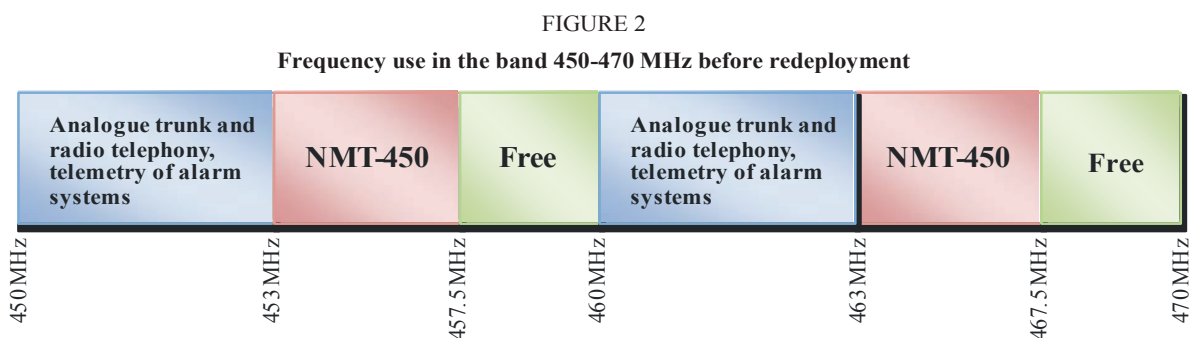
### **An example of the spectrum redeployment process based on the Ukrainian experience**

This Attachment contains the description of the spectrum redeployment process in Ukraine aimed for introduction of the CDMA-450 (IMT-MC-450 EV-DO) technology in the 450 MHz band, started at the end of 2006 and finished in 2011.

## 1 Prerequisites and objectives of the redeployment

The prerequisites of the redeployment process were: decreasing the number of NMT-450 users due to operation of GSM-900 on one hand and ever-growing demand for mobile data transmission services on the another hand.

Before starting the redeployment process, the 450-470 MHz frequency band was occupied by the public operator of the NMT-450 network (453-457.5/463-467.5 MHz) and operators of analogue trunk and radio telephony communications, telemetry of alarm systems (450-453/460-463 MHz, with a frequency step 25 kHz), as shown in Fig. 2.



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The operator of NMT-450 network appealed to the Ukrainian regulator, the National Commission on Communication Regulation of Ukraine, for changing its licence for outdated standard NMT-450 into the new one for CDMA-450 standard in the same frequency range.

The request was satisfied in accordance with the Law of Ukraine on Telecommunications allowing operator to do so without auction.

In order to create a competitive environment in the band, the Regulator adopted the Decision

No. 450 of 17 November 2006 on considering of frequency plan for development of digital cellular communication technology CDMA-450. The main objective of the Decision was to make the band 450-470 MHz available for CDMA-450. Thus this Decision launched the redeployment process in the occupied frequency band 450-453/460-463 MHz.

## 2 Redeployment planning

In order to make the band 450-470 MHz available for CDMA-450, the Regulator together with the Ukrainian State Centre of Radio Frequencies (UCRF) studied the occupancy of the bands

450-453/460-463 MHz in Ukraine. Totally 147 users operated in 27 regions of Ukraine in this band.

Based on the results of the analysis, the proposals on arranging redeployment process were prepared as follows:

- to inform operators that prolongation of issued licences for analogue trunk and radio telephony in the bands 450.6-453/460.6-463 MHz is not planned;
- to leave the frequency band 450.0-450.6/460.0-460.6 MHz for analogue trunk communications and rearrange it for the usage of frequency step of 12.5 kHz instead of 25 kHz;
- to shift analogue trunk and radio telephony frequencies from the band 450.6-453/460.6-463 MHz to the bands 450.0-450.6/460.0-460.6 MHz and 413-420/423-430 MHz;
- to stop licensing the band 450.6-453/460.6-463 MHz from 01.11.2007;
- to set the end of transition period for 01 November 2011.

The redeployment process was planned in such a way as to ensure the following:

- minimal negative impact to existing operators in the band;
- minimal financial expenses;
- providing as much as possible alternative frequencies in the band 450-450.6/460-460.6 MHz;
- possible financial compensation to operators.

During the planning of redeployment process several rounds of public consultations were done with operators, using the frequency band 450.6-453/460.6-463 MHz in order to agree on redeployment proposals and terms.

### 3 Redeployment implementation

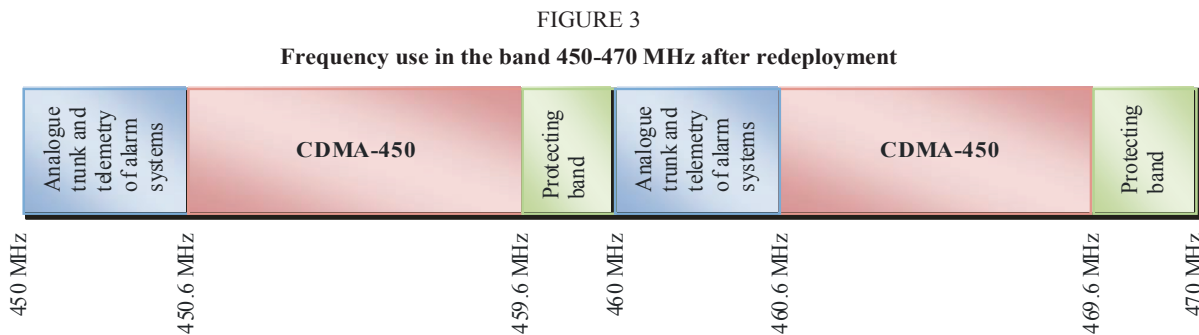
In the frequency band 450.0-450.6/460.0-460.6 MHz, the Regulator and UCRF succeeded to assign frequencies for 89% of operators. From 01 November 2007, the process of licences and permissions reissuing started. The duration of the transition period was set for one year.

For the rest of operators, proposals for shifting to the frequency band 413-420/423-430 MHz were prepared. From 01 July 2008, the process of licences and permissions reissuing started. The duration of the transition period was set for two years.

As the usage of the band 450-470 MHz changed, the UCRF made efforts for concluding new coordination agreements with the neighbouring countries.

In order to compensate partly financial expenses occurred because of shifting operators to another frequency band, the Regulator adopted Decision No. 988 of 30 October 2007 providing operators 40% reduction for the works of the UCRF on EMC calculation, frequency assigning and radio frequency monitoring. This norm was valid till 31 December 2007.

The use of the band 450-470 MHz after redeployment is shown in Fig. 3.



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## 4 Conclusion

The frequency redeployment process in the band 450-470 MHz in Ukraine succeeded because of cooperation of the Regulator and operators. Several rounds of public consultations were done.

During the frequency redeployment planning and implementation, a combination of the following methods was used:

- voluntary and regulatory spectrum redeployment;
- redeployment at the expiration of the current licence;
- migration to frequency bands within the tuning range of equipment used as much as possible;
- compensations.

## **Attachment 6 to Annex 1**

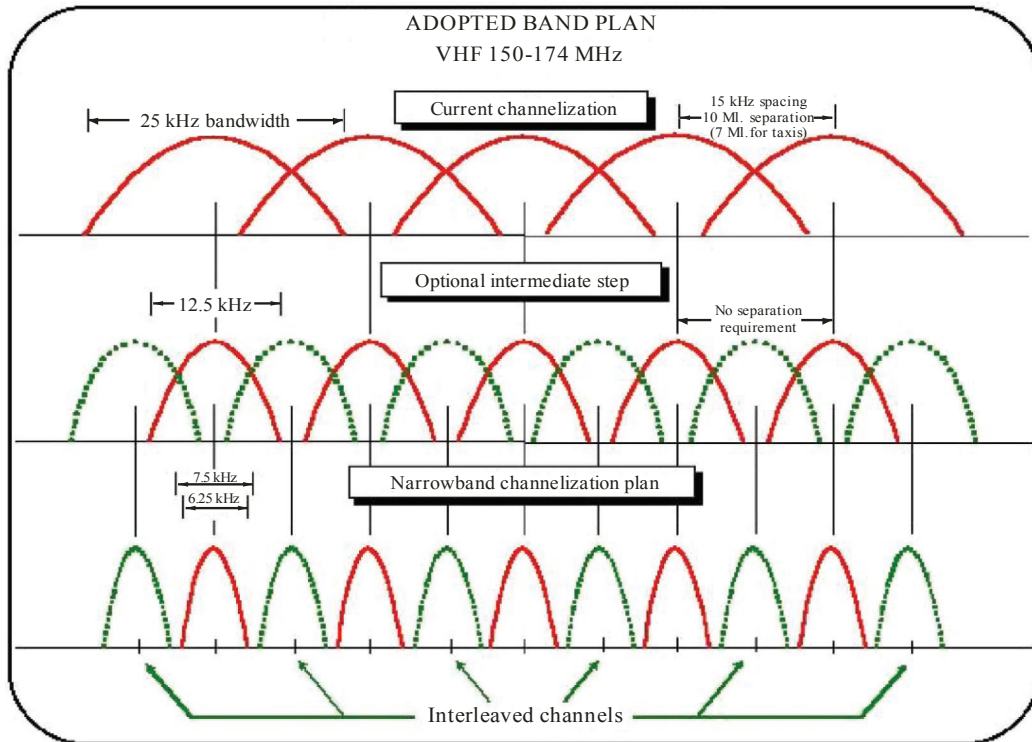
### **An example of the spectrum redeployment (refarming) process based on the United States of America experience**

“Refarming” is the informal name of a notice and comment rule-making proceeding (PR Docket No. 92-235 <http://apps.fcc.gov/ecfs/comment/view?id=107799>) opened in 1992 to develop an overall strategy for using the spectrum in the private land mobile radio (PLMR) allocations more efficiently to meet future communications requirements.

In June 1995, the Commission adopted a new narrowband channel plan in the PLMR bands below 800 MHz <http://apps.fcc.gov/ecfs/comment/view?id=146897>. In February 1997, the Commission adopted a Second Report and Order <http://apps.fcc.gov/ecfs/comment/view?id=180426> which did away with 20 discrete radio services and replaced them with two frequency pools: the Public Safety Pool and the [Industrial/Business Pool](#). In May 2001, the Commission adopted the Sixth Memorandum Opinion and Order which resolved all outstanding issues and terminated the proceeding.

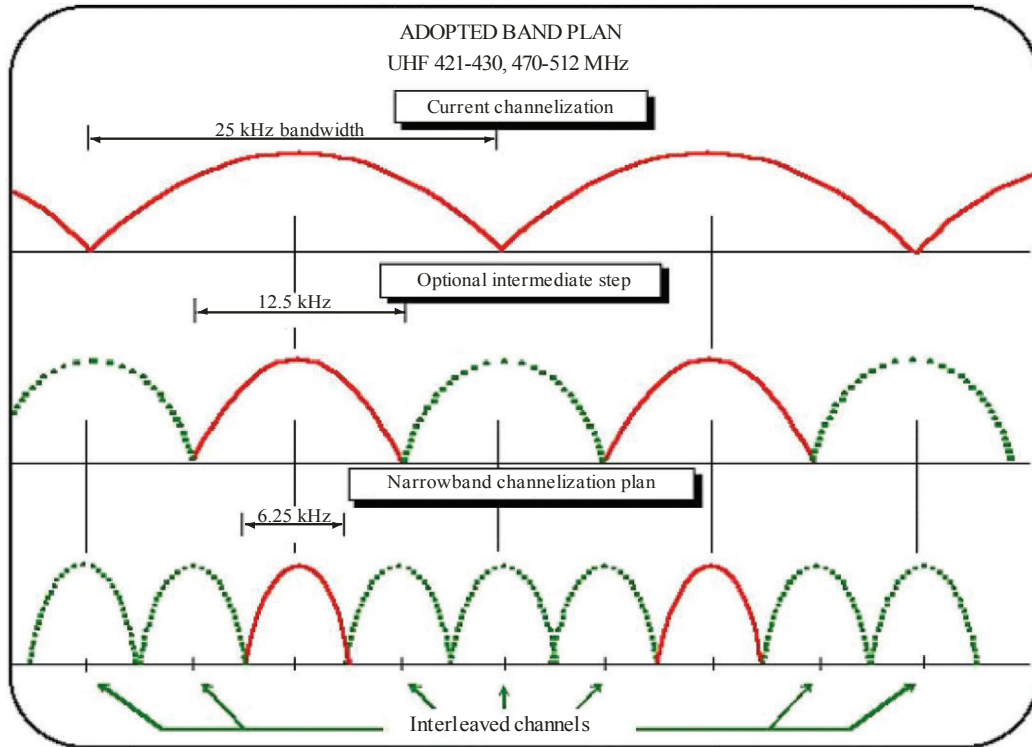
The rules adopted in the refarming proceeding are applicable to the Private Land Mobile bands below 800 MHz. Specifically, the technical rules adopted affect the licensing and use of radios in the following bands:

FIGURE 4  
**150-174 MHz**  
**VHF high band; available nationwide, channels are generally spaced every 7.5 kHz,**  
**authorized bandwidth is 20 kHz, 11.25 kHz or 6 kHz**



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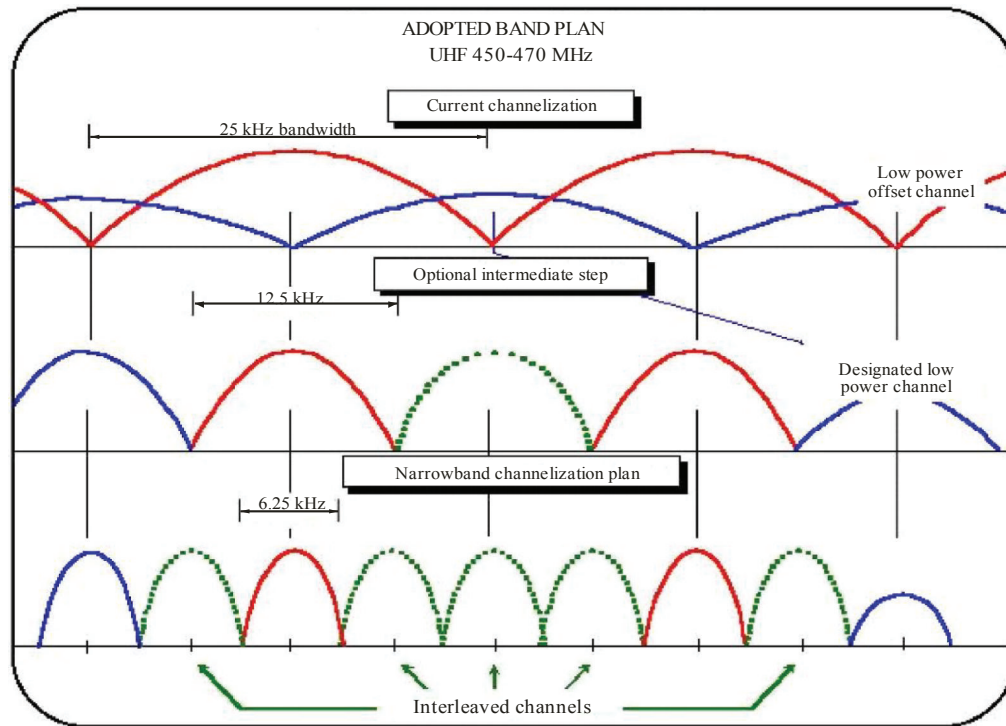
FIGURE 5  
421-430 MHz  
Available only in Detroit, Buffalo, and Cleveland, channels spaced every 6.25 kHz,  
authorized bandwidth is 20 kHz, 11.25 kHz or 6 kHz



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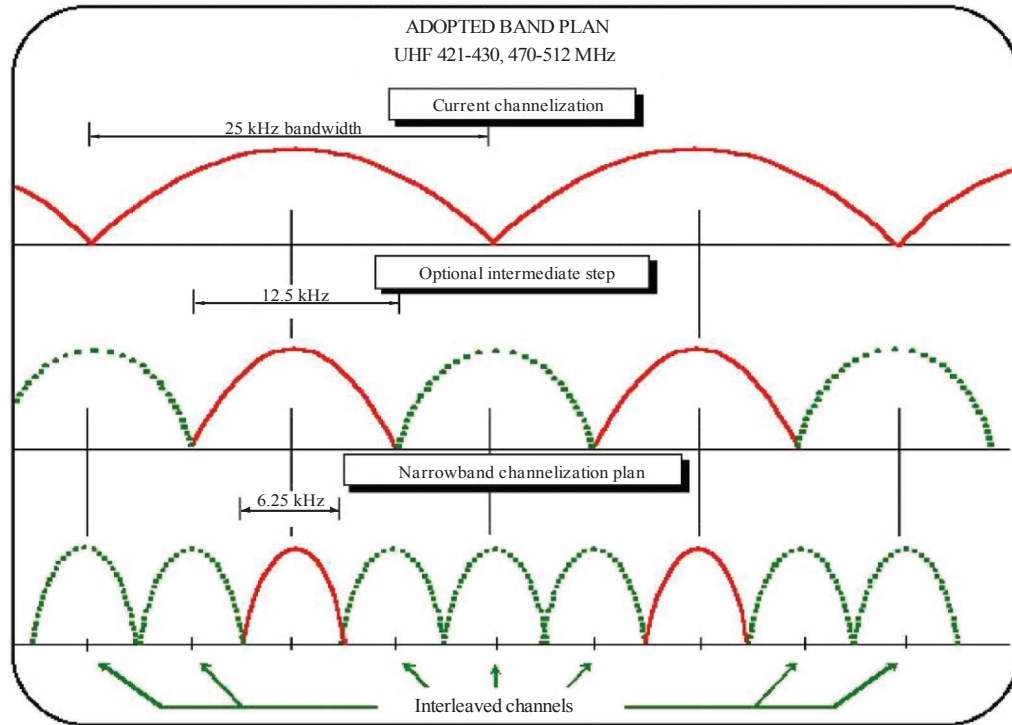


FIGURE 6  
**450-470 MHz**  
 Available nationwide, channels are generally spaced every 6.25 kHz, authorized bandwidth is 20 kHz, 11.25 kHz or 6 kHz



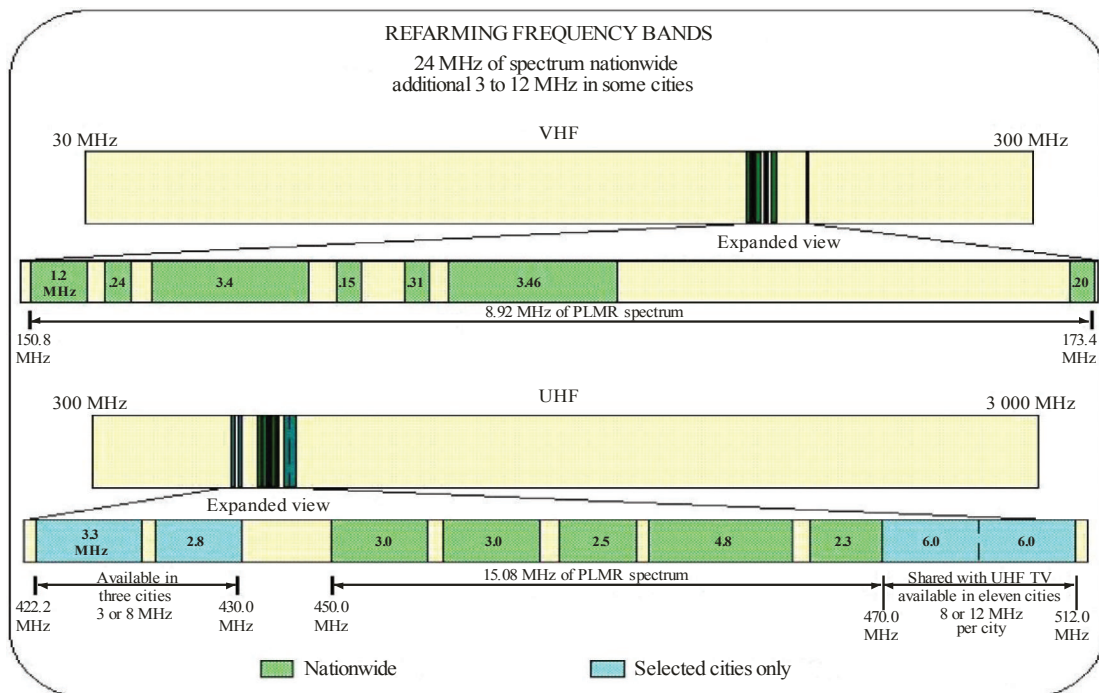
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FIGURE 7  
**470-512 MHz**  
 Shared with UHF-TV; available only in 11 cities, channels are spaced every 6.25 kHz, authorized bandwidth is 20 kHz, 11.25 kHz or 6 kHz



SM.1603-07

FIGURE 8



SM.1603-08

Information on the public safety radio systems operating in the 150-512 MHz radio bands and transition can be accessed at <http://transition.fcc.gov/pshs/public-safety-spectrum/narrowbanding.html>

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DEPARTMENT OF LABOUR  
NOTICE 167 OF 2019

LABOUR RELATIONS ACT, 1995

APPLICATION FOR VARIATION OF REGISTERED SCOPE OF A BARGAINING  
COUNCIL

I, Daniel Lehlohonolo Molefe, Registrar of Labour Relations, hereby, in terms of section 58(1) of the Labour Relations Act, 1995, give notice that an application for the variation of its registered scope has been received from the **Furniture Bargaining Council**.

Particulars of the application are reflected in the subjoined table.

Any person may object to the application on any or all of the following grounds:

- (a) the applicant has not complied with the provisions of section 29 of the Act, read with the changes required by the context;

- (b) the sector and area in respect of which the application is made is not appropriate; and
- (c) the applicant is not sufficiently representative in the sector and area in respect of which the application is made.

Any person who objects must lodge his/her written objection with me, c/o the Department of Labour, Laboria House, 215 Francis Baard Street, Pretoria (postal address: Private Bag X117, Pretoria, 0001), within 30 days of the date of this notice. A copy of the objection must be served on the applicant within the said period and I must be satisfied that a copy of the objection has been served on the applicant.

The applicant may respond to the objection within 14 days of the expiry of the 30-day period mentioned above and must satisfy me that a copy of the response has been served on the person who objected within the 14-day period.

### **TABLE**

**Name of the bargaining council:**

**Furniture Bargaining Council.**

**Address of bargaining council:**

Furniture Bargaining Council

North Block, 39 Empire Road, Park Town Extension Johannesburg

P.O.Box 32789

BRAAMFONTEIN

2017

Tel: 011 242 9200

**Date on which application was lodged:**

18 February 2019

**Intention of the application**

The intention of the application is to vary the scope of the council by inserting additional wording to expand the definition of the Furniture, Bedding and Upholstery Manufacturing Industry.

**Interest and Area in respect of which the application is made:**

The Furniture, Bedding and Upholstery Manufacturing Industry as defined hereunder, in the Provinces of Gauteng, North West, Mpumalanga, Limpopo and Free State.

**“Furniture, Bedding and Upholstery Manufacturing Industry”** or “Industry” means, without in any way limiting the ordinary meaning of the expression, the industry in which employers and their employees are associated for the manufacture, either in whole or as a complete unit or in part as a component or components, of all types of furniture and bedding as well as upholstery and/or re-upholstery and will, inter alia, include the following:

#### 1. **Furniture**

Repairing, staining, spraying, polishing, re-polishing, making loose covers and/or cushions, wood machining, veneering, woodturning, carving, assembling, painting, wood bending and laminating. Furniture manufacturing will also include the manufacturing, installation, repairing, polishing, re-polishing, staining, spraying of pianos, organs, movable room/office partitions, kitchen cupboards, kitchen cupboard tops, kitchen cupboard components (irrespective of materials used), attached wall cupboards, built-in cupboards, built-in cupboard components, free standing bars or built-in bar counters, cane, wicker or grass furniture, cabinets including cabinets for musical instruments and radios, wireless or television cabinets, bathroom cupboards, any other cupboard tops and furniture for tea-rooms, restaurants, offices, churches, schools, libraries, other educational institutions, conference centres, theatres, shop fitting, office fitting and bank fitting, which includes the manufacture and/or fixing of shop fronts, window enclosures, showcases, counters, including point of sales counters, screens interior fittings and fixtures and any form of shelving, irrespective of the material used.

#### 2. **Bedding**

The manufacturing, repairing, covering, re-covering of mattress bases, mattresses, spring mattresses, overlays, bolsters, pillows, cushions for studio couches, spring

units, box-spring mattresses and studio couches, but excluding the manufacturing of bedding made mainly of metal and/or plastic materials.

“Studio Couch” means an article of furniture, which is designed for seating and for conversion into a double bed or two or more beds and of which the frames are constructed mainly of metal and the seating and/or sleeping surfaces consist of mattresses and/or cushions.

### 3. Upholstery

The upholstering or re-upholstering of any furniture, or item of furniture, bedding, pelmets and mattress bases.

#### **Sector and area(s) in respect of which registration is held:**

The Furniture, Bedding and Upholstery Manufacturing Industry as defined hereunder, in the Provinces of Gauteng, North West, Mpumalanga, Limpopo and Free State.

“**Furniture, Bedding and Upholstery Manufacturing Industry**” or “Industry” means, without in any way limiting the ordinary meaning of the expression, the industry in which employers and their employees are associated for the manufacture, either in whole or as a complete unit or in part as a component or components, of all types of furniture and bedding as well as upholstery and/or re-upholstery and will, inter alia, include the following:

#### 1. Furniture

Repairing, staining, spraying, polishing, re-polishing, making loose covers and/or cushions, wood machining, veneering, woodturning, carving, assembling, painting, wood bending and laminating. Furniture manufacturing will also include the manufacturing, installation, repairing, polishing, re-polishing, staining, spraying of



pianos, organs, movable room/office partitions, kitchen cupboards, kitchen cupboard tops, kitchen cupboard components (irrespective of materials used), attached wall cupboards, built-in cupboards, built-in cupboard components, free standing bars or built-in bar counters, cane, wicker or grass furniture, cabinets including cabinets for musical instruments and radios, wireless or television cabinets, bathroom cupboards, any other cupboard tops and furniture for tea-rooms, restaurants, offices, churches, schools, libraries, other educational institutions, conference centres and theatres but excluding the manufacturing of furniture made mainly of metal and/or plastic materials.

## 2. **Bedding**

The manufacturing, repairing, covering, re-covering of mattress bases, mattresses, spring mattresses, overlays, bolsters, pillows, cushions for studio couches, spring units, box-spring mattresses and studio couches, but excluding the manufacturing of bedding made mainly of metal and/or plastic materials.

“Studio Couch” means an article of furniture, which is designed for seating and for conversion into a double bed or two or more beds and of which the frames are constructed mainly of metal and the seating and/or sleeping surfaces consist of mattresses and/or cushions.

## 3. **Upholstery**

The upholstering or re-upholstering of any furniture, or item of furniture, bedding, pelmets and mattress bases.

### **Representativeness of the Council:**

Total number of employees falling within the new scope of the Council and who belong to the trade unions which are party to the Council:

**6 194**

Total number of employers falling within the new scope of the Council and who belong to the employers' organisation which is a party to the Council:

**302**

Total number of the employers within the new scope of the Council:

**545**

Total number of employees employed within the new scope of the Council by the employers who belong to the employers' organisation which is a party to the Council:

**9 912**

Total number of the employees employed within the new scope of the Council:

**14 497**



**REGISTRAR OF LABOUR RELATIONS**

**DATE:** *19 March 2019* .....

**LAW SOCIETY OF THE CAPE OF GOOD HOPE**  
**NOTICE 168 OF 2019**  
**CODE OF CONDUCT FOR ALL LEGAL PRACTITIONERS, CANDIDATE LEGAL**  
**PRACTITIONERS AND JURISTIC ENTITIES**

This final Code of Conduct is published in terms of Section 36(1) of the Legal Practice Act 28 of 2014 (as amended) ("Act").

The Code of Conduct applies to all legal practitioners (attorneys and advocates) as well as all candidate legal practitioners and juristic entities as defined, and is effective from date of publication in the Gazette.

A draft amendment of the Code of Conduct previously published on 10 February 2017 in Government Gazette No 40610 in terms of Section 97(1)(b) of the Act, was published on 21 December 2018 in Government Gazette No 42127 in terms of Section 36(5) of the Act for comment. All interested parties were called upon to submit their comments in writing by 7 February 2019. These comments were considered by the Legal Practice Council when it drafted the final version now being published.

The Code of Conduct serves as the prevailing standard of conduct and will be enforced by the Legal Practice Council. It consists of the following parts:

- I. Definitions;
- II. Code of conduct: general provisions;
- III. Conduct of attorneys;
- IV. Conduct of advocates contemplated in section 34(2)(a)(i) of the Act;
- V. Conduct of advocates contemplated in section 34(2)(a)(ii) of the Act;
- VI. Conduct of legal practitioners and candidate legal practitioners in relation to appearances in court and before tribunals; and
- VII. Conduct of legal practitioners not in private practice.

**Executive Committee:** Ms. Kathleen Matolo-Dlepu – Chairperson, Adv Anthea Platt SC - Deputy Chairperson, Adv. Greg Harpur SC, Ms. Trudie Nichols, Mr Lutendo Sigogo, Mr Jan Stemmett, Adv. Phillip Zilwa SC, Executive Officer (acting): Ms. Charity Nzuza

Failure to adhere to the Code of Conduct will constitute misconduct and transgressors will be subjected to disciplinary proceedings in terms of the Rules promulgated under Sections 95(1), 95(3) and 109(2) of the Act as per Government Gazette number 41781 of 20 July 2018.

**Signed at Pretoria on this 19<sup>th</sup> day of March 2018.**



**Ms Hlaleleni Kathleen Dlepu**

**Chairperson: Legal Practice Council**

**Executive Committee:** Ms. Kathleen Matolo-Dlepu – Chairperson, Adv Anthea Platt SC - Deputy Chairperson, Adv. Greg Harpur SC, Ms. Trudie Nichols, Mr Lutendo Sigogo, Mr Jan Stemmett, Adv. Phillip Zilwa SC, Executive Officer (acting): Ms. Charity Nzuza

South African Legal Practice Council

Code of Conduct

made under the authority of section 36(1) of the Legal Practice Act, 28 of 2014

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## PART I

### Definitions

1. In this code, unless the context otherwise indicates:
  - 1.1 "**the Act**" means the Legal Practice Act, 28 of 2014;
  - 1.2 "**advocate**" means a legal practitioner who is admitted and enrolled as such under the Act;
  - 1.3 "**attorney**" means a legal practitioner who is admitted and enrolled as such under the Act;
  - 1.4 "**branch office**" means an office at or from which the firm practises, but which is not a main office;
  - 1.5 "**candidate attorney**" means a person undergoing practical vocational training with a view to being admitted and enrolled as an attorney;
  - 1.6 "**candidate legal practitioner**" means a person undergoing practical vocational training, either as a candidate attorney or as a pupil;
  - 1.7 "**chambers**" means premises suitable for the practice of an advocate;
  - 1.8 "**code of conduct**" or "**code**" means this code;
  - 1.9 "**conveyancer**" means any practising attorney who is admitted and enrolled to practice as a conveyancer in terms of the Act;
  - 1.10 "**Council**" means the South African Legal Practice Council established in terms of section 4 of the Act;
  - 1.11 "**counsel**" means an advocate referred to in section 34(2)(a)(i) of the Act;
  - 1.12 "**court**" means any court in the Republic as defined in section 166 of the Constitution of the Republic;
  - 1.13 "**disciplinary body**" means -
    - 1.13.1 an investigating committee;

- 1.13.2 a disciplinary committee; or
- 1.13.3 an appeal tribunal.
- 1.14 "**Fidelity Fund Certificate**" means the certificate referred to in section 85 of the Act;
- 1.15 "**firm**" means -
- 1.15.1 a partnership of attorneys;
- 1.15.2 an attorney practising for his or her own account; or
- 1.15.3 a juristic entity
- who or which in each case conducts the practice of an attorney;
- 1.16 "**Fund**" means the Legal Practitioners' Fidelity Fund referred to in section 53 of the Act;
- 1.17 "**High Court**" means the High Court of South Africa established by section 6 of the Superior Courts Act, 10 of 2013 or, if the context indicates otherwise, the Division thereof having jurisdiction;
- 1.18 "**juristic entity**" means a commercial juristic entity established to conduct a legal practice as an attorney, as contemplated in section 34(7) of the Act and a limited liability legal practice as contemplated in section 34(9) of the Act;
- 1.19 "**legal practitioner**" means an advocate or attorney admitted and enrolled as such in terms of sections 24 and 30 respectively of the Act;
- 1.20 "**main office**" means the premises at and from which the practice of a firm is as a whole administered and controlled, including such premises in two or more buildings situated in sufficiently close proximity to one another to allow the administration of that practice as a single composite entity, and includes premises declared or determined as such in terms of accounting rules 54.2 or 54.5, as the case may be;
- 1.21 "**Minister**" means the Minister of Justice and Correctional Services;
- 1.22 "**notary**" means any practising attorney who is admitted and enrolled to practise as a notary in terms of this Act;



- 1.23 **"private practice"** means the practice of a legal practitioner who places legal services at the disposal of the public for reward and is actively engaged in the profession either as an attorney or as an advocate, or the practice of a legal practitioner as contemplated in sections 34(5)(c), (d) or (e) or section 34(6)(b), (c) or (d), and **"practise"** has a corresponding meaning; and for purposes of this definition -
- 1.23.1 attorneys referred to in sections 34(5)(c), (d) and (e) of the Act will be regarded as being attorneys in private practice;
- 1.23.2 advocates referred to in sections 34(6)(b), (c) and (d) will be regarded as being advocates in private practice;
- 1.24 **"pupil"** means a person undergoing practical vocational training with a view to being admitted and enrolled as an advocate;
- 1.25 **"Republic"** means the Republic of South Africa;
- 1.26 **"roll"** means the roll of legal practitioners referred to in section 30(3) of the Act;
- 1.27 **"rules"** means the rules made in terms of the Act;
- 1.28 **"trust account practice"** means a practice conducted by -
- 1.28.1 one or more attorneys who are; or
- 1.28.2 an advocate referred to in section 34(2)(b) of the Act who is,  
in terms of the Act, required to hold a Fidelity Fund certificate.
- 1.29 Words or expressions referred to in this code which are not defined shall bear the respective meanings assigned to them by section 1 of the Act.

## PART II

### Code of Conduct: general provisions

2. The provisions of Part II of the code shall apply to, and be observed by, all legal practitioners, candidate legal practitioners and juristic entities including, where the context requires, legal practitioners who are not in private practice, but are not exhaustive. If legal practitioners, candidate legal practitioners and juristic entities are

at any time in doubt about the meaning or applicability of any part of this code they may apply for a ruling from the Council.

3. Legal practitioners, candidate legal practitioners and juristic entities shall -
  - 3.1 maintain the highest standards of honesty and integrity;
  - 3.2 uphold the Constitution of the Republic and the principles and values enshrined in the Constitution, and without limiting the generality of these principles and values, shall not, in the course of his or her or its practice or business activities, discriminate against any person on any grounds prohibited in the Constitution;
  - 3.3 treat the interests of their clients as paramount, provided that their conduct shall be subject always to:
    - 3.3.1 their duty to the court;
    - 3.3.2 the interests of justice;
    - 3.3.3 observance of the law; and
    - 3.3.4 the maintenance of the ethical standards prescribed by this code, and any ethical standards generally recognised by the profession;
  - 3.4 honour any undertaking given by them in the course of their business or practice, unless prohibited by law;
  - 3.5 refrain from doing anything in a manner prohibited by law or by the code of conduct which places or could place them in a position in which a client's interests conflict with their own or those of other clients;
  - 3.6 maintain legal professional privilege and confidentiality regarding the affairs of present or former clients or employers, according to law;
  - 3.7 respect the freedom of clients to be represented by a legal practitioner of their choice;
  - 3.8 account faithfully, accurately and timeously for any of their clients' money which comes into their possession, keep such money separate from their own money, and retain such money for only as long only as is strictly necessary;
  - 3.9 retain the independence necessary to enable them to give their clients or employers unbiased advice:

- 3.10 advise their clients at the earliest possible opportunity on the likely success of such clients' cases and not generate unnecessary work, nor involve their clients in unnecessary expense;
- 3.11 use their best efforts to carry out work in a competent and timely manner and not take on work which they do not reasonably believe they will be able to carry out in that manner;
- 3.12 be entitled to a reasonable fee for their work, provided that no legal practitioner shall fail or refuse to carry out, or continue, a mandate on the ground of non-payment of fees and disbursements (or the provision of advance cover therefor) if demand for such payment or provision is made at an unreasonable time or in an unreasonable manner, having regard to the particular circumstances.
- 3.13 remain reasonably abreast of legal developments, applicable laws and regulations, legal theory and the common law, and legal practice in the fields in which they practise;
- 3.14 behave towards their colleagues, whether in private practice or otherwise, including any legal practitioner from a foreign jurisdiction, and towards members of the public, with integrity, fairness and respect and without unfair discrimination, and shall avoid any behaviour which is insulting or demeaning;
- 3.15 refrain from doing anything which could or might bring the legal profession into disrepute;
- 3.16 unless exempted therefrom, pay promptly to the Council or any organ of the Council, or to the Fund, all amounts which are legally due or payable in respect of fees, charges, levies, subscriptions, penalties, fines or any other amounts of whatsoever nature levied on legal practitioners, candidate legal practitioners or juristic entities in terms of any powers arising under the Act or the rules;
4. Legal practitioners, candidate legal practitioners and juristic entities are required to become fully acquainted with this code and comply with its provisions;
5. Legal practitioners, candidate legal practitioners and juristic entities are encouraged to report unprofessional conduct by other legal practitioners, candidate legal practitioners or juristic entities to the Council in the manner prescribed in the rules prescribing the disciplinary procedure.
6. **Harassment and sexual harassment**

- 6.1 No legal practitioner or candidate legal practitioner may subject any person to sexual harassment.
- 6.2 No legal practitioner or candidate legal practitioner may subject any person to harassment, including sexual harassment.
- 6.3 For purposes of this paragraph 6:
- 6.3.1 "sexual harassment" is unwanted conduct of a sexual nature, or other unwelcome conduct based on the gender or sexual orientation of a person, which has the purpose or effect of violating a person's rights, or creating an uncomfortable, degrading, humiliating or hostile environment or has the effect of violating a person's dignity;
- 6.3.2 "harassment" is unwanted conduct which is persistent or serious and demeans, humiliates or creates a hostile or intimidating environment or is calculated to induce submission by actual or threatened adverse consequences and which is related to a person's membership or presumed membership of a group identified by one or more of the constitutionally prohibited discriminatory grounds or a characteristic associated with such group;
- 6.3.3 "conduct" may take the form of non-verbal conduct, verbal conduct, and/or physical conduct. Conduct qualifying as sexual harassment may occur in a single instance or may include conduct that occurs on a repeated basis where the effect is to sexually harass the person.

## 7. Approaches and publicity

- 7.1 For purposes of Part II of this code:
- 7.1.1 "**publicity**" shall include any direct or indirect reference to a legal practitioner or firm, published or disseminated by any written, pictorial or oral means, in any medium (including electronic and social media), irrespective of whether such publicity or reference:
- 7.1.1.1 is made in connection with any sponsorship, patronage, welfare activity, other similar benevolent purpose or support in any cause; or
- 7.1.1.2 is made, or is paid for, at the instance, or with the knowledge or consent, of the legal practitioner or firm; or

7.1.1.3 appears, or is contained, in any editorial, advertorial or advertisement and "**publicise**" has a corresponding meaning.

7.2 Legal practitioners shall ensure that all written and oral approaches (including letterheads) to clients, or potential clients, and all publicity, including the offering of services by publicity, made or published by or on behalf of a legal practitioner:

7.2.1 are made in a manner which does not bring the legal profession into disrepute;

7.2.2 are not offensive or inappropriate or do not constitute conduct which is in bad faith, unreasonable or unfair in respect of a matter in which another legal practitioner has already received instructions;

7.2.3 do not misrepresent the nature of the service offered;

7.2.4 accord in every respect with the requirements of this paragraph;

7.2.5 do not misrepresent, disparage, compare, criticise the quality of or claim to be superior to, the service provided by any other legal practitioner, whether or not such other legal practitioner is identified;

7.2.6 do not refer to a client by name in any publicity or advertisement published by or on behalf of a legal practitioner unless:

7.2.6.1 the prior written consent of the client had been obtained; or

7.2.6.2 the advertisement relates solely to the sale or letting of a client's property.

7.3 Legal practitioners' responsibilities set out in paragraph 7.2 cannot be delegated. Where a legal practitioner or a firm becomes aware of publicity referring to him or her or it which is in conflict with or infringes this paragraph 6, he or she or it shall immediately take appropriate steps reasonably necessary to have the publicity rectified or withdrawn and to further publish the rectification in the same medium or media as that in which the conflicting or infringing publicity appeared.

## 8. **Specialisation and expertise**

Legal practitioners may, on the basis of specialised qualifications or experience -

- 8.1 advertise or hold themselves out as being specialists or as offering specialist services, provided that if a legal practitioner claims specialisation or expertise in any branch of the law, the Council may:
- 8.1.1 require the legal practitioner to show good cause by a specified date why he or she should not be ordered by the Council to cease to hold himself or herself out as a specialist or as expert in any particular branch of the law;
- 8.1.2 order him or her to cease holding himself or herself out as a specialist or expert in the branch of the law concerned if it is the opinion of the Council that the claim is not justified; and
- 8.1.3 declare that such order shall serve as notice in terms of the rules relating to disciplinary procedures without in any way limiting the Council's powers in terms of those rules;
- 8.2 be accorded senior counsel or senior attorney status in accordance with criteria and procedures prescribed by the Council.

**9. Integrity in performance of professional services**

- 9.1 A legal practitioner and a firm shall take reasonable steps to avoid and prevent any reasonable suspicion arising that his, her, or its integrity is compromised in any respect.
- 9.2 A legal practitioner shall not, in giving advice to a client, advise conduct that would contravene any law; more particularly, a legal practitioner shall not devise any scheme which involves the commission of any offence.
- 9.3 A legal practitioner may give advice about whether any act, omission or course of conduct may contravene any law.
- 9.4 Whenever a legal practitioner performs any act in a personal capacity, which is ostensibly of a professional nature, he or she shall not permit any confusion to exist on the part of any interested person about whether he or she acts in a personal or professional role or both.
- 9.5 Whenever a client charged with an offence confesses at any time to a legal practitioner that the client is guilty of the offence, the legal practitioner must at once explain to that client that the future conduct of the matter shall be subject to these strictures:

- 9.5.1 the legal practitioner shall not assert or imply any fact, or permit the assertion or implication of any fact, which he or she knows to be untrue, nor shall he or she connive to substantiate a falsehood;
- 9.5.2 the legal practitioner shall not put forward any affirmative case inconsistent with the confession of the client;
- 9.5.3 the legal practitioner may argue that the evidence adduced to support the charge is insufficient to justify a conviction;
- 9.5.4 the legal practitioner may invoke or assert any point of law that might be of advantage to a resistance to a conviction;
- 9.5.5 the client may choose to retain the legal practitioner on the basis set out or choose to relieve the legal practitioner of the brief.
- 9.6 A legal practitioner shall, when a client gives conflicting instructions, or attempts to retract earlier instructions, withdraw from the matter if continuing to act for the client would cause unavoidable embarrassment to the legal practitioner.
- 9.7 A legal practitioner shall in the composition of pleadings and of affidavits rely upon the facts given to him or her by the instructing attorney or client, as the case may be, and in so doing:
- 9.7.1 shall not gratuitously disparage, defame or otherwise use invective;
- 9.7.2 shall not recklessly make averments or allegations unsubstantiated by the information given to the legal practitioner.
- 9.8 A legal practitioner who is briefed to prepare a document articulating the reasons relied upon by any entity or person whose decision is being reviewed or subjected to administrative appeal, must scrupulously express the reasons, as instructed, and must not distort their meaning by the manner of formulation or by the addition or subtraction of additional material.
- 9.9 A legal practitioner shall, in giving any advice about the prospects of success in any matter, give a true account of his or her opinion and shall not pander to a client's whims or desires. However, in any matter in which the legal practitioner's opinion is adverse to the prospects of success, the legal practitioner may upon client's insistence place before a court the client's case for the adjudicating officer to decide the matter and the legal practitioner shall advance that case as best as

9.10 Legal practitioners shall not abuse their positions of influence over clients by undue pressure upon them to:

9.10.1 plead guilty or plead guilty to a lesser charge;

9.10.2 accept a settlement of a matter.

#### 10. Disputes about fees in non-litigious matters

10.1 Any disputes about the quantum or rate of fees charged by a legal practitioner or about work done by and value received from a legal practitioner in relation to non-litigious matters shall be subjected to a fees enquiry to be conducted by an authorised sub-structure of the Council.

10.2 An onus shall rest on the legal practitioner to justify the reasonableness of fees charged and that the work charged for was done and was reasonably necessary to be done, or was done at the request of the client or of the instructing attorney, as the case may be.

### PART III

#### Conduct of attorneys

##### 11. Preamble

11.1 Unless otherwise stated or unless the context indicates otherwise, Part III of this code applies only to attorneys, candidate attorneys and juristic entities who are in private practice (all of whom, for purposes of this code, and unless the context otherwise requires, shall be referred to as "**attorneys**"). If Part III of this code conflicts with the provisions of Part II then the provisions of Part II will prevail and take precedence over the provisions of Part III.

11.2 Part III of this code is applicable to the professional conduct of attorneys.

##### 12. Sharing of fees

12.1 An attorney or a firm shall not, directly or indirectly, enter into any express or tacit agreement, arrangement or scheme of operation or any partnership (express, tacit or implied), the result or potential result whereof is to secure for him or her or it the benefit of professional work, solicited by a person who is not an attorney,



for reward, whether in money or in kind; but this prohibition shall not in any way limit *bona fide* and proper marketing activities.

12.2 An attorney shall furnish the Council with an affidavit, within seven days of request, explaining the presence and function or position of an employee and manner or form of remuneration earned by such employee, or containing similar information relating to any person who is not an attorney who is apparently associated with the attorney's practice or who is continuously or repeatedly in, at or about the attorney's office.

12.3 An attorney may not hold himself or herself out as practising as an attorney while in the employ of a person who is not an attorney otherwise than as permitted in terms of section 34 of the Act.

### 13. **Sharing of offices**

An attorney, other than an attorney referred to in sections 34(5) (c), (d) and (e) of the Act, may not, without the prior written consent of the Council, share offices with a person who is not an attorney or an employee of an attorney.

### 14. **Payment of commission**

An attorney or firm may not effect payment, directly or indirectly, of agent's commission in advance of the date upon which such commission is due and payable, except out of funds provided by the person liable for such commission and on the express authority of such person.

### 15. **Naming of partners and practice**

15.1 Subject to paragraph 15.4, an attorney shall disclose his or her name on any letterhead used for the practice and, in the case of -

15.1.1 a partnership, the names of all the partners; or

15.1.2 a juristic entity, the names of all directors

and, where the attorney has also been admitted as a notary or as a conveyancer, may disclose that fact on the letterhead of his or her firm.

15.2 An attorney who discloses in his or her letterhead or in other publications the name of any person employed by him or her or his or her firm in any capacity shall indicate clearly whether or not such person is an attorney or his or her partner or fellow director; provided that, without prior written consent of the

Council, such indication shall be made by using one or more of the following words and no others:

- 15.2.1 where such person is an attorney, "consultant", "senior associate", "associate", "professional assistant" or "assisted by";
- 15.2.2 where such person is not an attorney, "candidate attorney", or in the case of professionals in fields other than law, such professional status as may be appropriate, or in the case of management employees, the descriptive management title.
- 15.3 An attorney in private practice shall practise only under a style or name which -
- 15.3.1 is his or her own name or the name of a former proprietor of, or partner or director in, such practice if he or she practises without partners; or
- 15.3.2 contains the names of any or all of the present partners or directors or former partners or directors of or in such firm if he or she practises in partnership or as a juristic entity; or
- 15.3.3 is a derivative of the names referred to in paragraphs 15.3.1 or 15.3.2, or is the name of a national or international legal practice of which the attorney is an employee or with which the attorney or his or her firm is associated or of which he or she or his or her firm forms part, unless the Council in the particular circumstances prohibits the use of that name; or
- 15.3.4 the Council has first approved in writing, in the case of any other name.
- 15.4 Notwithstanding the provisions of paragraph 15.1, it will be sufficient compliance with that rule:
- 15.4.1 in the case of a partnership consisting of more than twenty partners, if the names of the senior partner and managing partner (and in the case of a branch office, the names of the senior partner of the partnership and the managing partner of the branch) are disclosed on the letterhead, provided the letterhead contains a note indicating the address at which the names of all the partners will be available for inspection;
- 15.4.2 in the case of a juristic entity, if the names of the directors are disclosed in the same manner as if the directors are partners in a partnership.

## 16. **Replying to communications**

An attorney -

- 16.1 shall within a reasonable time reply to all communications which require an answer unless there is good cause for refusing an answer;
- 16.2 shall respond timeously and fully to requests from the Council for information and/or documentation which he or she is able to provide;
- 16.3 shall comply timeously with directions from the Council; and
- 16.4 shall refrain from doing anything that may hamper the ability of the Council to carry out its functions.

**17. Naming in deed of sale or alienation**

An attorney may not act in terms of a deed of sale or alienation of immovable property in which the attorney's name or the name of the attorney's firm has been pre-printed or duplicated as the transferring attorney. This prohibition will not, however, apply if a separate written instruction is given to the attorney prior to the signature of the deed of sale or alienation or to an agreement prepared by the attorney on instruction from the client.

**18. Specific provisions relating to conduct of attorneys**

An attorney shall -

- 18.1 refrain from accepting from any person directly or indirectly any sum of money or financial reward which it is agreed or intended should be used as payment or part payment for services to be rendered or for disbursements to be made in the future in the event of any future act or omission forming the basis of any criminal charge against the person by or for whose benefit such payment was made;
- 18.2 issue and, on request, hand over or otherwise deliver to the person making payment, a receipt for any money received;
- 18.3 exercise proper control and supervision over his or her staff and offices;
- 18.4 not abandon his or her practice;
- 18.5 not close his or her practice without prior written notice to the Council and to his or her clients and without arranging with the clients for the dispatch of their business or the care of their property in his or her possession or under his or her control;

18.6 if he or she is practising as a sole practitioner, and intends to be absent from his or her practice for a period in excess of 30 consecutive days, give notice in writing to the Council at least 14 days prior to his or her departure of the arrangements which he or she has made for the supervision of the practice during his or her absence. The attorney may, in the case of urgency only, give the Council a shorter period of notice. In the notice the attorney must inform the Council -

18.6.1 which other attorney will be supervising his or her practice;

18.6.2 the extent of the supervision which the other attorney will exercise;

18.6.3 what arrangements he or she has made for the payment of business and trust creditors; and

18.6.4 the reason for the late notice, if applicable.

This paragraph 18.6 applies also to attorneys who practise as partners or directors of a firm where all the partners or directors intend to be absent simultaneously from the firm for a period in excess of 30 consecutive days;

18.7 not overreach a client or overcharge the debtor of a client, or charge a fee which is unreasonably high, having regard to the circumstances of the matter. Any disputes about the quantum or rate of fees by an attorney or by work done by and value received from an attorney shall be subject to a fees enquiry conducted by the Council or an authorised sub-structure of the Council, and an onus shall rest on the attorney to justify the reasonableness of fees charged and that the work charged for was done and was reasonably necessary to do, or was done at the request of the client;

18.8 submit an account for taxation or assessment, as the case may be, within a reasonable time after a request to do so by the Council, the client or the person purportedly liable for payment of the fee;

18.9 not act in association with any organisation or person whose business or part of whose business it is to solicit instructions for the attorney;

18.10 not buy instructions in matters from a third party and may not, directly or indirectly, pay or reward a third party, or give any other consideration for the referral of clients other than an allowance on fees to an attorney for the referral of work;

- 18.11 use the services of a third party (including services for the purpose of gathering evidence) only where the attorney has established a *bona fide* attorney and client relationship with the client, such that -
- 18.11.1 the client is free to elect whether or not to use the services of the third party;
- 18.11.2 the attorney takes proper instructions directly from the client; and
- 18.11.3 the attorney is mandated to engage the third party at the client's cost,
- in which event the attorney may issue an instruction to a third party whom the attorney considers will be competent to do specific work, and the attorney may, on the client's behalf, pay to the third party a fair and reasonable fee, consistent with the value of the work actually done by the third party;
- 18.12 when using the services of a third party, render an account to the client which discloses the payment to the third party as a disbursement;
- 18.13 not accept a mandate -
- 18.13.1 knowing there to be an existing mandate, or a freshly terminated mandate, given to another attorney without explaining to the client all the implications of his doing so, including in particular the cost implications;
- 18.13.2 in a matter taken on a contingency fee basis where he or she knows or ought reasonably to know that there were no good grounds for the potential client to terminate the existing mandate;
- 18.14 perform professional work or work of a kind commonly performed by an attorney with such a degree of skill, care or attention, or of such a quality or standard, as may reasonably be expected of an attorney;
- 18.15 in any communication with another person on behalf of a client -
- 18.15.1 not represent to that person that anything is true which the attorney knows, or reasonably ought to know, or reasonably believes, is untrue; or
- 18.15.2 not make any statement that is calculated to mislead or intimidate that other person, and which materially exceeds the legitimate assertion of the rights or entitlement of the attorney's client; or

- 18.15.3 not threaten the institution of criminal proceedings against any other person in default of that person's satisfying a concurrent civil liability to the attorney's client; or
- 18.15.4 not demand the payment of any costs to the attorney in the absence of an existing liability owed by the person to the attorney's client;
- 18.16 be in attendance, or immediately accessible, during a consultation with counsel or an attorney acting as counsel, or at court during the hearing of a matter (other than an unopposed application) in which he or she is the attorney of record, in person or through a partner or employee, being an attorney or a candidate attorney;
- 18.17 take all such steps as may be necessary from time to time to ensure compliance at all times as an accountable institution with the requirements of the Financial Intelligence Centre Act, 38 of 2001;
- 18.18 pay timeously, in accordance with any contractual terms or, in the absence of contractual terms, in accordance with the standard terms of payment, the reasonable charges of any legal practitioner, whether an advocate or an attorney, whom he or she has instructed to provide legal services to or on behalf of a client; such liability shall extend to every partner of a firm or member of an incorporated practice, and if the firm is dissolved or the incorporated practice is wound up, liability shall remain with each partner or member, as the case may be, the one paying, the others to be absolved;
- 18.19 dress appropriately when rendering services to or on behalf of a client;
- 18.20 not have a branch office unless, at all times when practice is being conducted there, that office is under the effective supervision of a practising attorney. The decision of the Council as to whether or not a branch office is under effective supervision shall be binding on the attorney and, if negative, shall entitle the Council to order that the matter be rectified or that the branch office be closed;
- 18.21 if he or she accepts appointment as an acting judge, adhere to the code of conduct applicable to judges;
- 18.22 not tout for professional work. An attorney will be regarded as being guilty of touting for professional work if he or she either personally or through the agency of another, procures or seeks to procure, or solicits for, professional work in an

improper or unprofessional manner or by unfair or unethical means, all of which for purposes of this rule will include, but not be limited to -

- 18.22.1 the payment of money, or the offering of any financial reward or other inducement of any kind whatsoever, directly or indirectly, to any person in return for the referral of professional work; or
- 18.22.2 directly or indirectly participating in an arrangement or scheme of operation resulting in, or calculated to result in, the attorney's securing professional work solicited by a third party.

For purposes of this paragraph 18.22 "professional work", in addition to work which may by law or regulation promulgated under any law be performed only by an attorney, means such other work as is properly or commonly performed by or associated with the practice of an attorney.

#### 19. **Pro bono instructions**

- 19.1 An attorney who accepts *pro bono* instructions shall not, after acceptance, seek to charge a fee except as may be permissible under section 92 of the Act.
- 19.2 Attorneys who appear in court proceedings *pro bono* shall disclose that fact to all interested parties and to the court.

## 20. Instructions involving court appearance

- 20.1 The provisions of paragraphs 28.1, 28.4, 28.5, 28.6, 28.8, 28.9, 28.10, 28.11, 28.12 and 28.13 of this code applicable to the acceptance of briefs by advocates apply, with the necessary changes required by the context, to attorneys who accept instructions to appear in court.
- 20.2 An attorney who accepts an instruction to appear in court on behalf of a client shall not resile from the undertaking to carry out the instruction in order to attend to another instruction offered later, except for good cause, which shall be deemed to be present under either of the following circumstances -
- 20.2.1 the interests of justice would otherwise be impaired;
- 20.2.2 the instructing clients of both the initially offered instruction and of the later offered instruction agree in writing to release the attorney from the initially offered instruction.
- 20.3 If, after an attorney has accepted an instruction to appear in court on behalf of a client, any circumstances arise that imperil the proper discharge of his or her duties of diligence, he or she shall, once such eventuality is apparent, especially in relating to trials, report such circumstances to the client to facilitate timeous steps to inhibit prejudice to the client and facilitate a successor to be instructed in time to take over the instructions.

## 21. Misconduct

Misconduct on the part of any attorney will include (without limiting the generality of these rules) -

- 21.1 a breach of the Act or of the code or of any of the rules, or a failure to comply with the Act or the code or any rule with which it is the attorney's duty to comply;
- 21.2 any conduct which would reasonably be considered as misconduct on the part of an attorney or which tends to bring the attorney's profession into disrepute.



## PART IV

### Conduct of advocates contemplated in section 34(2)(a)(i) of the Act

#### 22. Preamble

22.1 Part IV of this code is applicable to, and binding upon, every person who has been admitted and enrolled to practice as an advocate in South Africa and who is an independent practitioner of advocacy as contemplated in section 34(2)(a)(i) of the Act, called in Part IV of this code, "**counsel**".

22.2 Part IV of this code is applicable to the professional conduct of counsel.

22.3 The interpretation of Part IV of this code shall be effected purposively and aimed to give the fullest effect to the fundamental principles that shape, guide and express the essence of the profession of advocacy, which principles are that -

22.3.1 counsel are independent practitioners of advocacy and agents of the rule of law, who resist any undue influence from anyone, whose specialised services are available to all persons, in particular indigent people, regardless of any disregard in which persons requiring the services of counsel may be held by anyone;

22.3.2 counsel understand that the profession of advocacy is primarily vocational and serves the public interest and accordingly acknowledge fiduciary duties towards the courts and to their clients and to all professional colleagues.

#### 23. The nature of work undertaken by counsel

23.1 Counsel undertake to perform professional legal services for a reasonable reward.

23.2 There is no closed list of subject matter about which a brief may be accepted by counsel provided the brief does not require counsel to undertake work which is properly that of an attorney. In particular, counsel may accept a brief:

23.2.1 to give legal advice orally or in a written opinion;

23.2.2 to prepare any documents required for use in any court or arbitration or other adjudicative proceedings;

- 23.2.4 to argue an application;
  - 23.2.5 to argue an appeal;
  - 23.2.6 to move an unopposed matter;
  - 23.2.7 to appear in a trial or in an arbitration or in any other decision-making forum;
  - 23.2.8 to negotiate on behalf of a client;
  - 23.2.9 to settle a matter, whether on trial or otherwise;
  - 23.2.10 to argue a matter on taxation before a taxing master;
  - 23.2.11 to make representations to the National Prosecution Authority about whether or not to charge a person with a criminal offence;
  - 23.2.12 to undertake a criminal prosecution on behalf of the State or on behalf of, or as, a private prosecutor;
  - 23.2.13 to preside as an arbitrator, or as the chair of a disciplinary enquiry, or as presiding officer in any other adversarial proceedings, or to conduct any inquisitorial proceedings;
  - 23.2.14 to act as an expert or as a referee;
  - 23.2.15 to act as a mediator, facilitator or adjudicator;
  - 23.2.16 to conduct an investigation and furnish a report with recommendations as to facts found and to make recommendations as to future action;
  - 23.2.17 to act as a curator *ad litem*;
  - 23.2.18 to make representations to a statutory or voluntary body or any state official;
  - 23.2.19 to act as a commissioner in any enquiry.
- 23.3 Counsel shall comply with these rules of conduct and the rules of conduct applicable to prosecutors issued by the National Prosecution Authority whenever briefed on behalf of the State to conduct a prosecution, and in the event that any conflict might arise between the sets of rules, these rules of conduct shall prevail.

**24. Counsel's commitment to the practice of advocacy**

- 24.1 Counsel shall, in general, devote themselves to the practice of advocacy and to this end shall not engage in any other occupation or activity which is likely to compromise counsel's ability diligently to perform the work on any briefs or to diminish counsel's standing within the profession of advocacy or adversely affect the reputation of the profession of advocacy itself.
- 24.2 Counsel, in their professional capacity, shall not be involved in any way in any relationship or arrangement which resembles a partnership.

**25. Independence of counsel**

- 25.1 Counsel shall, in the advancement of the client's cause, resist any conduct calculated to deflect counsel from acting in the best interests of the client and to that end counsel shall be fearless in the conduct of the client's case, and shall not be deterred by the threat of or the prospects of adverse consequences to counsel or any other person.
- 25.2 Counsel shall unreservedly assert and defend the rights of the client and in particular in order to protect the client's liberty, to the best of counsel's ability and within lawful bounds.
- 25.3 Counsel shall upon acceptance of a brief exercise personal judgment over all aspects of the brief and shall not permit any person to dictate how the matter is to be conducted. If the decisions made or advice given by counsel are not acceptable to the instructing attorney or to the client, counsel must offer to surrender the brief, and if the instructing attorney elects to accept the surrender, counsel must forthwith withdraw.
- 25.4 Counsel shall not appear in any superior court in the absence of their instructing attorneys or instructing attorney's candidate attorneys, or other representatives, save as provided below.
- 25.5 Counsel may, when appearing in a matter before any court or tribunal of any kind, appear unaccompanied by their instructing attorney or the instructing attorney's candidate attorney or other representative, provided that the instructing attorney or a partner or employee of the instructing attorney (being an attorney or a candidate attorney) is immediately accessible to counsel at all times.

- 25.6 Counsel shall not bring about a binding settlement of any matter without an express and specific mandate by the instructing attorney as to the terms and conditions of an agreement of settlement.
- 25.7 Counsel shall ordinarily consult with instructing attorneys, clients and witnesses at counsel's chambers.
- 25.8 In circumstances which reasonably indicate that consultations cannot conveniently be held at the chambers of counsel, counsel may exercise a discretion to consult at some other place appropriate to the circumstances, which places include the home of counsel or the offices of the instructing attorney or the offices of the client, provided that counsel in so doing guards against compromising counsel's independent status, which circumstances may include -
- 25.8.1 where the large volume of documents to be scrutinised cannot usefully be accommodated in or transported to or from counsel's chambers;
- 25.8.2 where the great number of witnesses to be interviewed make it more convenient to meet at the place where they can be conveniently assembled;
- 25.8.3 where the consultations are to be held after hours or on weekends;
- 25.8.4 where the persons to be interviewed are located in places distant from counsel's chambers;
- 25.8.5 where counsel is to appear in proceedings occurring in a place other than counsel's home centre.

**26. Acceptance of briefs and the cab-rank rule**

- 26.1 Counsel are at liberty to limit in what areas of practice, and in which courts, they wish to accept briefs and to appear, and to profess to practise in such limited areas and courts. In the absence of expressly professing to practise in limited areas and in certain courts only, counsel shall be deemed to profess to practice in all areas of practice and in all courts.
- 26.2 Counsel shall not refuse to accept briefs in an area of practice in which they profess to practise or in a court in which they profess to practise on the grounds that they disapprove of the client or of the client's opinions or alleged conduct or because of any disregard in which such person might be held.

- 26.3 Counsel shall, unless they reasonably believe they are not professionally competent to do so, accept the offers of briefs to defend persons charged with criminal offences and shall resist any conduct designed to inhibit or discourage the acceptance of such a brief on any grounds, especially any disregard in which such accused person or the cause with which such accused person is associated, may be held by anyone.
- 26.4 Counsel may decline offers of briefs in matters in which they believe they are not competent to render professional services at the appropriate standard reasonably expected of a counsel in such matters or to discharge their duty of diligence, and when declining such offers counsel shall disclose those reasons to the instructing attorneys.
- 26.5 Counsel may decline the offer of a brief if agreement between counsel and the instructing attorney cannot be reached on the fee to be charged by counsel; provided that the fee proposed by counsel must satisfy the norm of the reasonable fee, as dealt with in paragraph 29 of the code.
- 26.6 Counsel shall, once alerted to the fact that the court or other adjudicative body is to be presided over by a member of counsel's family or other person with a close personal relationship with counsel, disclose that fact to the instructing attorney and to opposing counsel.
- 26.7 Counsel shall, once counsel is alerted to the fact that a family member or other person with a close personal relationship to counsel is opposing counsel or is an attorney in the opposing party's attorney's firm, notify the instructing attorney of such relationship.
- 26.8 Counsel may continue to act in any civil proceedings despite a family member or other person with a close personal relationship presiding over the matter, provided that none of the parties, having been informed of this, raises an objection. Whenever an objection is raised counsel must either withdraw, or the parties must jointly request and procure the recusal of the presiding officer.
- 26.9 Counsel shall not in a criminal trial, whether acting for the State or the defence, appear before a court presided over by his or her family member or other person with a close personal relationship to counsel.
- 26.10 Counsel may refuse to accept a brief if:

- 26.10.1 counsel is a senior counsel and considers that the nature of the brief and the work involved does not reasonably require the engagement of senior counsel;
- 26.10.2 the scale and duration of the work involved in undertaking the brief is such that counsel is apprehensive, on reasonable grounds, that commitment to the brief would prejudice counsel's practice or other professional or personal commitments;
- 26.10.3 the instructing attorney is reasonably suspected by counsel of being unlikely to pay the fees due to counsel timeously or at all.

**27. Acceptance of briefs: the referral rule**

- 27.1 Counsel undertakes to perform legal professional services in court-craft and knowledge of the law only upon the offer and acceptance of a brief.
- 27.2 Counsel shall accept a brief only from an attorney, and counsel shall not accept a brief directly from any other person or entity for either litigious or non-litigious work of any kind, save that counsel may accept a brief -
- 27.2.1 from a justice centre;
- 27.2.2 to perform professional services on brief from an attorney or legal practitioner in another country, including the equivalent of a state attorney or the attorney general or director of public prosecutions, without the intervention of a South African attorney;
- 27.3 Counsel who act as arbitrators or umpires shall do so only on receipt of a brief from the parties' attorneys, or on receipt of instructions from an arbitration body.
- 27.4 Counsel shall receive fees charged only from or through the instructing attorney who gave the brief to counsel, except where such attorney, for reasons of insolvency, or for any other reason, is unable to pay, in which circumstances, with leave from the Provincial Council, counsel may receive the fees due from another source in discharge of the indebtedness of the attorney.

**28. Acceptance of briefs: implied undertaking of diligence**

- 28.1 Counsel shall ordinarily only accept a brief given in writing or by email, but in circumstances of urgency counsel may accept an oral brief but must insist on

receipt, as soon as practicable, of a written or emailed brief, failing which counsel shall in writing or by email confirm the terms of the oral brief.

- 28.2 Counsel shall, upon accepting a brief, not resile from the undertaking to fulfil the brief in order to attend to another brief offered later, except for good cause; which cause shall be deemed to be present under either of the following circumstances:
- 28.2.1 the interests of justice would otherwise be impaired;
- 28.2.2 the instructing attorneys of both the initially offered brief and of the later offered brief agree in writing to release counsel from the initially offered brief.
- 28.3 Counsel shall not pass on a brief to another counsel except on the express prior agreement of the instructing attorney.
- 28.4 Counsel shall personally attend to all of the work involved in the briefs accepted by them, save as undertaken by leading counsel and one or more junior counsel briefed together, and subject to the long-standing practice of employing a “devil” in terms of which counsel shall be entitled, by agreement with another counsel, to have that counsel undertake research work in a particular brief in return for a fee agreed between counsel, and paid by the counsel on brief, provided that this shall not be converted into a permanent arrangement akin to employment of one counsel by another.
- 28.5 Counsel, upon accepting a brief, shall perform the necessary work to the best of their abilities, in keeping with counsels' seniority and relevant experience and:
- 28.5.1 counsel, upon acceptance of a trial brief, tacitly represent that they can properly commit themselves to remaining available throughout the period of the trial without compromising such commitment by reason of any prior commitments in other matters, regardless of whether such other matters have been set down at a time before or after the period estimated for the duration of the trial;
- 28.5.2 counsel, upon acceptance of a brief in any opposed application, tacitly represent that they can properly commit themselves to remaining available throughout the period during which that opposed application may be heard without compromising such commitment by reason of any prior commitments in other matters, regardless of whether such other matters

have been set down at a time before or after the period during which the opposed application may be heard.

- 28.6 Counsel must decline the offer of a brief if their other commitments do not reasonably allow them to discharge their duty of diligence in the preparation of the brief. In particular, counsel shall not accept any brief if it is reasonably foreseeable that -
- 28.6.1 counsel shall be unable to attend to all of the necessary work within a reasonable time;
  - 28.6.2 the risk exists that counsel might, because of a conflict of interest or any other reason, have to surrender the brief;
  - 28.6.3 the failure to attend to the brief timeously or the surrender of the brief is likely to result in embarrassment, inconvenience or prejudice to the instructing attorney or the client or a fellow counsel who might be briefed thereafter, or to the court.
- 28.7 If, after counsel has accepted a brief in any matter, any circumstance arises that imperils the proper discharge of counsel's duty of diligence, counsel shall, once such eventuality is apparent, especially in respect of trial briefs, report such circumstances to the instructing attorney to facilitate timeous steps to inhibit prejudice to the client and facilitate a successor to be briefed in time to take over the brief.
- 28.8 Counsel shall not accept more than one brief on trial for the same day.
- 28.9 Counsel shall not, when briefed on trial on a given day, also accept a brief to appear in any other opposed matter, save an application for leave to appeal, provided such proceedings are arranged to ensure no interference with the matter in which counsel is briefed on trial.
- 28.10 Counsel may, on a day on which counsel is briefed on trial, accept a further brief only on matters listed below, provided that the performance of that further brief does not interfere with the conduct of the matter in which counsel is briefed on trial:
- 28.10.1 a brief to mention, at a roll call, a trial matter for postponement by agreement;



- 28.10.2 a brief to record, at the roll call, the fact of a settlement of a trial matter and submit a settlement agreement to be made an order of court;
- 28.10.3 a brief to note a judgment in a matter in which counsel had been briefed to conduct the case;
- 28.10.4 a brief to attend to any matter during a period outside of court hours.
- 28.11 Counsel may, once released from any obligation to remain available in relation to a trial matter, accept any other brief for that period.
- 28.12 Counsel shall in appropriate circumstances expressly advise the client about the prospects of and availability of dispute resolution options other than litigation.
- 28.13 Counsel shall upon acceptance of a brief take reasonable steps to determine whether or not prescription might be imminent and if so deal with the matter to avoid that consequence.

**29. Counsel's fees: the norm of the reasonable fee**

- 29.1 Counsel shall, in calculating a fee for services rendered or to be rendered, be mindful that the profession of advocacy is primarily vocational and exists to serve the public interest, and accordingly, shall charge only reasonable fees for all work undertaken.
- 29.2 Counsel shall calculate a reasonable fee by having regard to the following factors, none of which is determinative and all of which are simply guides to a fair calculation:
- 29.2.1 the time and labour required;
- 29.2.2 the customary charges by counsel of comparable standing for similar services;
- 29.2.3 the novelty and difficulty of the issues involved;
- 29.2.4 the skill and expertise required to properly address the matter;
- 29.2.5 the amount at stake in the matter;
- 29.2.6 the importance of the matter to the client.
- 29.3 Counsel shall, in calculating a fee, guard against both overvaluing and undervaluing the services to be rendered.

- 29.4 Counsel shall not, in calculating a fee, inflate the amount because the client is able to pay generously.
- 29.5 Counsel may, in calculating a fee, on the grounds of a client's lack of means to pay fees, charge the client an amount less than would otherwise be reasonable for the services rendered, or charge no fee at all.
- 29.6 Upon acceptance of a brief counsel must, at the request of the instructing attorney, provide details to the attorney of counsel's estimate of the fees to be charged. Upon completion of the work, or item of work, which has been performed counsel must provide the instructing attorney with details of the make-up of the fee that has been charged.

### 30. **Agreements about fees**

- 30.1 If an attorney offers a brief to counsel which is already marked with a fee, counsel upon acceptance of the brief tacitly agrees to that fee; if counsel chooses to refuse the brief on those terms, counsel and the instructing attorney must expressly agree in writing or by email to a different fee, otherwise, if counsel performs the work mandated by the brief, the initial marked fee shall bind counsel.
- 30.2 Counsel shall, at the time of accepting a brief, stipulate to the instructing attorney the fee that will be charged for the service or the daily or hourly rate that shall be applied to computing a fee.
- 30.3 Counsel shall, in respect of every brief, expressly agree with the instructing attorney the fee or the rate of fees to be charged, unless there is a tacit understanding between counsel and the instructing attorney about the fees or the rate of fees usually charged by counsel for the particular kind of work mandated by the brief.
- 30.4 Counsel who is briefed under circumstances of urgency which are such that an agreement on the fees or the rate of the fees to be charged cannot reasonably be concluded immediately when the brief is offered, must take reasonable steps to agree a fee as soon as possible thereafter.
- 30.5 If for any reason, despite reasonable steps by counsel to reach an agreement about the amount or the rate of fees, no agreement is achieved, counsel shall be entitled to decline the brief.

30.6 The following standard terms, which counsel must draw to the attention of the instructing attorney, shall be implied in a brief offered to and accepted by counsel:

30.6.1 no amount agreed upon shall exceed a reasonable fee;

30.6.2 counsel may charge a reasonable fee for a reserved hearing date unless the instructing attorney releases counsel on reasonable notice;

30.6.3 counsel who charges a fee for a reserved hearing date shall deliver to the instructing attorney a certificate to the effect that counsel did not undertake any other brief for a hearing for the reserved date.

30.7 Counsel may expressly, in writing or in an email, conclude an agreement with an instructing attorney which includes provision for any or all of the following:

30.7.1 that the fees, or a specified amount as cover for counsel's fees, must be paid to the instructing attorney prior to the performance of any obligation in terms of the brief and that the attorney will hold the money in trust for payment of counsel's fees subject to counsel performing the brief;

30.7.2 that a special collapse fee shall be payable to counsel in the event that proceedings in a court or before a tribunal, for which counsel has, at the request of the instructing attorney, reserved a number of days, not proceed as envisaged, whether as a result of the matter being settled, postponed by agreement between the parties or by an order of court, or concludes earlier than the end of the period reserved by counsel, provided that the fee actually charged is a reasonable fee.

### 31. ***Pro bono* briefs**

31.1 Counsel who accept *pro bono* briefs shall not, after acceptance, seek to charge a fee except as may be permissible under section 92 of the Act.

31.2 Counsel who appear in proceedings *pro bono* shall disclose that fact to all interested parties and to the court.

### 32. **Prohibited fee agreements**

32.1 Counsel shall not agree to charge on results or agree to reduce or waive fees if a positive result is not achieved, except in a matter taken on contingency in terms

of the Contingency Fees Act 66 of 1997 and/or save as contemplated in section 92 of the Act.

32.2 Counsel shall not agree to charge a fee as allowed on taxation except in a matter undertaken on contingency, or as permitted in terms of section 92 of the Act.

**33. Acceptance of gifts by counsel**

33.1 Counsel shall guard against compromising their independence by the acceptance of gifts from a client or an attorney, and whenever it is not inappropriate to accept a gift from a client it shall be received by counsel through the agency of the instructing attorney.

33.2 Counsel may, whenever gifts of substantial value are offered, seek advice from the Council or the authorised sub-structure of the Council about the appropriateness of acceptance, before acceptance of such gift.

**34. Marking briefs and submitting fees accounts**

34.1 Counsel shall mark a fee as soon as practicable after the specific service has been rendered and shall render an account monthly of all fees owing by every debtor.

34.2 Counsel shall render accounts to the instructing attorney or arbitration body contemplated in paragraph 27.3, and shall receive payment only from the instructing attorney or arbitration body.

34.3 Counsel shall not submit an account directly to a client except by agreement with the instructing attorney and client and on condition that the same account is simultaneously submitted to the instructing attorney, nor receive payment directly from a client.

34.4 Counsel shall maintain a banking account into which every fee received shall be deposited.

34.5 Counsel shall keep and preserve records of account, in either physical or electronic format, up to date, for five years or for such longer period as may be required by any law, and hold them available for inspection by the Council at all times. Such records of account shall accurately record every fee marked, the instructing attorneys or other accredited entities who gave the briefs, the nature of the service rendered, the dates of performance, and every payment received.

34.6 Counsel shall not mark a brief, or in any form record a description of fees in any record of account, which is false or misleading as to the true nature of the brief or of the services rendered; in particular:

34.6.1 a brief to settle an agreement to resolve litigation shall not be recorded as a brief on trial;

34.6.2 a brief to negotiate a settlement shall not be recorded as a brief on trial.

**35. Recovery by counsel of fees owing and payable**

Counsel may sue an attorney or arbitration body for fees due and payable to him or her.

**36. Appropriate dress**

Counsel shall dress appropriately when rendering services to or on behalf of a client.

**37. Abandonment of practice**

37.1 Counsel shall not abandon his or her practice.

37.2 Counsel shall not close his or her practice without prior notice to the Council and to all attorneys by whom he or she has been briefed and in respect of whom work remains to be done, and without arranging with those attorneys for the manner in which their briefs are to be dealt with.

**PART V****Conduct of advocates contemplated in section 34(2)(a)(ii) of the Act****38. Preamble**

38.1 The rules of conduct in Part V of this code of conduct are applicable to, and binding upon, every person who has been admitted and enrolled to practice as an advocate in South Africa in terms of section 34(2)(a)(ii) of the Act, called in Part V of this code "**a trust account advocate**".

38.2 The provisions of paragraphs 18.1, 18.2, 18.3, 18.10, 18.11, 18.13, 18.15, 18.17, and 18.8 which apply to the attorneys, and paragraphs 22 to 22.3 inclusive, which apply to counsel, will apply, with the necessary changes required by the context, to trust account advocates.

38.3 For purposes of this Part V a reference to a trust account advocate accepting a brief shall include his or her accepting an instruction from an attorney or directly from a member of the public or from a justice centre.

**39. Nature of work undertaken by trust account advocates**

39.1 The provisions of paragraph 23.1 and 23.2 of this code apply, with the necessary changes required by the context, to trust account advocates.

39.2 A trust account advocate shall comply with the requirement to be in possession of a Fidelity Fund certificate and shall conduct his or her practice in accordance with the relevant provisions of chapter 7 of the Act and the rules relating to the opening and keeping of trust accounts and the handling of trust monies.

39.3 The provisions of paragraph 23.3 of this code apply, with the necessary changes required by the context, to trust account advocates.

**40. Trust account advocate's commitment to the practice of advocacy**

The provisions of paragraph 24 of this code apply, with the necessary changes required by the context, to trust account advocates.

**41. Independence of trust account advocates**

41.1 The provisions of paragraph 25.1, 25.2, 25.7 and 25.8 of this code apply, with the necessary changes required by the context, to trust account advocates.

- 41.2 A trust account advocate shall upon acceptance of a brief, whether from an instructing attorney or from a client directly, exercise personal judgment over all aspects of the brief and shall not permit any person to dictate how the matter is to be conducted. If the decisions made or advice given by the trust account advocate are not acceptable to the instructing attorney or to the client, the trust account advocate must offer to surrender the brief, and if the instructing attorney or the client elects to accept the surrender, the trust account advocate must forthwith withdraw.
- 41.3 A trust account advocate shall not appear in any superior court in the absence of his or her instructing attorney or instructing attorney's candidate attorney, or the client where the trust account advocate has taken an instruction directly from a member of the public, save as provided below.
- 41.4 A trust account advocate may, when appearing in a matter before any court or tribunal of any kind, appear unaccompanied by the instructing attorney or the instructing attorney's representative, or the client where the trust account advocate has been instructed directly by a member of the public, provided that the trust account advocate is able to remain in contact with the instructing attorney (or where the trust account advocate has been instructed directly by a member of the public, the client) at all times.
- 41.5 The trust account advocate shall not bring about a binding settlement of any matter without an express and specific mandate by the instructing attorney or by the client, as the case may be, as to the terms and conditions of an agreement of settlement.

#### 42. **Acceptance of briefs and instructions and the cab-rank rule**

- 42.1 The provisions of paragraphs 26.1, 26.2, 26.3, 26.8, 26.9 and 26.10 of this code apply, with the necessary changes required by the context, to trust account advocates.
- 42.2 A trust account advocate may decline offers of briefs in matters in which the trust account advocate believes he or she is not competent to render professional services at the appropriate standard reasonably expected of a trust account advocate in such matters or to discharge his or her duty of diligence, and when declining such offers the trust account advocate must disclose those reasons to the instructing attorney, or to the client where the trust account advocate has accepted an instruction directly from a member of the public.

42.3 A trust account advocate may decline the offer of a brief if agreement between him or her and the instructing attorney or the client (where the trust account advocate has been approached directly by a member of the public) cannot be reached on a fee to be charged in the matter; provided that the fee proposed by the trust account advocate must satisfy the norm of the reasonable fee, as dealt with in paragraph 29 of this code.

42.4 A trust account advocate shall, once he or she is alerted to the fact that the court or other adjudicative body is to be presided over by a member of his or her family or other person with a close personal relationship with him or her, disclose that fact to the instructing attorney, or to the client (where the trust account advocate has received an instruction directly from a member of the public), and to opposing counsel.

42.5 A trust account advocate shall, once he or she is alerted to the fact that a family member or other person with a close personal relationship to him or her is opposing counsel or is an attorney in the opposing party's attorneys' firm, notify the instructing attorney or the client (where the instruction has come directly from a member of the public) of such relationship.

#### 43. **Acceptance of briefs and instructions**

43.1 A trust account advocate shall perform legal professional services in court-craft and knowledge of the law only upon the offer and acceptance of a brief.

43.2 A trust account advocate may accept a brief from an attorney or from a member of the public or from a justice centre.

43.3 Where a trust account advocate accepts a brief from an attorney or from an arbitration body as contemplated in paragraph 27.3, the trust account advocate shall receive deposits and payment of accounts only from or through the instructing attorney or from or through the arbitration body which gave the brief to him or her, except where the attorney or arbitration body, for reasons of insolvency or for any other reason, is unable to pay, in which circumstances, with leave from the authorised sub-structure of the Council, a trust account advocate may receive payments due from another source in discharge of the indebtedness of the attorney or arbitration body.

43.4 Where a trust account advocate receives instructions directly from a member of the public or from a justice centre, he or she may receive fees from that member



of the public or justice centre or from any other source, subject to his or her complying with chapter 7 of the Act.

**44. Acceptance of briefs: implied undertaking of diligence**

44.1 The provisions of paragraphs 28.1, 28.4, 28.5, 28.6, 28.8, 28.9, 28.10, 28.11, 28.12 and 28.13 of this code apply, with the necessary changes required by the context, to trust account advocates.

44.2 A trust account advocate shall, upon accepting a brief, not resale from the undertaking to fulfil the brief in order to attend to another brief offered later, except for good cause, which shall be deemed to be present under either of the following circumstances -

44.2.1 the interest of justice would otherwise be impaired;

44.2.2 the instructing attorneys or the instructing clients of both the initially offered brief and of the later offered brief agree in writing to release the trust account advocate from the initially offered brief.

44.3 A trust account advocate shall not pass on a brief to another advocate except on the express prior agreement of the instructing attorney or of the client where the trust account advocate has been instructed directly by the client.

44.4 If, after a trust account advocate has accepted a brief in any matter, any circumstances arise that imperil the proper discharge of his or her duty of diligence, he or she shall, once such eventuality is apparent, especially in respect of trial briefs, report such circumstances to the instructing attorney or to the instructing client, as the case may be, to facilitate timeous steps to inhibit prejudice to the client and facilitate a successor to be briefed in time to take over the brief.

**45. Advocate's fees: The norm of the reasonable fee**

The provisions of paragraph 29 of this code apply, with the necessary changes required by the context, to trust account advocates.

**46. Agreements about fees**

46.1 The provisions of paragraph 30.1, 30.4 and 30.5 of this code apply, with the necessary changes required by the context, to trust account advocates.

- 46.2 A trust account advocate shall at the time of accepting a brief or an instruction, stipulate to the instructing attorney or to the client, as the case may be, the fee that will be charged for the service or the daily or hourly rate that will be applied to computing a fee.
- 46.3 A trust account advocate shall, in respect of every brief, expressly agree with the instructing attorney (or with the client, where the trust account advocate is instructed directly) the fee or the rate of fees to be charged, unless there is a tacit understanding between the trust account advocate and the instructing attorney or the client, as the case may be, about the fees or the rate of fees usually charged by the trust account advocate for the particular kind of work mandated by the brief or instruction.
- 46.4 The following standard terms, which the trust account advocate must draw to the attention of the instructing attorney and to the client where the instruction comes from a member of the public, shall be implied in a brief or instruction offered to and accepted by the trust account advocate:
- 46.4.1 no amount agreed upon shall exceed a reasonable fee;
- 46.4.2 the trust account advocate may charge a reasonable fee for a reserved hearing date unless the instructing attorney or the client, as the case may be, releases the trust account advocate on reasonable notice;
- 46.4.3 a trust account advocate who charges a fee for a reserved hearing date shall deliver to the instructing attorney or to the client, as the case may be, a certificate to the effect that the trust account advocate did not undertake any other brief for a hearing for the reserved date.
- 46.5 A trust account advocate may expressly, in writing or in an email, conclude an agreement with an instructing attorney, or with a client, as the case may be, which includes a provision for any or all of the following:
- 46.5.1 that payment of fees or a specified amount as cover for the fees must be made prior to the performance of any obligation in terms of the brief; provided that in such a case the payment shall be held in a trust account in accordance with chapter 7 of the Act and the accounting rules applicable to a trust account advocate;
- 46.5.2 that a special collapse fee shall be payable to the trust account advocate in the event that proceedings in a court or before a tribunal, for which the

trust account advocate has, at the request of the instructing attorney or the client, reserved a number of dates, not proceed as envisaged, whether as a result of the matter being settled, postponed by agreement between the parties or by a court order, or concludes earlier than the end of the period reserved by the trust account advocate, provided that the fee actually charged is a reasonable fee.

47. ***Pro bono instructions***

Paragraphs 31.1 and 31.2 of this code apply, with the necessary changes required by the context, to trust account advocates.

48. **Prohibited fee agreements**

The provisions of paragraph 32 of this code apply, with the necessary changes required by the context, to trust account advocates.

49. **Acceptance of gifts by advocates**

49.1 Trust account advocates shall guard against compromising their independence by the acceptance of gifts from a client or an attorney, and whenever it is not inappropriate to accept a gift from a client it shall be received by the advocate through the agency of the instructing attorney, where the advocate is briefed by an attorney.

49.2 The provisions of paragraph 33.2 of this code applies, with the necessary changes required by the context, to trust account advocates.

50. **Marking briefs and submitting fees accounts**

50.1 The provisions of paragraphs 34.1, 34.4, 34.5 and 34.6 of this code apply, with the necessary changes required by the context, to trust account advocates.

50.2 A trust account advocate shall render accounts to the instructing attorney or accredited entity and shall receive payment only from the instructing attorney or accredited entity. Where a trust account advocate receives an instruction directly from a member of the public or from a justice centre accounts shall be rendered to the client directly, and payment may be received from a client or from a third party.

50.3 A trust account advocate shall not submit an account directly to a client nor receive payment directly from a client where the trust account advocate has been instructed by an attorney.

50.4 A trust account advocate shall maintain banking accounts in accordance with chapter 7 of the Act and the accounting rules applicable to trust account advocates, and shall cause payments in respect of accounts to be paid into the appropriate banking account in accordance with chapter 7 of the Act and the accounting rules.

**51. Recovery by trust account advocates of fees owing and payable**

51.1 The provisions of paragraph 35 of this code apply, with the necessary changes required by the context, to trust account advocates in respect of accounts owing arising from briefs from attorneys.

51.2 A trust account advocate acting in terms of an instruction received directly from a member of the public or from a justice centre shall be entitled to recover directly from the client any accounts owing and payable by that client.

**52. Professional etiquette**

The provisions of paragraph 61.3 of this code apply, with the necessary changes required by the context, to trust account advocates.

**53. Abandonment of practice**

53.1 A trust account advocate shall not abandon his or her practice.

53.2 A trust account advocate shall not close his or her practice without prior notice to the Council and to his or her clients and to attorneys by whom he or she has been briefed without arranging with the clients and the attorneys for the despatch of their business or the care of their property in his or her possession or under his or her control.

## PART VI

### Conduct of legal practitioners and candidate legal practitioners in relation to appearances in court and before tribunals.

#### 54. Appearances

- 54.1 Unless otherwise stated or unless the context dictates otherwise, Part VI of this code applies to all legal practitioners and candidate legal practitioners in relation to appearances in any court in which they have the right of appearance or before any tribunal which performs a judicial, quasi-judicial or administrative function.
- 54.2 If Part VI of this code conflicts with any of the other provisions of this code then those other provisions will prevail and take precedence over the provisions of Part VI.

#### 55. Interviewing of Witnesses

##### General

- 55.1 A legal practitioner shall ordinarily interview clients and witnesses in the presence of the instructing attorney or other representative of the instructing attorney (where an instructing attorney has been appointed).
- 55.2 A legal practitioner who is an advocate as contemplated in section 34(2)(a)(i) of the Act may interview a witness in the absence of the instructing attorney or other representative of the instructing attorney in the following instances ;
- 55.2.1 when the matter is undertaken on brief from Legal Aid South Africa or a law clinic;
- 55.2.2 when there is a need to interview a witness and the instructing attorney cannot reasonably attend;
- 55.2.3 when the legal practitioner is at court or before the tribunal with the client and the instructing attorney is absent;
- 55.2.4 when the instructing attorney gives permission.
- 55.3 A legal practitioner shall ordinarily interview witnesses whose credibility might be in issue separately from other witnesses.

- 55.4 Unless a legal practitioner intends to present evidence by way of affidavit to a court or a tribunal, the written statements made by witnesses in an interview with the legal practitioner or written statements made by witnesses that are given to the legal practitioner by the instructing attorney (where applicable) may not be obtained on affidavit.
- 55.5 Once a legal practitioner has called a witness to testify, the legal practitioner shall not again interview that witness until after cross examination and re-examination, if any, have been completed, unless circumstances arise that make such an interview necessary. When a proper case for such a necessary interview exists, the legal practitioner shall prior to any interview inform the opposing legal practitioner of such need and unless the opposing legal practitioner consents, no such interview shall be held unless the court or tribunal grants permission to do so.

#### **Interviewing of witnesses of the opposing party in civil proceedings**

- 55.6 A legal practitioner shall not be prevented from interviewing any person, at any time before or during any trial, from whom it is believed useful information may be obtained, and in particular, it shall not be a reason to prevent such an interview that the opposing party has -
- 55.6.1 subpoenaed or contemplates subpoenaing that person;
- 55.6.2 already interviewed or has arranged to interview that person.
- 55.7 Whenever, after the commencement of a case, a legal practitioner has reason to suspect that a person with whom an interview is then sought may have been in touch with the opposing party with a view to testifying, the legal practitioner shall, either before or at the outset of an interview, or if the suspicion arises only during the interview, once the suspicion arises, ascertain if that person has been in touch with the opposing party and whether such person has been subpoenaed or is likely to be subpoenaed by the opposing party or has already been interviewed or an interview has been arranged with the opposing party, and if informed that any of these steps have been taken by the opposing party, the legal practitioner shall at once notify the opposing party of the intention to interview that person, and shall not commence or continue with an interview until such notification has been received by the opposing party, and thereafter the interview may take place in the absence of any representative of the opposing party.

- 55.8 Whenever a legal practitioner arranges to interview a person who has already testified for the opposing party, before such interview may be conducted, the legal practitioner must invite the opposing party to attend the interview, on reasonable notice. However, regardless of the presence or absence of the opposing party, the interview may be conducted as arranged in the notification.

#### **Interviewing of prosecution witnesses by defence legal practitioner**

- 55.9 A legal practitioner shall, except as provided hereafter, when conducting criminal defences, take reasonable steps to prevent inadvertent contact with any person who is, or is likely to be, a state witness, for as long as that person is or is likely to be a state witness, and whenever the legal practitioner proposes to interview any person he or she shall ascertain whether such person is a state witness before conducting the interview.
- 55.10 A legal practitioner may interview a state witness if the prosecution consents, or, failing such consent, if a court grants permission to do so, and if permission is subject to conditions, in strict accordance with those conditions.
- 55.11 For the purposes of these rules of conduct, a state witness in relation to a particular charge includes anyone from whom a statement has been taken by the South African Police Service about a crime or alleged crime, regardless of whether the prosecution is committed to calling such person or not, and anyone who has already testified for the state.

#### **56. The scope and limits of legitimate cross-examination**

- 56.1 A legal practitioner shall cross-examine a witness with due regard to the right to dignity of the witness.
- 56.2 A legal practitioner shall guard against being influenced by any person to become a channel for the infliction of gratuitous embarrassment, insult or annoyance of a witness, and shall retain personal control over what is asked or put in cross-examination by exercising personal judgment about the propriety of all and any imputations.
- 56.3 A legal practitioner shall not put to a witness an allegation of fact if the legal practitioner has no reasonable expectation that admissible evidence, whether oral or otherwise, is available to be adduced to substantiate the allegation of fact.

- 56.4 A legal practitioner shall not impugn the character of a witness unless he or she has good grounds to do so. In this regard, good grounds are deemed to be present if -
- 56.4.1 the instructing attorney (if one is appointed) informs the legal practitioner that the attorney is satisfied that the imputation is well-founded and true. However, a mere instruction to put an imputation shall be inadequate;
- 56.4.2 the source of the imputation is the statement of any person other than the instructing attorney, and the legal practitioner ascertains from that person, or any other source, reliable information or reasons to believe that the statement is well-founded or true.
- 56.5 Regardless of whether the imputations about the witness are well-founded or true, the legal practitioner shall not put such imputations to a witness unless the answers that might be given could reasonably be believed to be material to the credibility of that witness or to be material to any issue in the case.
- 56.6 A legal practitioner shall not, in the conduct of a criminal defence, recklessly attribute to, or accuse, a witness or other person of the crime with which the client is being tried. Such an attribution or accusation may be made only if the facts adduced, or to be adduced, in evidence, and the circumstances which the evidence suggest, afford a reasonable basis from which rational inferences may be drawn to justify at least a reasonable suspicion that the crime might have been committed by that witness or other person.

**57. Disclosures and non-disclosures by legal practitioner**

- 57.1 A legal practitioner shall take all reasonable steps to avoid, directly or indirectly, misleading a court or a tribunal on any matter of fact or question of law. In particular, a legal practitioner shall not mislead a court or a tribunal in respect of what is in papers before the court or tribunal, including any transcript of evidence.
- 57.2 A legal practitioner shall scrupulously preserve the personal and confidential information of a client communicated to him or her, unless the information is not privileged and disclosure is required by law.
- 57.3 A legal practitioner shall not waive or purport to waive privilege in respect of privileged information; the decision to waive professional privilege is that of the client, not of the legal practitioner.



- 57.4 A legal practitioner shall, in any ex parte proceedings, disclose to a court every fact (save those covered by professional privilege or client confidentiality) known to the legal practitioner that might reasonably have a material bearing on the decision the court is required to make.
- 57.5 A legal practitioner shall, in all proceedings, disclose to a court or a tribunal all relevant authorities of which the legal practitioner is aware that might reasonably have a material bearing on the decision the court or tribunal is required to make.
- 57.6 A legal practitioner shall, if the interests of justice require the disclosure to a court or tribunal of information covered by professional privilege, seek from the instructing attorney (where one is appointed) and the client permission to make the disclosure, and if permission is withheld, the legal practitioner shall scrupulously avoid any insinuation in any remarks made to a court or tribunal that all information that would serve the interests of justice has been disclosed.
- 57.7 A legal practitioner shall not, in the event of being obliged to withdraw from representing a client in any proceedings, offer an explanation that would disclose the client's confidential or privileged information.
- 57.8 A legal practitioner shall, if a draft order is presented to a court that deviates in any respect from standard form orders routinely made in that court, expressly draw such deviations to the attention of the court and offer a justification for such deviations.
- 57.9 A legal practitioner shall not rely on any statement made in evidence which he or she knows to be incorrect or false.
- 57.10 A legal practitioner shall not make use of any privileged information of the opposing party that has accidentally or unlawfully come into the possession of the legal practitioner, and shall at once he or she has knowledge of such circumstances, notify the legal representatives for the opposing party. However, if such information subsequently becomes available to the legal practitioner through lawful means, he or she shall not be prohibited from making use thereof.

## 58. Conflicts of interests involving legal practitioners

- 58.1 A legal practitioner shall guard against becoming personally, as distinct from professionally, associated with the interests of the client.
- 58.2 A legal practitioner shall not stand bail for the client.

- 58.3 A legal practitioner shall not accept a brief to appear before any court, council, board or other adjudicative tribunal, and whether statutory or voluntary in nature, if the legal practitioner is contemporaneously a member of that court, council, board or adjudicative tribunal, whether by election or appointment, and whether such membership is permanent, temporary or in an acting capacity.
- 58.4 A legal practitioner shall not be obliged to accept a brief if he or she has previously accepted a brief to advise another interested party about the matter. The legal practitioner must refuse such a brief if any confidential information having any bearing on the matter had been received by him or her with the earlier brief or a reasonable belief might exist that the client in the earlier brief might be prejudiced by such acceptance.
- 58.5 A legal practitioner may accept a brief to argue a case for a party despite having earlier given an opinion on the issues to the opposing party, provided that -
- 58.5.1 no information had been received by the legal practitioner for the purpose of giving the opinion about which a reasonable belief might exist that the client in the earlier brief might be prejudiced by acceptance of the later brief; and
- 58.5.2 the attorneys for both parties (where appointed), or an unrepresented party, agree to the offer of the later brief before an acceptance.
- 58.6 A legal practitioner may not accept a brief on appeal if the legal practitioner has accepted a brief for the opposing party at any stage of the proceedings.
- 58.7 A legal practitioner who has presided at an enquiry in terms of the company laws shall not at any time accept a brief to act in any capacity for any interested party in any subsequent proceedings related in any way to the subject matter of the enquiry.
- 58.8 A legal practitioner who has accepted a brief from a liquidator or from a trustee of an insolvent estate shall not at any time accept a brief to act in any capacity for any interested party in subsequent proceedings in the liquidation or the insolvency.
- 58.9 A legal practitioner shall not accept a brief if he or she has any form of relationship, including a family relationship, with the client or an opposing party which compromises, or which might reasonably be expected to compromise, the legal practitioner's independence.

- 58.10 A legal practitioner shall not accept a brief where a position or office previously occupied by him or her with a client or with an opposing party compromises, or might reasonably be expected to compromise, his or her independence.
- 58.11 A legal practitioner shall not accept a brief on behalf of a provincial or municipal council of which he or she is a member.
- 58.12 An advocate who was previously an attorney acting for the client in a matter should not accept a brief as a legal practitioner in the same matter where the advocate's former capacity, the extent of control and direction exercised by him or her as an attorney, or his or her established relationship as attorney with the client is likely to compromise the expectation that the advocate's advice about the conduct of the matter will be independent.

**59. Conflicts of interest among clients of legal practitioners**

- 59.1 A legal practitioner shall, when acting for two or more clients, be aware of the risk of a conflict of interests existing or arising in the course of the proceedings, whether criminal or civil, and once the legal practitioner is alerted to the existence of a conflict he or she shall withdraw from acting for one or all clients in those proceedings as soon as possible, and in particular -
- 59.1.1 if the legal practitioner has become aware of privileged or confidential information of any one client relevant to the proceedings that could be used to the prejudice of any other client, the legal practitioner may not act in any proceedings in which the prejudiced client is a party;
- 59.1.2 if the legal practitioner learns of a conflict of interest among clients at a time and under circumstances where the legal practitioner is not made aware of any privileged information, the legal practitioner may continue to act for one or other client as nominated by the instructing attorney (where one is appointed).
- 59.2 A legal practitioner may act for two or more adversaries in drawing a settlement agreement to capture their agreement, but must advise the parties of their rights to independent legal advice. Moreover, in any matter involving a settlement of a matrimonial dispute or a matter involving the regulation of care and residence of children, the legal practitioner shall take active steps to ensure that all aspects of any contemplated settlement is equitable to all parties and in the best interests of the children.

**60. Commitment of legal practitioner to an effective court process**

- 60.1 A legal practitioner shall not abuse or permit abuse of the process of court or tribunal and shall act in a manner that shall promote and advance efficacy of the legal process.
- 60.2 A legal practitioner shall not deliberately protract the duration of a case before a court or tribunal.
- 60.3 A legal practitioner shall take all reasonable steps to arrive promptly in a court or tribunal where the legal practitioner is expected to appear, and shall in this regard take reasonable steps to allow for habitual events that might inhibit prompt arrival.
- 60.4 A legal practitioner who is expected to appear in a court or before a tribunal at a given time shall honour that commitment and shall organise other commitments to prevent interference with the scheduled court hearings. In particular, the legal practitioner shall not endeavour to seek or arrange a postponement of the matter or a change to a different time to suit his or her convenience, except when the instructing attorney (where appointed) and the client, having been fully and accurately informed of the reasons relied upon by the legal practitioner, have agreed, and
- 60.4.1 when an opposing party is affected, the opposition legal representatives, if any, having been fully and accurately informed, have agreed, and
- 60.4.2 the business of the court or tribunal is not materially compromised.

**61. Public comment by legal practitioner**

- 61.1 A legal practitioner shall not comment publicly nor publish any opinions about matters which are before a court or other tribunal in which the litigation process is incomplete, except for the purposes of guiding public understanding of the issues that have arisen or may arise in the course of such proceedings.
- 61.2 A legal practitioner may publicly express opinions about any question of law or prospective law provided that the opinion is not likely to be construed as prejudging an actual case before the courts or any tribunal at that time.
- 61.3 **Professional etiquette**

- 61.4 Legal practitioners shall, upon a first appearance before a judicial officer, approach the registrar of the judicial officer (if the judicial officer is a judge), or the equivalent official in any other court, before the hearing in order to present themselves to the judicial officer; the rule is applicable to acting judges as well, and any prior professional or personal acquaintance with the acting judge is irrelevant.
- 61.5 At the trial court roll call, in the motion courts and in the divorce courts, legal practitioners shall seat themselves from the front row with regard to seniority.
- 61.6 Legal practitioners shall deal with the judicial officer, court staff and all other persons in court with civility and respect.
- 61.7 A legal practitioner shall, on the completion of his or her matter, remain in the courtroom until the legal practitioner in the next matter has risen, or if the legal practitioner is the last legal practitioner in court, until the court has risen.
- 61.8 A legal practitioner shall not, when briefed in an opposed matter, approach a judicial officer in the absence of the opposing legal practitioner, unless the opposing legal practitioner has expressly agreed thereto.
- 61.9 Legal practitioners shall not allow any ill-feeling between litigants or legal practitioners to interfere with the civil and professional conduct of the matter.
- 61.10 Legal practitioners shall not indulge in personal remarks about opposing legal practitioners or witnesses, whether in court or out of court, and shall not allow any antipathy that might exist between the legal practitioner and the opposing legal practitioners personally to intrude upon the conduct of the matter.
- 61.11 After a hearing when judgment is awaited, a legal practitioner shall not place before, or try to send to, a judicial officer any further material of whatever nature, except by agreement among representatives of all parties; provided that, if consent is unreasonably withheld, the placing of such further material may, in an appropriate case, be the subject matter of an application to re-open the hearing to receive it or, if the further material consists only of references to authorities which might offer assistance to deciding a question, a legal practitioner may address a request in writing to the judge's registrar or equivalent court official to approach the judicial officer with an invitation to receive the references.

- 61.12 A legal practitioner shall not deliberately seek to catch an opposing legal practitioner off-guard. Accordingly -
- 61.12.1 whenever a legal practitioner has prepared heads of argument, other than when compelled to do so in terms of the rules of conduct of court, he or she shall not later than the time when the heads are presented to a court also give the opposing legal practitioner an identical set of such heads;
- 61.12.2 whenever a legal practitioner gives a bundle of authorities to the court, he or she shall also give at least a list containing the authorities to the opposing legal practitioner;
- 61.12.3 whenever a legal practitioner makes use of a transcript of proceedings, he or she shall give the opposing legal practitioner a copy no later than the first time that reference is made to the transcript;
- 61.12.4 whenever a legal practitioner is intent on taking a point of law not evident from the papers, independently of any rule of court that might apply, he or she shall notify the opposing legal practitioner in good time to avoid that opposing legal practitioner being taken unawares;
- 61.12.5 whenever a legal practitioner intends presenting the court with an unreported judgment, he or she shall, in advance of the hearing, notify and give a copy of the judgment to the opposing legal practitioner in good time to avoid the latter being taken unawares.
- 61.13 Legal practitioners who have cause to lodge formal complaints about the conduct of other legal practitioners shall compose a full account of the circumstances giving rise to the complaint and shall submit the complaint to the authorised sub-structure of the Council.
- 61.14 Complaints shall be dealt with in accordance with prescribed procedures for the regulation of professional conduct.

**62. Additional provisions relating to legal practitioners**

The provisions of paragraph 26 shall apply to legal practitioners, with the necessary changes required in the context, as if they were included specifically in this Part.

**PART VII****Conduct of legal practitioners not in private practice**

- 63.1 Unless otherwise stated or unless the context indicates otherwise, Part VII of this code applies only to legal practitioners who are not in private practice and who are employed by an employer for the purpose of providing that employer with a dedicated source of legal services and advice in exchange for a salary or remuneration (all of whom, for purposes of Part VII, and unless the context otherwise requires, shall be referred to as "**corporate counsel**"). If Part VII of this code conflicts with the provisions of Part II then the provisions of Part II will prevail and take precedence over the provisions of Part VII.
- 63.2 Corporate counsel must at all times act in an ethical manner and should, without limiting the general nature of this duty, adhere to the following standards of conduct:
- 63.2.1 act in a fair, honest and transparent manner, and with dignity and integrity;
  - 63.2.2 remain impartial and objective, and avoid subordination or undue influence of their judgment by others;
  - 63.2.3 give effect to legal and ethical values and requirements, and treat any gap or deficiency in a law, regulation, standard or code in an ethical and responsible manner;
  - 63.2.4 not engage in any act of dishonesty, corruption or bribery;
  - 63.2.5 make disclosure to any relevant party any personal, business or financial interest in his or her employer or its business or in any stakeholder so as to avoid any perceived, real or potential conflict of interest;
  - 63.2.6 not knowingly misrepresent or permit misrepresentation of any fact;
  - 63.2.7 provide opinions, decisions, advice, legal services or recommendations that are honest and objective.
- 63.3 Corporate counsel must, when providing legal services or advice to his or her employer, be free from any conflict of interest, financial interest or self interest in discharging his or her duty to the employer. Without limiting the generality of this duty, a corporate counsel must -

- 63.3.1 be and appear to be free of any undue influence or self-interest, direct or indirect, which may be regarded as being incompatible with his or her integrity or objectivity;
- 63.3.2 assess every situation for possible conflict of interest or financial interest, and be alert to the possibility of conflicts of interest;
- 63.3.3 immediately declare any conflict of interest or financial interest in a matter, and must recuse himself or herself from any involvement in the matter;
- 63.3.4 be aware of and discourage potential relationships which could give rise to the possibility or appearance of a conflict of interest;
- 63.3.5 not accept any gift, benefit, consideration or compensation that may compromise or may be perceived as compromising his or her independence or judgment.
- 63.4 Corporate counsel must at all times act in a professional manner. Without limiting the generality of this duty corporate counsel must -
- 63.4.1 act with such a degree of skill, care, attention and diligence as may reasonably be expected from a corporate counsel;
- 63.4.2 communicate in an open and transparent manner with his or her employer and with third parties, and not intentionally mislead his or her employer or any third party;
- 63.4.3 make objective and impartial decisions based on thorough research and on an assessment of the facts and the context of the matter;
- 63.4.4 exercise independent and professional judgment in all dealings with his or her employer and with third parties;
- 63.4.5 remain reasonably abreast of legal developments, applicable laws, regulations, legal theory and the common law, particularly where they apply to his or her employer and the industry within which he or she operates;
- 63.4.6 comply with and observe the letter and the spirit of the law, and in particular those relevant to his or her employer or to the industry in which he or she operates, including internal binding and non-binding codes, principles and standards of conduct;



- 63.4.7 observe and protect confidentiality and privacy of all information made available to him or her and received during the course of performing his or her duties, unless there is a legal obligation to disclose that information;
- 63.4.8 generally act in a manner consistent with the good reputation of legal practitioners and of the legal profession, and refrain from conduct which may harm the public, the legal profession or legal practitioners or which may bring the legal profession or legal practitioners into disrepute.

**DEPARTMENT OF RURAL DEVELOPMENT AND LAND REFORM  
NOTICE 169 OF 2019**

**GENERAL NOTICE IN TERMS OF THE RESTITUTION OF LAND RIGHTS ACT 1994, (ACT No. 22 OF 1994) AS AMENDED**

Notice is hereby given in terms of Rule 5 (a) regarding procedure of the Commission of the Restitution of Land Rights Act, 1994 (Act No. 22 of 1994), as amended. This claim for the restitution of land rights has been submitted to the Regional Land Claims Commissioner: Western Cape. The particulars regarding this claim are as follows:

Reference Number : Various  
 Areas : Various  
 Compensation : Unknown  
 Number of Claimants : previous owners and tenants have lodged individual claims on various erven  
 Date Submitted : Various Dates

Num	Reference	Claimant Initial and Surname	Property Description	Extent	Capacity	Date Submitted
1	KRK6/2/3/A/4/2117/98/A475	J Awince	Cant view file	Cant view file	Cant view file	Cant view file
2	KRK6/2/3/A/6/0/1989/130/G324	C Gates	Erf 84602/84603 Retreat	Not Available	Tenant	23/12/1998
3	KRK6/2/3/A/1/0/84/208/N628	ME Nongauza	Athlone	Not Available	Owner	31/12/1998
4	KRK6/2/3/A/10/82/0/347B8	SC Meyers	Erf 6087 Paarl	Not Available	Not Available	02/01/1996
5	KRK6/2/3/A/8/72/0/8/H497	P Hanslo	Erf 10731 Strand	496 sqm	Owner	31/12/1998
6	KRK6/2/3/A/1/0/1238/7/M18	G Manle	Erf 59408 Lansdowne	Not Available	Not Available	09/11/1995
7	KRK6/2/3/A/6/0/1989/3/D202	BGV Dourands	Retreat	Not Available	Not Available	29/10/1996
8	KRK6/2/3/A/6/0/443/582/A691	T Adams	Lot 1846 Crawford	Not Available	Owner	30/12/1998
9	KRK6/2/3/A/6/0/1756/4/P454	J Parker	Erf 327 Ottery	Not Available	Tenant	17/12/1998
10	KRK6/2/3/A/1/0/331/709/S689	S Small	Hanover Street District Six	Not Available	Not Available	25/02/1998
11	KRK6/2/3/A/1/0/2676/90/W73	Z Van Wyk	Erf 11347 Woodstock	122sqm	Owner	Not Available

The Regional Land Claims Commission is requesting any party who has an interest in the above-mentioned land claims to submit, within 30 days from the publication of this notice, any comments / information to:

The Regional Land Claims Commission: Western Cape  
 Private Bag X 9163  
 Cape Town  
 8000

Tel: (021) 409-0300  
 Fax: (021) 424-5146

CHECKED  .....

DATE 2019/03/14 .....

APPROVED  .....

DATE 07/03/2019 .....

Mr LH Maphuta  
 Legal RLCC

**SOUTH AFRICAN RESERVE BANK  
NOTICE 170 OF 2019**

**Notice and Order of Forfeiture**

Notice of Forfeiture to the State of money in terms of the provisions of Exchange Control Regulation 22B made under Section 9 of the Currency and Exchanges Act, 1933 (Act No. 9 of 1933), as amended, as promulgated by Government Notice No. R.1111 of 1961-12-01 in respect of the money of:

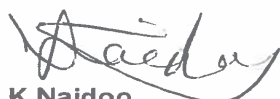
**Topsell Trading (Pty) Limited**  
**(Registration number 2013/130636/07)**

of:

13 Montequ  
Kingfisher Street  
Meyersdal  
Gauteng  
1448

**Be pleased to take notice that:**

1. The Minister of Finance has, by virtue of the provisions of Exchange Control Regulation 22E delegated all the functions and/or powers conferred upon the Treasury by the provisions of the Exchange Control Regulations [with the exception of the functions and/or powers conferred upon the Treasury by Exchange Control Regulations 3(5) and (8), 20 and 22, but which exception does not include the functions and/or powers under Exchange Control Regulations 22A, 22B, 22C and 22D], and assigned the duties imposed thereunder on the Treasury, to, *inter alia*, the Governor or the Deputy Governor of the South African Reserve Bank.
2. By virtue of the functions, powers and/or duties vested in me, in my capacity as the Deputy Governor of the South African Reserve Bank, in terms of the delegation and assignment of the functions, powers and/or duties referred to in 1 above, I hereby give notice of a decision to forfeit to the State the following money and I hereby declare and order forfeit to the State the following money, namely:
  - 2.1 the amount of R209 048.78 in account number 62432896655 in the name of Topsell Trading (Pty) Limited, held with FirstRand Bank Limited, together with any interest thereon and/or other accrual thereto.
3. The date upon which the money specified in 2 above is hereby forfeited to the State is the date upon which this Notice of Forfeiture is published in this Gazette.
4. The money specified in 2 above shall be disposed of by deposit thereof to the National Revenue Fund.
5. This Notice also constitutes a written order, as contemplated in Exchange Control Regulation 22B, in terms of which the money specified in 2 above is hereby forfeited to the State.
6. Signed at Pretoria on this 14 day of MARCH 2019.



**K Naidoo**  
**Deputy Governor**  
**South African Reserve Bank**

**SOUTH AFRICAN RESERVE BANK**  
**NOTICE 171 OF 2019**  
**Notice and Order of Forfeiture**

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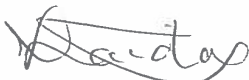
**Ausma Trading (Pty) Limited**  
**(Registration number 2014/085687/07)**

of:

PO Box 2683  
Saxonwold  
Johannesburg  
2123

**Be pleased to take notice that:**

1. The Minister of Finance has, by virtue of the provisions of Exchange Control Regulation 22E delegated all the functions and/or powers conferred upon the Treasury by the provisions of the Exchange Control Regulations [with the exception of the functions and/or powers conferred upon the Treasury by Exchange Control Regulations 3(5) and (8), 20 and 22, but which exception does not include the functions and/or powers under Exchange Control Regulations 22A, 22B, 22C and 22D], and assigned the duties imposed thereunder on the Treasury, to, *inter alia*, the Governor or the Deputy Governor of the South African Reserve Bank.
2. By virtue of the functions, powers and/or duties vested in me, in my capacity as the Deputy Governor of the South African Reserve Bank, in terms of the delegation and assignment of the functions, powers and/or duties referred to in 1 above, I hereby give notice of a decision to forfeit to the State the following money and I hereby declare and order forfeit to the State the following money, namely:
  - 2.1 the amount of R437 127.25 in account number 676031630001 in the name of Ausma Trading (Pty) Limited, held with China Construction Bank – Johannesburg Branch, together with any interest thereon and/or other accrual thereto.
3. The date upon which the money specified in 2 above is hereby forfeited to the State is the date upon which this Notice of Forfeiture is published in this Gazette.
4. The money specified in 2 above shall be disposed of by deposit thereof to the National Revenue Fund.
5. This Notice also constitutes a written order, as contemplated in Exchange Control Regulation 22B, in terms of which the money specified in 2 above is hereby forfeited to the State.
6. Signed at Pretoria on this 6 day of MARCH 2019.



**K Naidoo**  
**Deputy Governor**  
**South African Reserve Bank**

**SOUTH AFRICAN RESERVE BANK  
NOTICE 172 OF 2019**

**Notice and Order of Forfeiture**

Notice of Forfeiture to the State of money in terms of the provisions of Exchange Control Regulation 22B made under section 9 of the Currency and Exchanges Act, 1933 (Act No. 9 of 1933), as amended, as promulgated by Government Notice No. R.1111 of 1961-12-01 in respect of the money of:

**Ms Mushayathama Pearl Mokoma (Identity no. 9012260072083)  
Mr Ehinomen Nelson Otokhagua (Passport no. A00972336)**

**(hereinafter referred to as the Respondents)**

of:

548 Isithama Section  
Tembisa  
1632

**Be pleased to take notice that:**

1. The Minister of Finance has, by virtue of the provisions of Regulation 22E delegated all the functions and/or powers conferred upon the Treasury by the provisions of the Exchange Control Regulations [with the exception of the functions and/or powers conferred upon the Treasury by Regulations 3(5) and (8), 20 and 22, but which exception does not include the functions and/or powers under Exchange Control Regulations 22A, 22B, 22C and 22D], and assigned the duties imposed thereunder on the Treasury, to, inter alia, the Governor or Deputy Governors of the South African Reserve Bank.
2. By virtue of the functions, powers and/or duties vested in me, in my capacity as a Deputy Governor of the South African Reserve Bank, in terms of the delegation and assignment of the functions, powers and/or duties referred to in 1 above, I hereby give notice of a decision to forfeit to the State the following money and I hereby declare and order forfeit to the State the following money, namely:
  - 2.1 The capital amounts together with any interest thereon and/or any accrual thereto standing credit of the respondents in the following bank account numbers, held ABSA Bank Limited:

Authorised Dealer	Account number	Amount
ABSA Bank Limited	4091570056	R58 226,20
ABSA Bank Limited	4085081221	R58 678,98

3. The date upon which the money specified in 2 above is hereby forfeited to the State is the date upon which this Notice and order of Forfeiture is published in this Gazette.
4. The money specified in 2 above shall be disposed of by depositing it into the National Revenue Fund.
5. This Notice also constitutes a written order, as contemplated in Exchange Control Regulation 22B, in terms of which the money specified in 2 above is hereby forfeited to the State.
6. Signed at Pretoria on this 7 day of MARCH 2019.



**K Naidoo  
Deputy Governor  
South African Reserve Bank**

**SOUTH AFRICAN RESERVE BANK**  
**NOTICE 173 OF 2019**  
**Notice and Order of Forfeiture**

Notice of Forfeiture to the State of money in terms of the provisions of Exchange Control Regulation 22B made under Section 9 of the Currency and Exchanges Act, 1933 (Act No. 9 of 1933), as amended, as promulgated by Government Notice No. R.1111 of 1961-12-01 in respect of the money of:

**H and F Electronics Close Corporation**  
**(Registration number 2011/099818/23)**

of:

PO Box 2683  
Saxonwold  
Johannesburg  
2132

**Be pleased to take notice that:**

1. The Minister of Finance has, by virtue of the provisions of Exchange Control Regulation 22E delegated all the functions and/or powers conferred upon the Treasury by the provisions of the Exchange Control Regulations [with the exception of the functions and/or powers conferred upon the Treasury by Exchange Control Regulations 3(5) and (8), 20 and 22, but which exception does not include the functions and/or powers under Exchange Control Regulations 22A, 22B, 22C and 22D], and assigned the duties imposed thereunder on the Treasury, to, *inter alia*, the Governor or the Deputy Governor of the South African Reserve Bank.
2. By virtue of the functions, powers and/or duties vested in me, in my capacity as the Deputy Governor of the South African Reserve Bank, in terms of the delegation and assignment of the functions, powers and/or duties referred to in 1 above, I hereby give notice of a decision to forfeit to the State the following money and I hereby declare and order forfeit to the State the following money, namely:
  - 2.1 the amount of R3 032 443.63 in account number 022400524 in the name of H and F Electronics Close Corporation, held with The Standard Bank of South Africa Limited, together with any interest thereon and/or other accrual thereto.
3. The date upon which the money specified in 2 above is hereby forfeited to the State is the date upon which this Notice of Forfeiture is published in this Gazette.
4. The money specified in 2 above shall be disposed of by deposit thereof to the National Revenue Fund.
5. This Notice also constitutes a written order, as contemplated in Exchange Control Regulation 22B, in terms of which the money specified in 2 above is hereby forfeited to the State.
6. Signed at Pretoria on this 6 day of MARCH 2019.



**K Naidoo**  
**Deputy Governor**  
**South African Reserve Bank**

**SOUTH AFRICAN RESERVE BANK**  
**NOTICE 174 OF 2019**  
**Notice and Order of Forfeiture**

Notice of Forfeiture to the State of money in terms of the provisions of Exchange Control Regulation 22B made under Section 9 of the Currency and Exchanges Act, 1933 (Act No. 9 of 1933), as amended, as promulgated by Government Notice No. R.1111 of 1961-12-01 in respect of the money of:

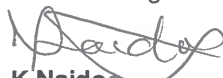
**Jin Yin International Trading (Pty) Limited**  
**(Registration number 2016/087729/07)**

of:

Shop GB15 New Oriental City  
49 Ernest Oppenheimer Road  
Bruma  
2198

**Be pleased to take notice that:**

1. The Minister of Finance has, by virtue of the provisions of Exchange Control Regulation 22E delegated all the functions and/or powers conferred upon the Treasury by the provisions of the Exchange Control Regulations [with the exception of the functions and/or powers conferred upon the Treasury by Exchange Control Regulations 3(5) and (8), 20 and 22, but which exception does not include the functions and/or powers under Exchange Control Regulations 22A, 22B, 22C and 22D], and assigned the duties imposed thereunder on the Treasury, to, *inter alia*, the Governor or the Deputy Governor of the South African Reserve Bank.
2. By virtue of the functions, powers and/or duties vested in me, in my capacity as the Deputy Governor of the South African Reserve Bank, in terms of the delegation and assignment of the functions, powers and/or duties referred to in 1 above, I hereby give notice of a decision to forfeit to the State the following money and I hereby declare and order forfeit to the State the following money, namely:
  - 2.1 the amount of R192 480.19 in account number 62597462573 in the name of Jin Yin International Trading (Pty) Limited and the amount of R18 046.12 in account number 62403211147 in the name of Jintao Chen (Linked account to Jin Yin International Trading (Pty) Limited), both accounts held with FirstRand Bank Limited, together with any interest thereon and/or other accrual thereto.
3. The date upon which the money specified in 2 above is hereby forfeited to the State is the date upon which this Notice of Forfeiture is published in this Gazette.
4. The money specified in 2 above shall be disposed of by deposit thereof to the National Revenue Fund.
5. This Notice also constitutes a written order, as contemplated in Exchange Control Regulation 22B, in terms of which the money specified in 2 above is hereby forfeited to the State.
6. Signed at Pretoria on this 4 day of MARCH 2019.



**K Naidoo**  
**Deputy Governor**  
**South African Reserve Bank**

**SOUTH AFRICAN RESERVE BANK  
NOTICE 175 OF 2019**

**Notice and Order of Forfeiture**

Notice of Forfeiture to the State of money in terms of the provisions of Exchange Control Regulation 22B made under Section 9 of the Currency and Exchanges Act, 1933 (Act No. 9 of 1933), as amended, as promulgated by Government Notice No. R.1111 of 1961-12-01 in respect of the money of:

**New Empire Trading Close Corporation  
(Registration number 2009/080368/23)**

of:

PO Box 358  
Pretoria  
0001

**Be pleased to take notice that:**

1. The Minister of Finance has, by virtue of the provisions of Exchange Control Regulation 22E delegated all the functions and/or powers conferred upon the Treasury by the provisions of the Exchange Control Regulations [with the exception of the functions and/or powers conferred upon the Treasury by Exchange Control Regulations 3(5) and (8), 20 and 22, but which exception does not include the functions and/or powers under Exchange Control Regulations 22A, 22B, 22C and 22D], and assigned the duties imposed thereunder on the Treasury, to, *inter alia*, the Governor or the Deputy Governor of the South African Reserve Bank.
2. By virtue of the functions, powers and/or duties vested in me, in my capacity as the Deputy Governor of the South African Reserve Bank, in terms of the delegation and assignment of the functions, powers and/or duties referred to in 1 above, I hereby give notice of a decision to forfeit to the State the following money and I hereby declare and order forfeit to the State the following money, namely:
  - 2.1 the amount of R6 786.08 in account number 62251061223 and the amount of R269 721.40 in account number 62484303286 in the name of New Empire Trading Close Corporation, held with FirstRand Bank Limited, together with any interest thereon and/or other accrual thereto.
3. The date upon which the money specified in 2 above is hereby forfeited to the State is the date upon which this Notice of Forfeiture is published in this Gazette.
4. The money specified in 2 above shall be disposed of by deposit thereof to the National Revenue Fund.
5. This Notice also constitutes a written order, as contemplated in Exchange Control Regulation 22B, in terms of which the money specified in 2 above is hereby forfeited to the State.
6. Signed at Pretoria on this 4 day of MARCH 2019.



**K Naidoo  
Deputy Governor  
South African Reserve Bank**



**STATISTICS SOUTH AFRICA**

**NOTICE 176 OF 2019**

THE HEAD: STATISTICS SOUTH AFRICA notifies for general information that the Consumer Price Index is as follows:

Consumer Price Index, Rate (**Base Dec 2017=100**)

**2018:**

Rate: **February 2019 – 4.1**

**DEPARTMENT OF TRADE AND INDUSTRY  
NOTICE 177 OF 2019**

**INTERNATIONAL TRADE ADMINISTRATION COMMISSION OF SOUTH AFRICA**

**GUIDELINES AND CONDITIONS PERTAINING TO A BILATERAL SAFEGUARD APPLICATION IN TERMS OF ARTICLE 34 OF THE ECONOMIC PARTNERSHIP AGREEMENT (EPA) BETWEEN THE EUROPEAN UNION AND ITS MEMBER STATES, OF THE ONE PART, AND THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY (SADC) EPA STATES, OF THE OTHER**

Emanating from the Economic Partnership Agreement (EPA) between the European Community and its Member States, of the one part, and the Southern African Development Community (SADC) EPA States, of the other, Article 34 of the EPA provides for safeguard action in defined circumstances.

The International Trade Administration Commission of South Africa (the Commission) has approved the attached reference and procedural guide pertaining to the application for safeguard action in terms of Article 34 of the EPA.

Further information can be obtained from the Senior Manager: Trade Remedies I, Ms Carina Janse van Vuuren, at (012) 394 3594.



International Trade Administration Commission of South Africa

## **GUIDELINES AND CONDITIONS PERTAINING TO A BILATERAL SAFEGUARD APPLICATION IN TERMS OF ARTICLE 34 OF THE ECONOMIC PARTNERSHIP AGREEMENT (EPA) BETWEEN THE EUROPEAN UNION AND ITS MEMBER STATES, OF THE ONE PART, AND THE SOUTHERN AFRICAN DEVELOPMENT COMMUNITY (SADC) EPA STATES, OF THE OTHER**

### **1. PURPOSE**

- 1.1 The purpose of this document is to provide a reference and procedural guide pertaining to the application for bilateral safeguard action in terms of Article 34 of the EPA.

### **2. SCOPE**

- 2.1 The scope of this document covers the application process by applicants for bilateral safeguard action in terms of Article 34 of the EPA which provides as follows in paragraph 2:

*“Safeguard measures referred to in paragraph 1 above may be taken, if as a result of the obligations incurred by a Party under this Agreement, including tariff concessions, a product originating in a Party is being imported into the territory of another Party or SACU as the case may be, in such increased quantities and under such conditions as to cause or threaten to cause:*

- (a) serious injury to the domestic industry producing like or directly competitive products in the territory of the importing Party or SACU as the case may be, or*

- (b) *disturbances in a sector of the economy producing like or directly competitive products, particularly where these disturbances produce major social problems, or difficulties which could bring about serious deterioration in the economic situation of the importing Party or SACU as the case may be, or*
- (c) *disturbances in the markets of like or directly competitive agricultural products in the territory of the importing Party or SACU as the case may be.”*

### 3. PROCEDURE

- 3.1 In order for the Department of Trade and Industry (**thedti**) to raise the matter of a bilateral safeguard in the Trade and Development Committee, it will need to have a case to present, i.e. facts demonstrating that, as a result of the obligations incurred, a product is being imported from the EU in such increased quantities and under such conditions as to cause or threaten to cause serious injury to the SACU industry; or cause or threaten to cause disturbances in a sector of the SACU economy; or cause or threaten to cause disturbances in a sector of the economy; or cause or threaten to cause disturbances in an agricultural market. Facts supporting these allegations must be set forth in an application to the International Trade Administration Commission of South Africa (ITAC or the Commission). Further, if there is the need for immediate action pending a decision by the Trade and Development Committee, a case will need to be made why a delay would cause damage which would be difficult to repair. Facts supporting these allegations must be set forth in an application to ITAC.
- 3.2 Prior to the submission of an application with ITAC, the industry concerned must lodge a request with the Minister of Trade and Industry to invoke the remedies under Article 34 of the EPA.
- 3.3 Should the Minister of Trade and Industry be in agreement with the request to invoke the said remedies, the Minister will request the Minister of Economic Development to instruct the Commission, in terms of Section 16(d)(i) of the International Trade Administration Act, 2002 (Act 71 of 2002) (ITA Act) to investigate and evaluate an application for bilateral safeguard action in terms of Article 34 of the EPA.

- 3.4 The industry concerned must then submit an application to the Commission, in the prescribed form. The Commission will consider the application and if warranted, initiate an investigation and publish a notice in the *Government Gazette* for comment. A period of 20 days from the date of publication of the initiation notice will be provided for interested parties to submit comments to the Commission.
- 3.5 The rules relating to confidential information as contained in the ITA Act will apply to ALL correspondence, which unless clearly indicated to be confidential and filed together with a non-confidential version, will be placed on the public file and be made available to other interested parties. A public file will be available for inspection at the Commission's offices by all interested parties, by appointment, and interested parties are encouraged to inspect the public file regularly.
- 3.6 All interested parties will be informed of the essential facts to be considered by the Commission in making its preliminary determination. All interested parties will receive 7 days to comment on the essential facts. The Commission may grant parties a single extension on good cause shown. The Commission will take all relevant comments on the essential facts that have been timeously submitted into consideration in its determination.
- 3.7 Taking comments into account, the Commission will then make a preliminary determination which will form the basis for **thedti** to raise the matter in the Trade and Development Committee. On instruction of **thedti**, the Commission may request the Commissioner for South African Revenue Service (SARS) to impose provisional measures. Such measures will take the form of a provisional safeguard duty.
- 3.8 The provisional measures will stay in place for a period not exceeding 200 days. The duration of any such provisional measure shall be counted as a part of the initial period for which safeguard measures may be applied.

- 3.9 Such period shall contain clear elements progressively leading to their elimination at the end of the period for which measures are applied. Where the circumstances warranting imposition of safeguard measures continue to exist, such measures may be extended.

#### **4. APPLICATION**

- 4.1 Applications for safeguard action in terms of Article 34 of the EPA must be addressed to the Chief Commissioner, International Trade Administration Commission of South Africa, Private Bag X 753, Pretoria or delivered by hand to the dti Campus (Block E), 77 Meintjies Street, Sunnyside, Pretoria, 0002.
- 4.2 Applications must be submitted according to the requirements reflected in the attached application form (See Annexure A).
- 4.3 Applicants should provide full and accurate information and wherever possible provide supporting documentary evidence from commercial or governmental sources, e.g. commercial invoices or offers, official trade and production statistics. Failure to do so could detrimentally affect the case of the applicant. The Commission will not consider unsubstantiated information. All cost related information should be reconcilable to the financial statements or management accounts.
- 4.4 The Trade Remedies unit offers a public liaison service and if any party has particular problems in answering the questionnaire or requires more information or clarification on policy issues, the staff of the Trade Remedies section are ready to discuss these issues and to provide assistance. Please feel free to contact ITAC's Trade Remedies Unit.
- 4.5 If the application is based in part on confidential material, the application must contain a non-confidential version of the confidential material together with an explanation of why it is confidential. Section 33 of the ITA Act provides as follows:

- “(1) A person may, when submitting information to the Commission, identify information that the person claims to be information that –
- (a) is confidential by its nature; or
  - (b) the person otherwise wishes to be recognized as confidential.
- (2) A person making a claim in terms of subsection (1) must support that claim with –
- (a) a written statement in the prescribed form-
    - (i) explaining, in the case of information that is confidential by its nature, how the information satisfies the requirements set out in the definition of “information that is by nature confidential” in section 1(2); or
    - (ii) motivating, in the case of other information, why that information should be recognized as confidential; and
  - (b) either –
    - (i) a written abstract of the information in a non-confidential form; or
    - (ii) a sworn statement setting out the reasons why it is impossible to comply with subparagraph (i).”

These summaries should be in sufficient detail to permit a reasonable understanding of the substance of the information submitted in confidence. Therefore where confidential and non-confidential versions are supplied, parties must:

- (1) Indicate each instance where confidential information has been omitted;
- (2) Provide reasons for confidentiality in each instance;
- (3) Provide a summary of the confidential information which permits a reasonable understanding of the substance of the confidential information in each instance; and
- (4) Where information is not susceptible to a non-confidential summary, indicate this in each instance and provide a sworn statement setting out the reasons why the information is not susceptible to summarization.

A sworn statement is defined as a written sworn statement of fact voluntarily made by an affiant or deponent under an oath or affirmation administered by a person authorized to do so by law. Such statement is witnessed as to the authenticity of the affiant's signature by a taker of oaths, such as a notary public or commissioner of oaths.

An affidavit is a type of verified statement or showing, or in other words, it contains verification, meaning it is under oath or penalty of perjury and this serves as evidence to its veracity and is required for court proceedings.

The Commission will not formally accept an application until a proper non-confidential version has been submitted in accordance with the above guidelines. If, in terms of section 34 of the ITA Act, the Commission finds that a request for confidentiality is not warranted and if the applicant is either unwilling to make the information public or to authorize its disclosure in summarized format, the Commission will not consider such information in determining the merits of the application.

Please take note that the rules relating to confidential information and the submission of non-confidential versions of submissions applies to ALL correspondence, which unless clearly indicated to be confidential and filed together with a non-confidential version, will be placed on the public file and be made available to other interested parties. If a document is indicated to be confidential but a proper non-confidential document complying with the above-mentioned rules is not filed, then the document will not be taken into consideration by the Commission. The public file is available for inspection at the Commission's offices by all interested parties, by appointment.

- 4.6 Note that interested parties are encouraged to inspect the public file regularly. The Commission and the Trade Remedies section will not check the public file on interested parties' behalf.
- 4.7 Information should be submitted in hard copies as well as in electronic format, such as on compact disks or flash disks. The Commission's computer system is based on Windows and it uses Excel and MS Word software. The disks must not be write protected and labeled clearly indicating:
1. Applicant's name;
  2. Product(s) concerned;
  3. Type of information on the disk;



4. Software used; and
  5. Whether or not confidential.
- 4.8 The Commission may verify information submitted. Should it be found that the information submitted is false or misleading, the Commission may decide not to proceed with the investigation.

## 5. CONDITIONS

- 5.1 SACU producers representing at least 50% of the total volume produced by all producers that express an opinion on the investigation must support the application, and a minimum of 25% (by production volume) of the total industry must support the application. Without this support the Commission cannot accept an application for investigation. Letters of support for the application must be attached to the application as Annexure 5.1. Additionally, the Commission may not make a determination of serious injury or disturbance unless it has evidence relating to “a major proportion” of the SACU industry for consideration.
- 5.2 A like product is defined as “a product which is identical, i.e. is alike in all respects to the product under investigation, or in the absence of such a product, another product which, although not alike in all respects, has characteristics closely resembling those of the product under investigation”, while a directly competitive product is “a product, other than a like product, that competes directly with the product under investigation”.
- 5.3 The following factors will be considered by the Commission in making a determination of serious injury or disturbance:
- a. the rate and volume of the increase in imports of the product under investigation from the EU –
    - (i) in absolute terms; or
    - (ii) relative to the production and demand in SACU; and

- b. whether the SACU industry is experiencing:
- (i) price suppression;
  - (ii) price depression;
  - (iii) price undercutting/price disadvantage with regard to EU as well as other imports;
  - (iv) a decline in exports;
  - (v) a change in market share;
  - (vi) any other relevant factors placed before the Commission.

None of these factors listed above is necessarily decisive on its own. The threshold to be applied by the Commission when assessing the above factors, will be lower for measures linked to disturbance than those linked to serious injury.

The information requested must relate only to the affected SACU product that is a like or directly competitive product to the product under investigation.

- 5.4 The SACU industry must provide the information as requested in Annexure A.

ANNEXURE A

INTERNATIONAL TRADE ADMINISTRATION  
COMMISSION OF SOUTH AFRICA

APPLICATION FOR A BILATERAL SAFEGUARD MEASURE IN TERMS  
OF ARTICLE 34 OF THE EPA ON

[product]

**APPLICANT**

Name:

Address:

**INTRODUCTION**

1. The purpose of this questionnaire is to help industry bring together in a concise and logical form the information needed by the International Trade Administration Commission of South Africa (the Commission) to decide whether or not to initiate a formal investigation, and will also serve as a basis for further investigation.
2. The legal framework is the International Trade Administration Act No.71 of 2002 (the ITA Act).

**SECTION A APPLICANT**

- A1 State the name, postal and street addresses, the telephone and fax numbers (including codes) and the E-mail address of your company.

Company: \_\_\_\_\_

Postal Address: \_\_\_\_\_

\_\_\_\_\_

Physical Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Tel: (\_\_\_\_) \_\_\_\_\_

Fax: (\_\_\_\_) \_\_\_\_\_

Email: \_\_\_\_\_

- A2 State the names, telephone numbers of and positions held by the company's officers to be contacted.

Person: \_\_\_\_\_

Designation: \_\_\_\_\_

Direct line: (\_\_\_\_) \_\_\_\_\_

Direct fax: (\_\_\_\_) \_\_\_\_\_

Email: \_\_\_\_\_

- A3 Indicate the exact location of your manufacturing site(s). (Map to reach your offices)

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A4 Indicate the legal structure of your firm, i.e. public or private company, closed corporation, etc. \_\_\_\_\_

A5 Have you appointed a consultant, legal or other representative to assist you in this application and/or ensuing investigation?  
Yes/No.

If affirmative, please attach a copy of the letter of appointment, setting out the scope and duration of the appointment, as Annexure A5.

**SECTION B SACU INDUSTRY**

B1 If there is a representative organisation submit the following information:

- (a) Name of organisation: \_\_\_\_\_  
 Name of contact person: \_\_\_\_\_  
 Designation: \_\_\_\_\_  
 Postal address: \_\_\_\_\_  
 Physical address: \_\_\_\_\_  
 Tel: (\_\_\_\_) \_\_\_\_\_ Fax: (\_\_\_\_) \_\_\_\_\_  
 Email: \_\_\_\_\_

- (b) Name the producers in the industry affiliated to the organisation. (Supply the company names, postal, street and E-mail addresses, telephone and fax numbers and the names of contact persons).

Company: _____ Postal address: _____ Physical address: _____	Company: _____ Postal address: _____ Physical address: _____
Contact person: _____ Designation: _____ Tel: (____) _____ Fax: (____) _____ Email: _____	Contact person: _____ Designation: _____ Tel: (____) _____ Fax: (____) _____ Email: _____

B2 Name all other producers constituting the SACU industry concerned. Give their company names, postal and physical addresses, telephone and fax numbers, E-mail addresses and the names of contact persons.

Company: _____ Postal address: _____ Physical address: _____	Company: _____ Postal address: _____ Physical address: _____
Contact person: _____ Designation: _____ Tel: (____) _____ Fax: (____) _____ Email: _____	Contact person: _____ Designation: _____ Tel: (____) _____ Fax: (____) _____ Email: _____

B3 Indicate the industry support and/or opposition to the application in the following format:

<b>Industry Standing</b> (Total domestic production of like goods for the 12 months preceding the lodging of the application)			
Producer	Production volume- Support Application	Production volume- Oppose application	Production volume- Neutral
Your Company			
Other producers 1. 2. 3.			
Total SACU			

## SECTION C PRODUCTS

### C1 Imported (subject) product

**Note** If more than one type of imported product form part of this application, information should be submitted separately for each such product type.

C1.1 Describe the imported product in the following detail:

- (a) Detailed physical description:
  - scientific name.
  - common name and
  - trade name
- (b) Main raw materials/components/inputs used
- (c) Production/manufacturing process used
- (d) Technical characteristics
- (e) Application/use
- (f) Categories of users

Substantiate your description with catalogues, brochures and other literature/samples.

C1.2 Enumerate in detail any differences between the imported product and the SACU like or directly competitive product.

C1.3 Customs classification

Supply the following information:

Tariff subheading	Description	Unit	Rate of duty

C1.4 Possible tariff loopholes

Indicate if you are aware of any loopholes in the tariff classification.

**C2 SACU like product/directly competitive product**

C2.1 Describe the subject product that you produce (attach photograph or brochure):

- (a) Detailed physical description
  - Scientific name (if any)
  - Common name
  - Trade name
- (b) Main raw materials/components/inputs used
- (c) Production/manufacturing process used
- (d) Technical characteristics
- (e) Application/use
- (f) Categories of users

Substantiate your description with catalogues, brochures and other literature/samples.

C2.2 Statutory or other standards/specifications

Give details of all standards/specifications applicable to the product concerned in the SA prescribed by law or otherwise.



**SECTION D SERIOUS INJURY/DISTURBANCE**

*All information provided in Sections D, E and F should be for the latest 3 financial years, as defined by D2.1.*

**D1 General Information**

- D1.1 Provide a flow chart of your marketing/distribution channels for the product(s) concerned in the application and indicate the percentage off-take for each channel.
- D1.2 Provide full details of your terms and conditions of sale and selling price to each class of customer, e.g. wholesaler, retailer, downstream producer, etc. Attach a copy of your standard terms and conditions as **Annexure (D1.2)**.
- D1.3 Give the reasons and basis for your categorisation of customers.
- D1.4 Enumerate major changes over the past three years in your answers to the above questions.

**D2 FINANCIAL INFORMATION**

**Note:** All financial information should be in a reconciled format. If such requested information is not readily available in the same format or needs adjustment or re-apportionment please qualify by way of explanatory notes or discuss the merits of the situation with the Commission.

- D2.1 Indicate your normal accounting period.
- D2.2 Provide copies of your audited financial statements, including detailed manufacturing, trading and profit and loss statements for the most recent three financial years. If your statutory statements do not include detailed accounts/schedules, please provide such accounts/schedules separately.)

- D2.3 Provide copies of your year-to-date management accounts, including detailed manufacturing, trading and profit and loss accounts for the period between the last financial year-end and the most recent month end. Provide ancillary schedules if not part of published accounts.
- D2.4 Provide a separate sales and profit (before tax) contribution analysis of all the product line items manufactured by your company, including a percentage analysis. The information should be sufficient to allow proper verification of your like product information. The requested income statements should be analysed in a departmental or divisionalised format detailing the product concerned as a separate activity. The analysis should also be in respect of three prior financial years and the most recent year-to-date management accounts period. **If the requested information is not available from your financial database, please discuss alternatives with the Commission.**

### D3 IMPORTS

**Give the following information on the imports of the product, being the subject of the application, for the latest three calendar years and separately on a monthly basis for the period subsequent to the end of the last calendar year.**

#### D3.1 Annual import statistics

**Import volumes and values per annum (State unit of measurement)**

		Year 1	Year 2	Year 3	Current year
EU	Volume				
EU	Value				
EU	Average unit price				
Other imports	Volume				
Other imports	Value				
Other imports	Average unit price				

**D3.2 Import volumes and values per month**

Attach as Annexure D3.2 a table indicating the monthly volumes, values and unit prices of imports for the last 18 consecutive months in the same format.

**D3.3 Own imports**

Provide the following information on your own imports of the product:

		Year 1	Year 2	Year 3	Current year
EU	Volume				
EU	Value				
EU	Average unit price				
Other imports	Volume				
Other imports	Value				
Other imports	Average unit price				

State your reasons for importing the product.

**D4 Effects on the SACU prices****Definitions:**

Price undercutting is the extent to which the price of the imported product is lower than the price of the SACU product. The price should be compared at the same level of trade and with the same terms of condition of trade, normally at the SACU ex-factory level compared to the landed cost of the imported product.

Price depression is the extent to which the SACU industry has been forced to reduce its prices, i.e. price depression takes place where there has been an absolute decrease in prices.

Price suppression takes place where the SACU industry is not able to increase prices in line with the increase in costs, i.e. where there is a relative decrease in prices.

**D4.1 Price undercutting**

D4.1.1 Provide the following information with regard to your selling price per unit and the selling price per unit of the imported product:

(R/unit)	Year 1	Year 2	Year 3	Current Year
Your company				
Average landed cost (incl. duty) of imported product				
Undercutting per unit				
Undercutting %				

*Undercutting %: express the undercutting per unit as a percentage of your price.*

D4.1.2 Indicate the level of trade and selling conditions of your product and the imported product, i.e. ex-factory/delivered, payment terms, distributor/wholesaler/retailer.

D4.1.3 Comment on the trends indicated by this information and substantiate how this factor is indicative of serious injury/disturbance. (If the trends do not support your argument, you must provide other substantiating evidence as proof.)

#### **D4.2 Price suppression and depression**

D4.2.1 Provide the following information with regard to your average per unit ex-factory selling prices:

Per unit	Year 1	Year 2	Year 3	Current Year
Your production cost				
Your total cost (incl. Selling, general and admin costs)				
Your ex-factory price				
Total cost % of selling price				

D4.2.2 If your cost or prices changed significantly during the last 18 calendar months please additionally supply the abovementioned information on a monthly or quarterly basis.

Please attach as Annexure D4.2.2.

D4.2.3 Indicate any other factors that have depressed your ex-factory selling price that do not reflect in the above table, e.g. longer payments terms, higher year-end rebates, additional free stock, etc.

#### D4.4 Cost build-up

D4.4.1 Please supply a cost build-up in the format indicated in **Annexure D4.4.1**. Where your management accounts do not allow for the specific cost elements indicated in the pro forma, please indicate the information that is available and supply as much detail as possible.

D4.4.2 Please supply a Bill of Materials for the domestic like or directly competitive product.

#### D5 SACU INDUSTRY SALES AND MARKET SHARE

D5.1 Please supply the following information on your sales volume in SA. State the unit of measurement.

	Year 1	Year 2	Year 3	Current Year
Your sales volume				
Sales by other SACU producers				
Total volume of SACU sales by SACU producers				
Volume of imports				
Your market share				
Total market share held by SACU producers				
Market share held by imports				

D5.2 Indicate how the information in Tables D5.1 supports your allegation of serious injury to the SACU industry, disturbance to a sector of the economy or disturbance in the market.

D5.3 If sales of the product is of a cyclical nature comment on the nature thereof, indicating the length of the cycle and the prices both during the up and down phases.

**D6 Other information**

Please indicate any other information to be considered by the Commission and not covered by the questions above.

**SECTION E THREAT OF SERIOUS INJURY/DISTURBANCE**

Note: It is not necessary to complete this section if you can prove actual current serious injury/disturbance.

Note: Any allegation of threat of serious injury/disturbance should be based on concrete evidence and not only mere conjecture or remote possibility.

- E1 Give details on the freely disposable capacity or imminent substantial increase in capacity of the exporter.
- E2 Substantiate any significant increase of imports into the SACU market indicating the likelihood of substantially increased importation.
- E3 State whether the products concerned enter the country at prices that will have a significant depressing or suppressing effect on SACU prices and are likely to increase demand for further imports. Substantiate your reply.
- E4 Give any other information relevant to your allegation that a serious injury/disturbance is imminent.

**CONTINUES ON PAGE 770 - PART 7**





# Government Gazette Staatskoerant

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**AIDS HELPLINE: 0800-0123-22 Prevention is the cure**

**SECTION F CAUSE OF SERIOUS INJURY/DISTURBANCE**

- F1 Give the reasons for your belief that the imports are the cause of the alleged serious injury/disturbance.
- F2 Give a comparison between your actual ex-factory selling prices and the actual landed costs of the imported products concerned over the latest three financial years, and indicate what your actual (unsuppressed) prices ought to have been.
- F3 Give the details of any depression of your ex-factory selling prices to enable you to compete with the imported products (indicate price depression, extended payment terms or lower discounts granted, etc.)
- F4 Give the details of any suppression of your ex-factory selling prices to enable you to compete with the imported products. Refer to matters such as unavoidable increases in the cost of inputs that had to be absorbed partially or totally by your firm.
- F5 Indicate the view that your clients have regarding:
- (a) the quality of your product;
  - (b) your delivery times;
  - (c) your service; and
  - (d) your after sales service, including guarantees and warranties and technical training to customers.
- Please elaborate on all of the above issues.
- F6 Have you had any strikes, go-slows or lock-outs during the past twelve calendar months? Please elaborate.
- F7 Has there been a contraction in demand for your product or has there been a change in consumption patterns? Please elaborate.

F8 Indicate the technology developments that have taken place since you last updated your manufacturing process.

F9 Comment on your productivity vis-à-vis that of the exporters.

**SECTION G                      DAMAGE THAT WOULD BE DIFFICULT TO REPAIR**

Paragraph 10 of Article 34 of the EPA provides as follows:

*“Where delay would cause damage which it would be difficult to repair, the importing party concerned, whether the EC Party, or a SADC EPA States or SACU, as the case may be, may take the measures provided for....”*

Provide substantiation which would warrant the Commission to take immediate action.

**SECTION H****GENERAL**

Provide any other evidence you wish to bring to the attention of the Commission.

**SECTION H CERTIFICATION**

The information submitted must be accompanied by the following certificate:

"I, the undersigned, certify that the information given above is complete and correct to the best of my knowledge and belief and that I have been authorised to represent

\_\_\_\_\_.  
Company

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of authorised person

\_\_\_\_\_  
Name and title of authorised person **(in print)**

**NB: HAVE YOU COMPLETED YOUR NON-CONFIDENTIAL SUBMISSION?**

**IN THE ABSENCE OF A PROPER NON-CONFIDENTIAL VERSION THE COMMISSION WILL NOT BE IN A POSITION TO REGARD YOUR COMPLAINT AS A PROPERLY DOCUMENTED APPLICATION AND NO INVESTIGATION CAN BE INITIATED.**

Annex D4.4.1	Products under investigation	All other products	Company total cost
<p><b>1. DIRECT COST:</b></p> <p>Materials #                      - Imported                      - Domestic                      Waste recovery *                      Components *                      - Imported                      - Domestic                      Direct labour &amp; related costs                      Re-tooling *                      Power &amp; fuel                      Royalties, etc                      Variable overheads *                      Other *</p>	<p><i>Separate cost analyses must be provided for each of the subject products in this format. Note that the cost data should reconcile to your company's income statement.</i></p>		
<p><b>2. FIXED OVERHEAD COST:</b></p> <p>Direct labour                      Utilities *                      Repair &amp; maintenance                      Rates &amp; insurance                      R &amp; D                      Plant depreciation                      Other *</p>			
<p><b>3. TOTAL PRODUCTION COST:</b>                      4. Operating profit</p>			
<p><b>5. IN-STORE COST: (3&amp;4)</b>  <b>6. SELLING &amp; ADMINISTRATIVE EXPENSES:</b></p> <p>Administrative expenses                      - salaries &amp; wages                      - rent                      - rates &amp; insurance                      - depreciation                      - other *                      Selling expenses                      - salespersons salaries                      - advertising                      - warranties &amp; guarantees                      - warehousing                      - other *                      Other costs *</p>			
<p><b>7. TOTAL COST: (5&amp;6)</b>  <b>8. PROFIT, ETC:</b></p> <p>Subsidies                      Selling profit</p>			
<p><b>9. SELLING (LIST) PRICE (7&amp;8)</b>  <b>10. DISCOUNTS, ETC:</b></p> <p>Discounts                      Settlements discounts                      Rebates</p>			

11. <b>NET EX-FACTORY PRICE</b> (9&10)			
12. Distribution costs *			
13. <b>NET DELIVERED PRICE</b> (11&12)			

# - Supply a full Bill of materials, indicating the cost and volume of each material or component

\* - Supply a detailed breakdown of the items.

Indicate the production volume on which the above cost and price build-ups are based.

This format serves as an indication of the details required by the Commission. However, you may use your own format, provided that the required amount of detail is submitted. This information should be reconcilable to your income statements. Provide a detailed breakdown of the basis of allocation in each case that an allocation has been made.

**The cost and price build-ups should refer to the average costs for the 12-month period under investigation.**



**DEPARTMENT OF TRADE AND INDUSTRY**  
**NOTICE 178 OF 2019**  
**INTERNATIONAL TRADE ADMINISTRATION COMMISSION**  
**CUSTOMS TARIFF APPLICATIONS**  
**LIST 02/2019**

The International Trade Administration Commission (herein after referred to as ITAC or the Commission) has received the following applications concerning the Customs Tariff. Any objection to or comments on these representations should be submitted to the Chief Commissioner, ITAC, Private Bag X753, Pretoria, 0001. Attention is drawn to the fact that the rate of duty mentioned in these applications is that requested by the applicant and that the Commission may, depending on its findings, recommend a lower or higher rate of duty.

**CONFIDENTIAL INFORMATION**

*The submission of confidential information to the Commission in connection with customs tariff applications is governed by section 3 of the Tariff Investigations Regulations, which regulations can be found on ITAC's website at <http://www.itac.org.za/documents/R.397.pdf>.*

*These regulations require that if any information is considered to be confidential, then a non-confidential version of the information must be submitted, simultaneously with the confidential version. In submitting a non-confidential version the regulations are strictly applicable and require parties to indicate:*

- Each instance where confidential information has been omitted and the reasons for confidentiality;*
- A summary of the confidential information which permits other interested parties a reasonable understanding of the substance of the confidential information; and*
- In exceptional cases, where information is not susceptible to summary, reasons must be submitted to this effect.*

*This rule applies to all parties and to all correspondence with and submissions to the Commission, which unless clearly indicated to be confidential, will be made available to other interested parties.*

*The Commission will disregard any information indicated to be confidential that is not accompanied by a proper non-confidential summary or the aforementioned reasons.*

*If a party considers that any document of another party, on which that party is submitting representations, does not comply with the above rules and that such deficiency affects that party's ability to make meaningful representations, the details of the deficiency and the reasons why that party's rights are so affected must be submitted to the commission in writing forthwith (and at the latest 14 days prior to the date on which that party's submission is due).*

*Failure to do so timeously will seriously hamper the proper administration of the investigation, and such party will not be able to subsequently claim an inability to make meaningful representations on the basis of the failure of such other party to meet the requirements.*

**1. INCREASE IN THE GENERAL RATE OF CUSTOMS DUTY ON:**

*‘‘Certain aluminum plates, sheets, strips and foil products classifiable under tariff heading 76.06 and 76.07, from free of duty to WTO bound rate of 15% ad valorem’’*

**APPLICANT:**

Hulamin Operations (Pty) Ltd  
P. O. Box 74  
Pietermaritzburg  
3201

**REASONS FOR THE APPLICATION:**

**The applicant submitted, *inter alia*, the following reasons for the application:**

- Import volumes of aluminium sheet, plate and foil products into the local SACU market have increased over the past few years and have resulted in a decline in Hulamin’s domestic market share;
- The loss in market share has resulted in a negative impact on production, ability to fully utilise recent investment in strategic assets and negative financial impact on Hulamin;
- The most significant decline in sales took place in the can stock market. As a result, Hulamin is buying reduced volumes of used beverage cans in South Africa, negatively impacting on the livelihoods of over 3,000 scrap collectors; and
- Without intervention through tariff protection, the resultant loss in local market share and declining profits will require an evaluation of the business model and market offering, which may result in the impairment or downsizing of certain key machine centres of the operation. These will have negative socio-economic effects on the Pietermaritzburg region because of lower output/production.

**PUBLICATION PERIOD:**

Representation should be made within **four (4)** weeks of the date of this notice.

**Enquiries:** ITAC Ref: 16/2018, Mr. Tshepiso Sejamoholo and Ms. Diphetogo Rathete, Tel: 012 394 1605/43683 or alternatively e-mail [tsejamoholo@itac.org.za](mailto:tsejamoholo@itac.org.za)/[drathete@itac.org.za](mailto:drathete@itac.org.za).

**2. INCREASE IN THE GENERAL RATE OF CUSTOMS DUTY ON:**

*“Crystalline silicon photovoltaic modules or panels classifiable under tariff subheading 8541.40.10, by way of creating an 8-digit tariff subheading, from free of duty to 10% ad valorem.”*

**APPLICANT:****Amisec (Pty) Ltd trading as ARTsolar**

Unit 11,  
124 Escom Road,  
New Germany,  
Pinetown  
3610

**REASONS FOR THE APPLICATION:**

- Currently no protection exists for photovoltaic module manufacturers in the SACU;
- To retain the remaining local production capacity and jobs to enable the local industry to significantly grow as there are a number of foreign companies looking at investing in PV plants abroad since China’s PV industry has exceeded demand in Q1 2016;
- A number of photovoltaic module/panel manufacturers had ceased their production operations in the SACU region due to high competition from low-priced imports; and
- Unlike USA and Europe, South Africa does not have anti-dumping duties to help protect local manufacturers.

**PUBLICATION PERIOD:**

Written representations must be submitted within **four (4) weeks** of the date of this notice.

**Enquiries:** ITAC Ref: 09/2017, Enquires: Ms Diphetogo Rathete and Ms

Pateka Busika, Tel: 012 394 3683/3595 and/or alternatively e- mail: [drathete@itac.org.za/pbu](mailto:drathete@itac.org.za/pbu)  
[sika@itac.org.za](mailto:sika@itac.org.za).

**3. INCREASE IN THE GENERAL RATE OF CUSTOMS DUTY ON:**

*“Fully automatic top loader washing machines, each of a dry linen capacity not exceeding 10kg, classifiable under tariff subheading 8450.11, from free of duty to 30% ad valorem”*

**APPLICANT:**

Defy Appliances (Pty) Ltd  
P O Box 12004  
JACOBS  
4026

**REASONS FOR THE APPLICATION:**

- Defy intends to start manufacturing fully-automatic top loader washing machines and the new production lines will be fully operational in 2019;
- There is currently no customs duty applicable to fully automatic top loader washing machines that are imported. As such, Defy will not have protection once the manufacturing commences;
- The white goods industry in South Africa has been facing challenges at an operational level. These challenges include amongst others; high cost of raw material (steel), rising low-priced imports, energy and labour costs. Therefore there is a need to protect and maintain the investment and job creation; and
- The 30% tariff increase requested will serve as an incentive for other companies to invest in the manufacturing of fully-automatic washing machines in the SACU region. This would be to the benefit of the domestic industry.

**PUBLICATION PERIOD:**

Written representations must be made within **four (4) weeks** of the date of this notice.

**Enquiries:** ITAC Ref: 13/2018, Ms. Diphetogo Rathete and Mr. Pfarelo Phaswana, Tel: 012 394 3683/3628 or alternatively e-mail [drathete@itac.org.za](mailto:drathete@itac.org.za)/[pphaswana@itac.org.za](mailto:pphaswana@itac.org.za).

DEPARTMENT OF TRADE AND INDUSTRY  
NOTICE 179 OF 2019

**INTERNATIONAL TRADE ADMINISTRATION COMMISSION OF  
SOUTH AFRICA**

**GUIDELINES, RULES AND CONDITIONS PERTAINING TO CAUSTIC SODA IMPORTED IN  
TERMS OF REBATE ITEMS 306.15/2815.12/01.06 AND 306.15/2815.12/02.06 FOR THE  
EXTRACTION OF COPPER AND NICKEL CLASSIFIABLE UNDER TARIFF SUBHEADINGS  
2603.00 AND 2604.00, RESPECTIVELY**

**Note: In terms of section 26 (4) of the International Trade Administration Act, 71 of 2002, the Commission may, *inter alia*, require an applicant to provide additional information in respect of the application. The conditions attached to and the information requested below reflects the minimum requirements, which ITAC would apply to evaluate an application under this rebate provision.**

1. Applications for permits must be addressed to the International Trade Administration Commission (ITAC), Private Bag X 753, Pretoria or delivered by hand to the DTI Campus, (Block E), 77 Meintjies Street, Sunnyside, Pretoria, 0002.
2. Applications for permits must be submitted according to the requirements as set out in the attached application form. If the space provided in the application form is insufficient, please use the format of the application form to submit the requested information.
3. If all the information requested in the application form is not submitted, the application will be deemed deficient. The application will not be considered, and it will be returned to the applicant.
4. At least fourteen (14) working days should be allowed for the processing of applications and the issue of permits, provided that all necessary information which renders the application duly completed has been submitted to ITAC.
5. Each rebate permit issued defines the period during which the goods concerned can be cleared under the rebate item. The rebate permit will only be valid for a period of twelve (12) months, commencing from the date on which the permit is issued. The permit may be issued for a shorter period as requested by the applicant, or as decided upon by ITAC.
6. If an applicant intends to apply for a subsequent permit for which the period of validity should commence on the day after the expiry date of the permit issued in terms of paragraph 7, this must be clearly indicated in a new application. The application must be submitted to ITAC at least two weeks prior to the expiry date of the previous permit as permits cannot be issued with retrospective effect.
7. Rebate permits issued will be subject to the following conditions and reciprocities:
  - 7.1. The applicant must provide a formal letter on the applicant's business letter head confirming that the applicant complies with labour laws, regulations and agreements gazetted by the Minister of Labour.
  - 7.2. The applicant must submit a SARS PIN to enable ITAC to verify the Applicant's tax clearance status on the SARS Tax Clearance System. Should challenges exist in providing this information give detailed reason/s for the absence thereof. Thereafter, applicants will be requested to submit a valid tax clearance certificate.
  - 7.3. Applicant(s) must consult with the local manufacturers of caustic soda to confirm if they are able to supply a reasonable quality and quantity of caustic soda as required. The applicant can request the manufacturers to respond within 14 days of the request. Should the local manufactures of caustic soda not be able to supply the quantity requested, the applicant(s) must obtain a confirmation letter from the manufacturer stating that they are not able to supply and the reason thereof. Letters received from caustic soda manufacturers must be submitted with application form and should have a date, not older than 30 days from the date of application.

- 7.4. If the manufacturer unreasonably refuses to provide such a confirmation letter, ITAC will write a letter to the manufacturer informing them of the application and requesting them to confirm their production and production capacity. The manufacturer will then be allowed 7 days to respond to this letter. Should the manufacturer respond within the 7 day period, the information provided will be taken into account during the decision making process;
- 7.5. Should, after receipt of the manufacturers response, or in the absence of such response, information be available that reflects that the manufacturer is unable to supply the quantity of caustic soda required, ITAC will be able to issue a permit without, or despite, the required letter of confirmation by the manufacturer.
- 7.6. As a rebate provision is considered for the purpose of providing relief to domestic producers that may experience injurious import pressures against similar imported end products, the benefit of the rebate provision will be tied to conditions related to economic performance over time and may be reviewed after a specified period. Reciprocity commitments as set out in the application form must be addressed in each application submitted.
- 7.7. The applicant must commit, *inter alia*, to the creation of employment and provide in each permit the number of jobs it expects to create annually as a result of the rebate permit granted. The applicant must submit to ITAC an annual report on its job creation performance.
8. Rebate permits may not be transferred in any manner by the holder thereof to any other person, or be used to the benefit of any person, not named in the permits.
9. Permits in relation to these rebate provisions should be applied for and received before the goods concerned are shipped.
10. Any request for an amendment to a rebate permit must be forwarded to ITAC for consideration. Amendments will only be considered in the following instances:
  - a) Error by ITAC on permit;
  - b) Error by applicant regarding the product description or tariff subheading. This will only be processed if the request is accompanied by a confirmation from SARS in this regard.
11. Should any party misplace a permit, the applicant should submit an affidavit on a company letterhead endorsed by a Commissioner of Oath, stating that the permit was lost and the circumstances surrounding loss of such permit. ITAC may, on the facts furnished, exercise its discretion to issue a new permit that replaces the lost permit. Should the lost permit be found the applicant must return such permit to ITAC.
12. Extension of the validity period from which the permit is valid may be granted. Extensions will only be granted where the relevant permit has not expired, and in the view of ITAC, good cause warrants extension of such permit. Such discretion shall lie solely with ITAC. Extensions will only be permitted for a period up to 3 months and the party applying for the extension must submit a letter and supporting documents to ITAC, furnishing reasons and good cause for the extension.
13. If it is suspected that any condition of this permit is not being adequately complied with, the permit holder will upon detection of such contravention be issued with a compliance notice to show good cause and submit evidence within seven (7) days of receipt thereof, why ITAC should not make any adverse finding/s on the prima facie evidence of non-compliance with the above conditions. Thereafter the matter will be considered by ITAC and if ITAC determines that a contravention of any of these permit conditions have occurred, this permit may be varied, amended or revoked/rescinded.

Should non-compliance with any applicable legislation governing the issue of this permit be detected by ITAC, at any time, ITAC will take such non-compliance by a permit holder or related party who facilitates such conduct into account, in considering whether to revoke/rescind this permit. In terms of section 54(1)(b) of the International Trade Administration Act, Act 71 of 2002, it is an offence to fail to comply with a condition stated in this permit and any person found guilty of such an offence is liable to a fine not exceeding R500 000,00 or to imprisonment for a period not exceeding ten years or to both such fine and imprisonment.

By accepting this permit, the person/entity and its Directors and persons exercising management control over it, to which this permit is issued, irrevocably binds himself/herself/itself/ jointly and severally, to the conditions contained herein as well as any legislative requirements and/or obligations contained in the relevant guidelines, rules and conditions associated with the rebate items concerned.

## DEPARTMENT OF TRADE AND INDUSTRY

## NOTICE 180 OF 2019

STANDARDS ACT, 2008  
STANDARDS MATTERS

In terms of the Standards Act, 2008 (Act No. 8 of 2008), the Board of the South African Bureau of Standards has acted in regard to standards in the manner set out in the Schedules to this notice.

**SECTION A: DRAFTS FOR COMMENTS**

The following draft standards are hereby issued for public comments in compliance with the norm for the development of the South Africa National standards in terms of section 23(2)(a) (ii) of the Standards Act.

Draft Standard No. and Edition	Title, scope and purport	Closing Date
SANS 1843 Ed 3	<i>High performance engine lubricating oil for diesel engines (for API Service Category Cj-4). Covers one type of engine lubricating oil suitable for the crankcase lubrication of heavy duty naturally aspirated, turbo-charged or super-charged compression-ignition engines that operate under the conditions described in API Service Category CI-4.</i>	2019-05-23
SANS 11135 Ed 2	<i>Medical devices - Validation and routine control of ethylene oxide sterilization. Establishes requirements and guidance for validation and routine control of ethylene oxide sterilization processes for medical devices.</i>	2019-05-28
SATS 220002-6 Ed 1	<i>Prerequisite programmes on food safety - Part 6: Feed and animal food production. Specifies requirements for establishing, implementing and maintaining prerequisite programmes (PRPs) to assist in controlling feed safety hazards in feed and animal food and in materials intended for use in the production of feed and animal food, specifically feed safety hazard attributes that have a potential to affect animal and/or human health adversely</i>	2019-05-28

**SCHEDULE A.1: AMENDMENT OF EXISTING STANDARDS**

The following draft amendments are hereby issued for public comments in compliance with the norm for the development of the South African National Standards in terms of section 23(2)(a) (ii) of the Standards Act.

Draft Standard No. and Edition	Title	Scope of amendment	Closing Date

**SCHEDULE A.2: WITHDRAWAL OF THE SOUTH AFRICAN NATIONAL STANDARDS**

In terms of section 24(1)(C) of the Standards Act, the following published standards are issued for comments with regard to the intention by the South African Bureau of Standards to withdraw them.

Draft Standard No. and Edition	Title	Reason for withdrawal	Closing Date
SANS 373-2:2009 Ed 2	<i>Reprocessing of endoscopes Part 2: Rigid endoscopes, associated components and accessories.</i>	Rigid endoscopes should be handled like any other medical device. There should not be a standard specifically for their reprocessing. They can therefore be reprocessed in the same way as other surgical instruments.	2019-06-30

**SCHEDULE A.3: WITHDRAWAL OF INFORMATIVE AND NORMATIVE DOCUMENTS**

In terms of section 24(5) of the Standards Act, the following documents are being considered for withdrawal.

Draft Standard No. and Edition	Title	Reason for withdrawal	Closing Date

**SECTION B: ISSUING OF THE SOUTH AFRICAN NATIONAL STANDARDS****SCHEDULE B.1: NEW STANDARDS**

The following standards have been issued in terms of section 24(1)(a) of the Standards Act.

<b>Standard No. and year</b>	<b>Title, scope and purport</b>
SANS 11737-1:2019 Ed 1	<i>Sterilization of health care products. Microbiological methods. Determination of a population of microorganisms on products.</i> Specifies requirements and provides guidance on the enumeration and microbiological characterization of the population of viable microorganisms on or in a healthcare product, component, raw material or device packaging.
SANS 60838-1:2019 Ed 2	<i>Miscellaneous lampholders Part 1: General requirements and tests.</i> Applies to lampholders of miscellaneous types intended for building-in (to be used with general purpose light sources, projection lamps, floodlighting lamps and street-lighting lamps with caps as listed in Annex A) and the methods of test to be used in determining the safe use of lamps in lampholders.
SANS 62271-102:2019 Ed 2	<i>High-voltage switchgear and controlgear Part 102: Alternating current disconnectors and earthing switches.</i> Applies to alternating current disconnectors and earthing switches, designed for indoor and outdoor enclosed and open terminal installations for voltages above 1 000 V and for service frequencies up to and including 60 Hz.
SANS 1395-1:2019 Ed 2	<i>Road transport management systems Part 1: Requirements for Operators, consignors and consignees: Goods and Passengers.</i> Covers road safety (evidenced by a reduction in the number of accidents), ensuring of the roadworthiness of vehicles, optimization of loading conditions, driver wellness (fatigue, health and driver training), improvement of driver behaviour and preservation of road infrastructure.

**SCHEDULE B.2: AMENDED STANDARDS**

The following standards have been amended in terms of section 24(1)(a) of the Standards Act.

<b>Standard No. and year</b>	<b>Title, scope and purport</b>
SANS 1507-3:2019 Ed 1.3	<i>Electric cables with extruded solid dielectric insulation for fixed installations (300/500 V to 1 900/3 300 V) Part 3: PVC Distribution cables. Consolidated edition incorporating amendment No.3.</i> Amended to update general requirements and the tables on list of tests to be conducted and thickness and on insulation resistance of PVC insulation of types D1, D2, D3, D4, D5 and D6.
SABS 60320-1:2019 Ed 4.1	<i>Appliance couplers for household and similar general purposes - Part 1: General requirements. Consolidated edition incorporating amendment No.1.</i> Amended to update referenced standards, requirements on dimensions and compatibility, temperature rise, cord and anchorage, mechanical strength, resistance to heat and ageing, resistance of insulating material to heat, fire and tracking, and the annex on test schedule.
SATR 62271-306:2019 Ed 1.1	<i>High-voltage switchgear and controlgear Part 306: Guide to IEC 62271-100, IEC 62271-1 and other IEC standards related to alternating current circuit-breakers. Consolidated edition incorporating amendment No.1.</i> Amended to update referenced standards, information on classification of circuit-breakers, insulation levels and dielectric tests, transient recovery voltage, short-line faults, switching of capacitive currents, gas tightness, symmetrical and asymmetrical currents, synthetic making and breaking tests, transport, storage, installation, operation and maintenance, inductive load switching, information and technical requirements relevant for enquiries, tenders and orders, to update the annex on consideration of DC time constant of the rated short-circuit current in the application of high-voltage circuit-breakers, the annex on interruption of currents with delayed zero crossings, the annex on application of current limiting reactors, and the annex on guidance for short-circuit and switching test procedures for metal-enclosed and dead tank circuit-breakers, and to delete the annex on parallel switching.



SANS 1408:2019 Ed 2.1	<i>Mechanical components for tendon based rock support systems. Consolidated edition incorporating amendment No.1.</i> Amended to change the designation from SABS to SANS, to update referenced standards, and to update definitions.
SANS 1823 :2019 Ed 1.2	<i>Touch and close fasteners. Consolidated edition incorporating amendment No.2.</i> Amended to update the note to the scope.
SANS 5100:2019 Ed 3.1	<i>Water resistance - Water-repellency of fabrics permeable to air (Bundesmann test). Consolidated edition incorporating amendment No.1.</i> Amend to update the clause on apparatus.
SANS 10231:2019 Ed 4.2	<i>Transport of dangerous goods by road - Operational requirements. Consolidated edition incorporating amendment No.2.</i> Amended to update the table on inspection categories, intervals and requirements and applicability.

### SCHEDULE B.3: WITHDRAWN STANDARDS

In terms of section 24(1)(C) of the Standards Act, the following standards have been withdrawn.

Standard No. and year	Title

### SCHEDULE B.4: ESTABLISHMENT OF TECHNICAL COMMITTEES

In terms of section 4(2) (l) the South African Bureau of Standards has established the following technical committees:

Technical Committee No.:	Title	Scope

### SCHEDULE B.4: DISBANDMENT OF TECHNICAL COMMITTEES

In terms of section 4(2) (l) the South African Bureau of Standards has disbanded the following technical committees:

Technical Committee No.:	Title	Scope

If your organization is interested in participating in these committees, please send an e-mail to [Dsscomments@sabs.co.za](mailto:Dsscomments@sabs.co.za) for more information.

### SCHEDULE 5: ADDRESSES OF THE SOUTH AFRICAN BUREAU OF STANDARDS OFFICES

The addresses of offices of the South African Bureau of Standards where copies of the standards mentioned in this notice can be obtained, are as follows:

1. Gauteng Head Office, 1 Dr Lategan Road, Groenkloof, Private Bag X191, Pretoria 0001.
2. Western Cape Regional Office, SABS, Liesbeek Park Way, Rosebank, PO Box 615, Rondebosch 7701.
3. Eastern Cape Regional Office, SABS, 30 Kipling Road, cor. Diaz and Kipling Roads, Port Elizabeth, PO Box 3013, North End 6056.
4. KwaZulu-Natal Regional Office, SABS, 15 Garth Road, Waterfall Park, Durban, PO Box 30087, Mayville 4058.

**DEPARTMENT OF TRANSPORT****NOTICE 181 OF 2019****AIR SERVICE LICENSING ACT, 1990 (ACT NO.115 OF 1990)  
APPLICATION FOR THE GRANT OR AMENDMENT OF DOMESTIC AIR  
SERVICE LICENCE**

Pursuant to the provisions of section 15 (1) (b) of Act No. 115 of 1990 and Regulation 8 of the Domestic Air Regulations, 1991, it is hereby notified for general information that the application detail of which appear in the appendix, will be considered by the Air Service Licensing Council. Representation in accordance with section 15 (3) of the Act No.115 of 1990 in support of, or in position, an application, should reach the Air Service Licensing Council. Private Box X 193, Pretoria, 0001, within 21 days of date of the publication thereof.

**APPENDIX II**

(A) Full Name and trade name of the applicant. (B) Full business or residential address of the applicant. (C) The Class and number of license in respect of which the amendment is sought (D) Type of air service and the amendment thereto which is being applied for (E) Category of aircraft and the amendment thereto which is being applied for.

**APPENDIX I**

(A) Full name and trade name of the applicant. (B) Full business or residential address of the applicant. (C) Class of licence applied for. (D) Type of air service to which application applies. (E) Category of aircraft to which application applies.

(A) **Dinokeng Surveying (Pty) Ltd.** (B) Plot 234, Kameelfontein, Pretoria. (C) Class III, (D) Type G3, G4, G5 & G16 (RPAS). (E) Category A4, H1 & H2.

(A) **Lanseria Flight Centre (Pty) Ltd.** (B) Office Suite 25B, Terminal Building, Grand Central Airport, New Road, Midrand. (C) Class II; N833D. (D) Type N1 & N2. (E) Category A3 & A4. **Changes to the Management Plan:** Jean Kichenbrand is appointed as the Air Service Safety Officer & Security Manager & Alan Bridger as the RP: Aircraft.

(A) **S. A. Airways SOC Ltd; S. A. Airways.** (B) Airways Park, Jones Street, OR Tambo International Airport, 1627. (C) Class I, II & III; S552D, N553D & G554D. (D) Type S1, S2, N1, N2 & G2. (E) Category A1, A2 & A3. **Changes to the MP:** Mr Kiran Arun Vassen Paima is appointed as the Acting Air Service Safety Officer.

(A) **UAV Technologies (Pty) Ltd.** (B) Hanger 34N, Springs Airfield, New Era, Springs. (C) Class III; G1269. (D) Type G3, G4 & G16 (RPAS). (E) Category A4, H1 & H2. **Changes to the MP:** Reinie Guldenpfennig is appointed as the Air Service Safety Officer.

(A) **Flightshare (Pty) Ltd.** (B) Office 14 & 15, 33 New Road, Grand Central Airport, Midrand. (C) Class II & III; N1439D & G1416D. (D) Type N1, N2, G2, G3, G4, G5, G6, G7, G8, G10, G13, G14, G15 & G16 (Ship to Shore). (E) Category H1. **Addition of category H2.**

(A) **Titanoffshore (Pty) Ltd.** (B) Convair Road, General Aviation Area, Cape Town International Airport, Cape Town. (C) Class III; G795D. (D) Type G3, G10, G15 & G16 (Ship to Shore operations). (E) Category H1 & H2. **Addition of type G8 (Fire Spotting, Control & Fighting).**  
**This application for amendment has been withdrawn by the Applicant.**

(A) **Gillcor CC.** (B) Room N39, Building 33, CSIR, Meiring Naude Road, Brummeria, 0001. (C) Class III, (D) Type G3, G4 & G16 (RPAS Ops). (E) Category A4, H1 & H2. **Changes to the MP:** Stefan Wilburt Timmerman is appointed as the RP: Flight Operations, Liezel Guba as the Quality Assurance Manager & Jean Jonck as the Security Manager.

**This application for amendment has been withdrawn by the Applicant.**

**DEPARTMENT OF TRANSPORT****NOTICE 182 OF 2019****INTERNATIONAL AIR SERVICE ACT, (ACT NO.60 OF 1993)  
GRANT /AMENDMENT OF INTERNATIONAL AIR SERVICE LICENSE**

Pursuant to the provisions of section 17 (12) of Act No.60 of 1993 and Regulation 15 (1) and 15 (2) of the International Air Regulations,1994, it is hereby notified for general information that the applications, detail of which appear in the Schedules hereto, will be considered by the International Air Services Council (Council) representation in accordance with section 16(3) of the Act No. 60 of 1993 and regulation 25(1) of International Air Services Regulation, 1994, against or in favour of an application, should reach the Chairman of the International Air Services Council at Department of Transport, Private Bag X 193, Pretoria, 0001, within 28 days of the application hereof. It must be stated whether the party or parties making such representation is / are prepared to be represent or represented at the possible hearing of the application.

**APPENDIX II**

(A) Full name, surname and trade name of the applicant. (B) Full business or residential address of the applicant. (C) Class of licence applied for. (D) Type of International Air Service to which application pertains. (E) Category or kind of aircraft to which application pertains. (F) Airport from and the airport to which flights will be undertaken. (G) Area to be served. (H) Frequency of flight.

**(A) Air Ambulance Health Services (Pty) Ltd; Air Ambulance Health Services. (B) Hanger 1, Gate 11, Airport Road, Bram Fischer Airport, Bloemfontein. (C) Class II; I/N404. (D) Type N1 & N2. (E) Category A3. Addition of category H1 & H2.**

**(A) S. A. Airways SOC Ltd; S. A. Airways. (B) Airways Park, Jones Street, OR Tambo International Airport, 1627. (C) Class I & II; I/S094 & I/N095. (D) Type S1, S2, N1, N2, N3 & N4. (E) Category A1 & A2. (F) OR Tambo International Airport, Cape Town International Airport & King Shaka International Airport. Changes to the MP: Mr Kiran Arun Vassen Paima is appointed as the Acting Air Service Safety Officer**

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**BOARD NOTICES • RAADSKENNISGEWINGS**

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**BOARD NOTICE 34 OF 2019****THE SOUTH AFRICAN PHARMACY COUNCIL****GOOD PHARMACY EDUCATION STANDARDS**

The South African Pharmacy Council intends to publish the Good Pharmacy Education Standards (Occupational Qualification Sub-Framework) in terms of Section 34 of the Pharmacy Act, 53 of 1974, read together with the *Regulations relating to pharmacy education and training* (GNR 1156, published on 20 November 2000).

Interested persons are invited to submit, within 60 days of publication of this notice, substantiated comments or representations on the qualifications and scopes of practice to the Registrar, The South African Pharmacy Council, Private Bag X40040, Arcadia, 0007, or Fax 0865063010 or email: [BN@sapc.za.org](mailto:BN@sapc.za.org) (for the attention of the Senior Manager: Legal Services and Professional Conduct).

**SCHEDULE**

(a) Good Pharmacy Education Standards: Occupational Qualification Sub-Framework.

In this notice "the Act" shall mean the Pharmacy Act, 53 of 1974 (as amended), and any expression to which a meaning has been assigned in the Act shall bear such meaning.

**TA Masango  
REGISTRAR**

Address: 591 Belvedere Street, Arcadia, Pretoria, 0083, Private Bag X40040, Arcadia, 0007. Telephone: 0861 7272 00. Facsimile 012-321 1479/92

To obtain the full content of this Board Notice please visit the 'Proposed Legislation' section on the South African Pharmacy Council's website:

[https://www.pharmcouncil.co.za/Legislation\\_Proposed](https://www.pharmcouncil.co.za/Legislation_Proposed)

**BOARD NOTICE 35 OF 2019****SOUTH AFRICAN PHARMACY COUNCIL****RULES RELATING TO THE SERVICES FOR WHICH A PHARMACIST MAY LEVY A FEE AND GUIDELINES FOR LEVYING SUCH A FEE OR FEES**

The South African Pharmacy Council herewith publishes *Rules relating to the services for which a pharmacist may levy a fee and guidelines for levying such fee or fees*, in terms of sections 35A (b)(iii) and 49(4) of the Pharmacy Act, 1974 (Act 53 of 1974) as amended, which rules shall replace the existing Rules relating to the services for which a pharmacist may levy a fee and guidelines for levying such fee or fees, as published under Board Notice 193 on 20 December 2010. These rules must be read in conjunction with the *Rules relating to Good Pharmacy Practice* (GPP) as published by the South African Pharmacy Council.

As amended by

BN 33, in GG 35095 of 2 March 2012

BN 432, in GG 40812 of 6 June 2017

**SCHEDULE****Services for which a pharmacist may levy a fee or fees**

1. A pharmacist may levy a fee or fees for one or more of the services that may be provided in the various categories of pharmacies as prescribed in the *Regulations relating to the practice of pharmacy* (GNR.1158 of 20 November 2000), subject to the guidelines for levying such a fee as approved by the Council from time to time.
2. A pharmacist who wishes to levy a fee or fees for the services referred to in **Annexure B** must comply with the provisions of these rules.
3. Services for which a pharmacist wishes to levy a fee or fees must be provided in accordance with Regulation 20 of the *Regulations relating to the practice of pharmacy* (GNR.1158 of 20 November 2000).
4. Council may add services for which a fee or fees may be levied as listed in **Annexure B** to the Schedule from time to time. The fee that may be charged for such a service may be based on a fee for a comparable service or procedure appearing in Annexure B.
5. A pharmacist must ensure, when a service for which he or she wishes to levy a fee or fees involves the supply of medicine, whether supplied on a prescription or not, that the patient for whom such medicine is supplied is furnished with adequate advice or information for the safe and effective use of the medicine(s) supplied by him or her, whether such medicine(s) is supplied personally (face-to-face) or by any other means.
6. Services for which a pharmacist may levy a fee or fees may not be advertised in any manner that –
  - (a) is not factually correct;
  - (b) is misleading;
  - (c) harms the dignity or honour of the pharmacy profession;
  - (d) disparages another pharmacist;
  - (e) is calculated to suggest that his or her professional skill or ability or his or her facilities or that of the pharmacy owner, as the case may be, for practising his or her profession or rendering the service(s) concerned are superior to those of other pharmacists.

7. A pharmacist may not tout or attempt to tout for services for which he or she wishes to levy a fee or fees.
8. A pharmacist may not levy a fee or fees for a service for which he or she is not trained or for which prior authorisation from the Council is required before he or she may provide such service(s) until such authorisation is obtained. Acceptable documentary evidence of training, experience or competence, must be provided if and when required by the Council, which could include but shall not be limited to-
  - (a) the successful completion of further education and training at a provider accredited by a competent authority; or
  - (b) practical experience gained under controlled circumstances and the mentorship of a competent person or authority; or
  - (c) the successful completion of continuing professional development (CPD) courses offered by a provider accredited by a competent authority.
9. A pharmacist may provide any one or more of the services referred to in **Annexure B** without levying a fee or fees.
10. A pharmacist who wishes to levy a fee or fees for the services referred to in **Annexure B** must inform patients regarding the fee to be levied prior to providing any of the services listed in the schedule.
11. A pharmacist who wishes to levy a fee or fees for the services referred to in **Annexure B** must display a list of services and fees conspicuously in the pharmacy.
12. A pharmacist who wishes to levy a fee or fees for the services referred to in **Annexure B** must indicate clearly on the invoice and/or receipt provided, the service for which a fee is levied and the amount of the fee per service.

#### **Guidelines for the levying of a fee or fees**

13. The guidelines published herewith as **Annexure A** shall constitute the only guidelines for levying a fee or fees for any one or more of the services referred to in **Annexure B**.



**TA Masango**  
**REGISTRAR**

Address: 591 Belvedere Street. Arcadia. Pretoria. 0083. Private Bag X40040. Arcadia. 0007.  
Telephone: 0861 7272 00. Facsimile 012-321 1479/92

**ANNEXURE A****GUIDELINES FOR LEVYING A FEE OR FEES****General guidelines governing the determination of a fee or fees****1. Definitions**

“**Compounding**” means to the preparing, mixing, combining, packaging and labelling of a medicine for dispensing as a result of a prescription for an individual patient by a pharmacist or a person authorised in terms of Medicines and Related Substances Act, 101 of 1965.

“**Dispensing**” means the interpretation and evaluation of a prescription, the selection, manipulation or compounding of the medicine, the labelling and supply of the medicine in an appropriate container according to the Medicines Act and the provision of information and instructions by a pharmacist to ensure the safe and effective use of medicine by the patient and “dispense” has a corresponding meaning.

“**Therapeutic medicine monitoring**” means the use of serum medicine concentrations, the mathematical relationship between a medicine dosage regimen and resulting serum concentrations (pharmacokinetics), and the relationship of medicine concentrations at the site of action to pharmacological response (pharmacodynamics) to optimise medicine therapy in individual patients taking into consideration the clinical status of the patient.

**2. Nature of services provided**

A pharmacist may, in charging a fee for professional services rendered by him/her take into account one or more of the following factors –

- (a) the nature of the professional service rendered;
- (b) the time of day and circumstances under which the service is rendered.

**3. Call out service, delivery of medicines and after-hour fees**

- (a) Where a pharmacist is called out from his/her pharmacy, or the pharmacy in which he/she practises, or from his or her residence or other place where he or she may be, a fee including the travelling time and costs according the South African Revenue Services (SARS) travelling reimbursement table as published from time to time, may be charged.
- (b) Where a pharmacist is required to deliver a service after normal operating hours, an after-hours fee may be charged. The recommended fee is one and a half times the normal fee for a specific procedure code. The hours of opening of a pharmacy must be clearly displayed.
- (c) Where a pharmacist is required by the patient or caregiver to transport a medicine to a patient, the transport costs according the South Africa Revenue Services (SARS) travelling reimbursement table as published from time to time may be charged.
- (d) Where a pharmacist is reclaiming expenses, details of the expenses must be individually itemised.

**4. Collaboration with other health care professionals**

Services may be provided in collaboration with a registered nurse or other registered health care professional as agreed to by the Council and other statutory health councils as applicable.

## 5. A pharmacist's guide to fees

### 5.1 Procedures

5.1.1 Services for which a fee or fees may be levied shall be divided into procedures as indicated in **Annexure B**. A separate fee shall be charged for each procedure.

5.1.2. The fee per procedure shall be based on a procedure code as listed in **Annexure B**.

5.1.3 The fee for after-hours and/or call-out services must be levied separately as per clause 3 using the designated procedure codes as listed in **Annexure B**.

5.1.4 The fees will be reviewed on an annual basis.

5.1.5 All expenses claimed must be indicated separately.

### 6. Pharmacy support personnel

The fee or fees may be levied by a pharmacist whether the service concerned is provided by the pharmacist, any other person registered in terms of the Pharmacy Act or a healthcare professional employed in the pharmacy: Provided that any such person may only provide a service or perform an act which falls within his or her scope of practice.

### 7. Chronic Medicines Authorisation

A fee may be levied by a pharmacist where he/she needs to liaise with a medical scheme, an entity concerned with the management of pharmaceutical benefits and/or a medical practitioner to initiate or renew a chronic medicine authorisation or update a chronic medicine authorisation.

### 8. Guidelines for charging fees where one or more service may be provided

The following examples are provided as guidelines:

	Scenario	Fees that may be levied for services provided	Procedure Codes
i.	A patient presents a prescription for dispensing to the pharmacist which requires the compounding of a product.	A professional fee for compounding plus the fee for dispensing may be levied.	Procedure codes 0002 and 0001
ii.	A patient presents a prescription for dispensing to the pharmacist which includes the preparation of a sterile product.	A professional fee for preparation of a sterile product plus the fee for dispensing may be levied.	Procedure codes 0003 and 0001
iii.	A patient presents a prescription for dispensing to the pharmacist which includes the preparation of an intravenous admixture or parenteral solution.	A professional fee for the preparation of an intravenous admixture or parenteral solution plus the fee for dispensing may be levied.	Procedure codes 0004 and 0001
iv.	A patient presents a prescription for dispensing to the pharmacist which includes the preparation of a total parenteral nutrition product	A professional fee for preparation of a total parenteral nutrition product plus the fee for dispensing may be levied.	Procedure codes 0005 and 0001
v.	A patient presents a prescription for dispensing to the pharmacist which includes a cytotoxic preparation.	A professional fee for cytotoxic preparation plus the fee for dispensing may be levied.	Procedure codes 0006 and 0001
vi.	A patient requests information regarding the use of medicine dispensed by another entity authorised to dispense medicines.	A professional fee for provision of information concerning the medicines may be levied.	Procedure code 0008
vii.	A patient presents him/herself to the pharmacist with a prescription for dispensing and requests blood glucose monitoring.	A professional fee for blood glucose monitoring plus the fee for dispensing may be levied.	Procedure codes 0012 and 0001
viii.	A patient presents him/herself to the pharmacist with a prescription for dispensing and requests blood cholesterol and/or triglyceride monitoring.	A professional fee for blood cholesterol and/or triglyceride monitoring plus the fee for dispensing may be levied.	Procedure codes 0013 and 0001
ix.	A patient presents him/herself to the pharmacist with a prescription for dispensing and requests blood pressure monitoring.	A professional fee for blood pressure monitoring plus the dispensing fee may be levied.	Procedure codes 0015 and 0001



	<b>Scenario</b>	<b>Fees that may be levied for services provided</b>	<b>Procedure Codes</b>
x.	A patient presents him/herself to the pharmacist with a prescription for dispensing and requests a peak flow measurement.	A professional fee for peak flow measurement plus the fee for dispensing may be levied.	Procedure codes 0019 and 0001
xi.	A patient requests immunisation.	A professional fee for administration of immunisation plus the fee for dispensing may be levied.	Procedure codes 0022 and 0001
xii.	A patient requests that the medicine on a prescription dispensed in the pharmacy be delivered to a given address.	A delivery fee plus the fee for dispensing may be levied.	Procedure codes 0025 and 0001
xiii.	The pharmacist is called to the pharmacy after hours to dispense a prescription.	A fee for a call out service plus the fee for dispensing may be levied.	Procedure codes 0024 and 0001
xiv.	A patient presents herself to the pharmacist for emergency post coital contraception (EPC).	A professional fee for EPC plus the fee for pharmacist initiated therapy may be levied.	Procedure codes 0027 and 0001
xv.	A patient presents him/herself for pharmacist initiated therapy.	A professional fee for pharmacist initiated therapy plus the fee for dispensing may be levied.	Procedure codes 0028 and 0001

## ANNEXURE B

Procedure Code	Procedure	Performed by	Reference	Categories of pharmacies in which services may be provided	Time in Minutes	Fee (VAT exclusive) (Rands)	Fee (VAT inclusive) (Rands)
	<b>DISPENSING PROCEDURES</b>						
0001(a)	Independent evaluation of a prescription with regard to appropriateness of items prescribed for the individual, legality, content and correctness. It includes evaluating the dosage, safety of the medicine, interactions with other medicines used by the patient, pharmaceutical and pharmacological incompatibilities, treatment duplications and possible allergies to the medicine prescribed.	Pharmacist	GPP manual Sections: Facilities: 1.2.1 through 1.2.13, 1.3 (institutional pharmacies), 1.4 (mobile pharmacies)	Community and Public or Private Institutional	1	Refer to <i>Regulations relating to a transparent pricing system for medicines and scheduled substances: Amendment (Dispensing fee for pharmacists)</i> , GNR 1090, published on 19 November 2010 published in terms of the Medicines and Related Substances Act (Act 101 of 1965)	
0001(b)	Preparation of the medicine(s) as per a prescription, which includes the picking, packaging, labelling of medicine, checking of expiry dates and keeping of appropriate dispensing records in compliance with the Medicines and Related Substances Act, Act 101 of 1965, as amended.	Pharmacist	Dispensing service: 2.7.1, 2.7.2, 2.7.3, 2.7.4, Standards for patient information and advice: 2.8 and 2.7.5(b)	Community and Public or Private Institutional	3		
0001(c)	Handing of medicines to the patient/caregiver, including the provision of advice/instructions and a patient information leaflet/written material regarding the safe and efficacious use of the medicine dispensed.	Pharmacist		Community and Public or Private Institutional	1		
0002	Compounding of an extemporaneous preparation for a specific patient. It refers to the compounding of any non-sterile pharmaceutical product prepared as a single preparation for a patient (a new product is manufactured) including the necessary documentation.	Pharmacist	GPP manual 2.18	Community and Public or Private Institutional	10	178,96	205,80
0003	Preparation of a sterile product including the preparation of the documentation, equipment, and the area for the preparation of sterile products.	Pharmacist	GPP manual 1.2, 2.4, 2.10, 2.17	Community and Public or Private Institutional	14	344,21	395,85
0004	Preparation of an intravenous admixture or parenteral solution, including the preparation of the documentation, equipment, the area for the preparation of the sterile products and the quality control of the final product.	Pharmacist	GPP manual 2.4, 2.10, 2.17.1	Public or Private Institutional	6	161,85	186,13

Procedure Code	Procedure	Performed by	Reference	Categories of pharmacies in which services may be provided	Time in Minutes	Fee (VAT exclusive) (Rands)	Fee (VAT inclusive) (Rands)
0005	Preparation of a total parenteral nutrition preparation (TPN), including the preparation of the documentation, equipment, the area for the preparation of the sterile products and the quality control of the final product.	Pharmacist	GPP manual 2.10, 2.17.2, 2.18	Public or Private Institutional	13	341,59	392,82
0006	Preparation of cancer chemotherapy for intravenous, intramuscular or intrathecal administration, including the preparation of the documentation, equipment, the area for the preparation of the sterile products, the admixing and reconstitution thereof for dispensing in a large/small volume parenteral, or a syringe for a specific patient.	Pharmacist	GPP manual 2.4, 2.10, 2.17.3,	Public or Private Institutional	17	441,32	507,52
<b>CLINICAL PHARMACY</b>							
0007	Performance of a consultation to establish the pharmacokinetic dosing of a medicine and perform therapeutic medicine monitoring. This includes the review of the data collected, the necessary calculations, review and the formulation of recommendations and the necessary consultation with the prescriber.	Pharmacist registered as a specialist in pharmacokinetics	GPP Manual 2.11.3	Consultant, Public or Private Institutional	18	495,58	569,92
0008	Provision of information concerning a particular patient's condition or medicine following evaluation by the pharmacist in a situation where no dispensing activity occurs.	Pharmacist	GPP manual 2.8	Community or Consultant or Private or Public Institutional	4	71,68	82,43
0009	The application of pharmaceutical expertise to help maximise medicine efficacy and minimise medicine toxicity in individual patients by contributing to the care of the individual patient through the provision of medicine information and assisting in problem solving in the ward environment for individual patients, where no dispensing activity occurs.	Pharmacist	GPP manual 2.11	Private or Public Institutional	3	60,89	70,02

Procedure Code	Procedure	Performed by	Reference	Categories of pharmacies in which services may be provided	Time in Minutes	Fee (VAT exclusive) (Rands)	Fee (VAT inclusive) (Rands)
0010	PCDT: A face-to-face consultation with a patient where a pharmacist personally takes down a patient's history, performs an appropriate health examination including observations, and plans appropriate interventions/treatment, which may include referral to another health care professional.	Pharmacist who has completed supplementary training in PCDT and registered such course with Council and who is the holder of a permit issued in terms of Section 22A(15) (or its predecessor) of the Medicines Act	GPP Manual section 2.12	Community	8	215,50	247,82
0011	Medicine use review: Reviewing of the patient's overall medication requirements, as requested by the patient or the patient's health care professional, to ensure the effective use of medicine in response to a diagnosis made by another health care professional in order to maximise therapeutic outcomes. It involves analysing the patient's medication record to assess the appropriateness and/or cost effectiveness of treatment to ensure rational medicine use, and to identify possible interactions and adverse drug reactions. It also involves developing a plan of action in collaboration with other health care professionals and the patient. It may involve a consultation with the patient. Full records must be kept in accordance with the GPP standard	Pharmacist	GPP manual 2.25	Community or Consultant or Private or Public Institutional	4	108,36	124,62
<b>PROMOTION OF PUBLIC HEALTH SCREENING AND TESTING OF BIOLOGICAL AND PHYSICAL PARAMETERS.</b>							
0012	Blood glucose	Pharmacist	GPP Manual 2.13.7	Community and Public or Private Institutional	4	81,39	93,59
0013	Blood cholesterol and/or triglycerides	Pharmacist	GPP Manual 2.13.6	Community and Public or Private Institutional	7	132,87	152,80
0014	Urine analysis	Pharmacist	GPP Manual 2. 13.9	Community and Public or Private Institutional	7	121,47	139,69

Procedure Code	Procedure	Performed by	Reference	Categories of pharmacies in which services may be provided	Time in Minutes	Fee (VAT exclusive) (Rands)	Fee (VAT inclusive) (Rands)
0015	Blood pressure monitoring	Pharmacist	GPP Manual 2.13.3	Community and Public or Private Institutional	4	72,14	82,97
0016	HIV and AIDS pre-test counselling	Pharmacist	GPP Manual 2.13.5	Community and Public or Private Institutional	24	576,82	663,34
0017	HIV and AIDS testing and post-test counselling	Pharmacist	GPP Manual 2.13.5	Community and Public or Private Institutional	17	410,95	472,59
0018	Pregnancy screening	Pharmacist	GPP Manual 2.13.8	Community and Public or Private Institutional	7	129,33	148,73
0019	Peak Flow measurement	Pharmacist	GPP Manual 2.13.4	Community and Public or Private Institutional	4	64,89	74,63
0020	Reproductive health service	Pharmacist	GPP Manual 2.15	Community and Public or Private Institutional	5	114,23	131,36
0021	Administration of an intra-muscular or sub-cutaneous injection.	Pharmacist	GPP Manual 2.15	Community and Public or Private Institutional	4	78,93	90,77
0022	Administration of immunisation.	Pharmacist	GPP Manual 2.14	Community and Public or Private Institutional	5	88,79	102,10
<b>REIMBURSABLE EXPENSE CODES</b>							
0023	Chronic medicine authorisation assistance: A fee may be levied by a pharmacist where she/he needs to liaise with a medical scheme / PBM and or doctor to initiate or renew a chronic medicine authorisation or update a chronic medicine authorisation where there has been a dosage or other prescription change, which may include completion of application forms.	Pharmacist		Community and Public or Private Institutional			
0024	Call Out: Where a pharmacist is called out from his/her pharmacy, or the pharmacy in which he/she practises, or from his or her residence or other place where he or she may be, a fee including the travelling time and costs according the South African Revenue Services (SARS) travelling reimbursement table as published from time to time, may be charged.	Pharmacist	GPP manual 4.2.3.2 and 4.3.6	Community and Public or Private Institutional			
0025	Delivery of medicine: Where it is necessary, at the request of a patient or the patient's agent and by agreement with the patient or his or her agent, for		GPP manual 2.7.5	Community and Public or Private Institutional			

Procedure Code	Procedure	Performed by	Reference	Categories of pharmacies in which services may be provided	Time in Minutes	Fee (VAT exclusive) (Rands)	Fee (VAT inclusive) (Rands)
	medicine to be transported to a place requested by the patient or his or her agent, the costs involved in that transportation can be charged back to the patient as a reimbursable expense. The travelling cost per kilometre must be based on the SARS rate.						
0026	After-hours service: where a pharmacist is required to deliver a service after normal operating hours, an after-hours fee may be charged. The recommended fee is one and a half times the normal fee.		GPP manual 4.2.3.2 and 4.3.6	Community and Public or Private Institutional			
<b>ADDITIONAL DISPENSING PROCEDURES</b>							
0027	Emergency post-coital contraception (EPC)	Pharmacist	GPP manual 2.26	Community and Public or Private Institutional	3.	60,11	69,13
0028	Pharmacist Initiated Therapy (PIT)	Pharmacist	GPP manual	Community and Public or Private Institutional	3	56,88	65,41

# **WARNING!!!**

## **To all suppliers and potential suppliers of goods to the Government Printing Works**

The Government Printing Works would like to warn members of the public against an organised syndicate(s) scamming unsuspecting members of the public and claiming to act on behalf of the Government Printing Works.

One of the ways in which the syndicate operates is by requesting quotations for various goods and services on a quotation form with the logo of the Government Printing Works. Once the official order is placed the syndicate requesting upfront payment before delivery will take place. Once the upfront payment is done the syndicate do not deliver the goods and service provider then expect payment from Government Printing Works.

Government Printing Works condemns such illegal activities and encourages service providers to confirm the legitimacy of purchase orders with GPW SCM, prior to processing and delivery of goods.

To confirm the legitimacy of purchase orders, please contact:

Anna-Marie du Toit (012) 748-6292 ([Anna-Marie.DuToit@gpw.gov.za](mailto:Anna-Marie.DuToit@gpw.gov.za)) and

Siraj Rizvi (012) 748-6380 ([Siraj.Rizvi@gpw.gov.za](mailto:Siraj.Rizvi@gpw.gov.za))

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