INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA

NOTICE 580 OF 2021

HEREBY ISSUES A NOTICE REGARDING THE INQUIRY FOR THE IMPLEMENTATION OF THE RADIO FREQUENCY MIGRATION PLAN AND THE IMT ROAD MAP IN TERMS OF SECTION 4B OF THE INDEPENDENT COMMUNICATIONS AUTHORITY OF SOUTH AFRICA ACT, 2000 (ACT NO. 13 OF 2000)

1. The Independent Communications Authority of South Africa ("the Authority") hereby publishes a notice on **the inquiry for the implementation of the Radio Frequency Migration Plan and of the International Mobile Telecommunications (IMT) Roadmap ("the Inquiry")** for consultation in terms of section 4B of the Independent Communications Authority of South Africa Act, 2000 (Act No. 13 of 2000).

2. The purpose of this Inquiry is to determine the current use and usage of the frequency bands as mandated by the Radio Frequency Migration Regulations 2013 in order to develop an implementation plan regarding the Radio Frequency Migration Plans, IMT Roadmap and the frequencies identified for migration during the development of the National Radio Frequency Plan of 2018, as well as the implementation plan thereof, through the development

and amendment of new and existing the Radio Frequency Assignment Plans to achieve global harmonisation of Standards and Systems.

3. Interested persons are hereby invited to submit written representations on a **signed PDF version**, including an electronic version of the representation in **Microsoft Word**, of their views on the Inquiry. Submissions must be made no later than 16h00 on Friday 03 December 2021.

4. Stakeholders are hereby advised that they may submit questions for clarity to the Authority by 15 October 2021.

5. The Authority will respond to all clarity seeking questions and publishing a briefing note on its website by the 01 November 2021.

6. Representations in terms of this notice, must respond to the questions using the attached template. The notice together with the Microsoft Word version of the questionnaire can also be obtained on the ICASA website.

7. Written representations or enquiries may be directed to:

The Independent Communications Authority of South Africa,
Dr Ivy Matsepe-Casaburri Building,
350 Witch-Hazel Avenue, Eco Point Office Park
Eco Park, Centurion
South Africa

Private Bag X10,
Highveld Park 0169
Centurion, Pretoria

Attention:

Mr. Manyaapelo Richard Makgotlho
e-mail : rmakgotlho@icasa.org.za
cc : jdikgale@icasa.org.za

8. All written non-confidential representations submitted to the Authority pursuant to this notice shall be made available for inspection by interested persons from 07 December 2021 on ICASA`s website and Library. Copies of such representations and documents can be obtainable on payment of a fee.

9. The notice regarding the inquiry, briefing note and representations will be uploaded on the ICASA website using this link: https://www.icasa.org.za/legislation-and-regulations/radio-frequency-spectrum-plans/draft-radio-frequency-spectrum-plans.

10. Where persons making representations require that their representation or part thereof be treated as confidential, then an application in terms of section 4D of the ICASA Act, 2000 (Act No. 13 of 2000) must be lodged with the Authority. Such an application must be submitted simultaneously with the representation on the inquiry. In addition, all confidential material must be pasted onto a separate annexure which is clearly marked as "Confidential". If, however, the request for confidentiality is not granted, the person making the request will be allowed to withdraw the representation or document in question.

11. The guidelines for confidentiality requests are contained in Government Gazette Number 41839 (Notice 849 of 2018).

DR KEABETSWE MODIMOENG
CHAIRPERSON
DATE: 30 / 9 / 2021

Inquiry regarding the implementation the of the Radio Frequency Migration Plan and the International Mobile Telecommunications (IMT) Roadmap for public consultation

October 2021

INTRODUCTION

1. The Authority is developing the revised radio frequency migration and assignment plans for IMT frequency bands and other Radiocommunications frequency bands to ensure that sufficient radio frequency spectrum is available for broadband and other services in the short term (within the next 3-5 years).

2. The Authority considers that there are two key aspects to this process:

2.1. A broad range of radio frequency bands that might be considered for migration and radio frequency spectrum assignment plans *(category 1 bands)*, and

2.2. A set of 14 IMT bands and 8 other radiocommunications bands for closer study *(category 2 bands)*. The Authority is considering assignment of the first set of 14 bands to IMT. The Authority is considering migrating current users in these 14 IMT bands into the other 8 radiocommunications bands or may consider applications that facilitate access to Broadband Service in the latter bands.

3. Questions on each of these two categories of bands are set out in the next sections.

CATEGORY 1 BANDS

4. The main objective of the category 1 bands is to identify priority IMT and other Radiocommunications frequency bands. Stakeholders are requested to consider the frequency bands below and the questions at the top of each column.

5. Stakeholders are requested to provide comments at the bottom of each response to the table indicating whether alternative frequency bands ought to be considered in respect of category 1 bands.

6. Stakeholders are further requested, in respect of category 1 bands, to provide any other information that might assist the Authority to rank the various frequency bands, in respect of information acquired on the impact of the

frequency band on your businesses, on consumers, or on the economy more broadly.

7. IMT frequency category 1 bands for comment are:

No	Band	Q1: Rate[1] the importance of this band to your business.	Q2: Does your firm use this band? (Yes/No)	Q3: If yes to Q2, what does your firm use this band for?	Q4: Does your firm have plans to use this band in the future?	Q5: If your firm uses this band or plans to use it, what is the value (in annual revenues) of the use of this band for your application?	Q6: If yes to Q2, what would be the impact if you had to vacate this band?	Q7: Additional comments and if yes to Q2, how many sites in total have you deployed for this band and how many sites per province?
1.	450 – 455 & 455 – 456 & 456 – 459 & 459 – 460 & 460 - 470 MHz							
2.	617 – 652 MHz paired with 663 - 698 MHz							
3.	694 - 790 MHz							

[1] 1 = Not relevant to my organisation; 2 = Minor relevance but not commercially relevant to my organisation; 3 = Some relevance commercially to my organisation; 4 = Reasonably commercially relevant to my organisation; 5 = Critical commercial relevance to my organisation

4.	733 – 758 MHz (700MHz Guard frequency bands)							
5.	790 - 862 MHz							
6.	862 - 890 MHz (including 862-876 MHz)							
7.	890 - 942 MHz							
8.	942 - 960 MHz							
9.	1350 - 1375 MHz paired with 1492 - 1518 MHz							
10.	1375 – 1400 MHz paired with 1427 – 1452 MHz							
11.	1452 - 1492 MHz							
12.	1492 - 1518 MHz							
13.	1880 - 1900 MHz (1880 - 1920 MHz +1885 - 1980 MHz)							

14.	1980 - 2010 / 2170-2200 MHz + 2010-2025 MHz							
15.	2010-2025 MHz Planned for IMT							
16.	2025 – 2110 paired with 2200 - 2285 MHz							
17.	2300 - 2400 MHz							
18.	2500 - 2690 MHz							
19.	3300 - 3400 MHz							
20.	3400 - 3600 MHz							
21.	3600 - 3800 MHz							
22.	3800 - 4200 MHz							
23.	4800 - 4990 MHz							
24.	24.25 - 27.5 GHz							

25.	37 - 43.5 GHz (including 38-39.5 GHz for HAPS)							
26.	45.5-47 GHz							
27.	47.2 - 48.2 GHz (identified for IMT in Region 2 and another 69 countries from Regions 1 and 3)							
28.	66 - 71 GHz							

8. The category 1 frequency bands for other Radiocommunications Services to be commented on are:

No	Band	Q1: Rate[2] the importance of this band to your business	Q2: Does your firm use this band (Yes/No)	Q3: If yes to Q2, what does your firm use this band for?	Q4: Does your firm have plans to use this band in the future?	Q5: If your firm uses this band or plans to use it, what is the value (in annual revenues) of the use of this band for your application?	Q6: If yes to Q2, what would be the impact if you had to vacate this band?	Q7: Additional comments and if yes to Q2, how many sites in total have you deployed for this band and how many sites per province?
29.	75.2 - 87.5 MHz							
30.	138 - 144 MHz							
31.	150.05 - 153 MHz							
32.	156.4875 - 156.5625 MHz							

[2] 1 = Not relevant to my organisation; 2 = Minor relevance but not commercially relevant to my organisation; 3 = Some relevance commercially to my organisation; 4 = Reasonably commercially relevant to my organisation; 5 = Critical commercial relevance to my organisation

33.	156.875 - 174 MHz							
34.	174 - 223 MHz							
35.	214 - 230 MHz T-DAB							
36.	223 - 230 & 230 - 238 MHz							
37.	238 - 267 MHz							
38.	335.4 - 380 MHz							
39.	380 - 387 & 387 - 390 & 390 - 399.9 MHz							
40.	410 - 420 & 420 - 430 MHz							
41.	440 - 450 MHz							

42.	470 - 493 MHz							
43.	825 to 830 MHz and 870 to 875 MHz							
44.	1518 - 1525 MHz							
45.	1525 - 1530 & 1530 - 1535 & 1535 - 1559 MHz							
46.	1668 - 1675MHz							
47.	2290 - 2300 MHz							
48.	5470 - 5725 MHz							
49.	5725 - 5850 MHz							
50.	5850 - 5925 MHz							
51.	5925 - 6425 MHz							
52	6425 – 7025 MHz							

	(or 7125 MHz)							
53.	10700 - 11700 MHz							
54.	15400 - 15700 MHz							
55.	57 - 66 GHz							
56.	71-76 GHz and 81- 86 GHz							

9. Are there any other IMT or other Radiocommunications frequency bands which have not been covered above that you feel need to be considered? Please detail these frequency bands and why they need to be considered.

CATEGORY 2 BANDS

10. The following is a list of the 22 category 2 radio frequency bands:

10.1. This first list concerns bands that ***may be*** considered for IMT services, with the current users migrating to alternative bands:

No	**Band**
1	450 – 455 & 455 – 456 & 456 – 459 & 459 – 460 & 460 - 470 MHz
2	1452 - 1492 MHz
3	1492 – 1518 MHz
4	2300 - 2400 MHz
5	3300 - 3400 MHz
6	3600 - 3800 MHz
7	3800 – 4200 MHz
8	24.25 – 27.5 GHz
9	1980-2010 / 2170-2200 MHz + 2010-2025 MHz
10	738 – 758 MHz
11	4800 – 4990 MHz
12	37 - 43.5 GHz
13	45.5 - 47 GHz
14	47.2 - 48.2 GHz

10.2. This second list concerns other radiocommunications frequency bands that may be considered for services that facilitate access to broadband services or bands to which users in the first (IMT) list might migrate into:

No	**Band**
1	66 – 71 GHz
2	71 - 76 GHz and 81 - 86 GHz
3	57 - 66 GHz
4	5925 - 6425 MHz
5	380 - 387 & 387 - 390 & 390 - 399.9 MHz
6	1518 - 1525 MHz
7	27.5-29.5 GHz (28 GHz)
8	75.2-87.5 MHz

10.3. Are there any other IMT or other Radiocommunications frequency bands which have not been included in the tables above that you feel need to be considered? For this band(s) please also provide answers to question below.

11. In respect of each of the category 2 bands, provide any information on the feasibility of changes in usage of these bands, in the following respects:

11.1. Proposed applications and potential users that might be assigned spectrum in the band.

11.2. Regulatory considerations, including an explanation as to how the use of the band for the proposed application helps achieve the objectives set out in Section 2 of the ECA and meets the requirements set out in section 30 and Section 34 of the ECA.

11.3. Economic costs and benefits of migration (please provide any information or research that your firm has available and any relevant underlying data):

11.3.1. Annual revenues earned for services in the current and proposed applications in South Africa,

11.3.2. Annual costs (including operating costs, depreciation, etc.) of providing the services for the current and proposed applications in South Africa,

11.3.3. Fixed investment costs of the current and proposed applications. This includes the costs of the assets deployed to offer the current and proposed services,

11.3.4. Consumer economic benefits of the current and proposed applications including using any measures of consumer surplus (the difference between consumer willingness to pay for the current and proposed applications, and the prices to consumers of the current and proposed applications),

11.3.5. Estimates of elasticities of demand for the current and proposed applications (estimates of consumer price sensitivity),

11.3.6. Estimates of the impact of the current and proposed applications on economic variables such as gross domestic product, employment, inflation, and export competitiveness in South Africa,

11.3.7. Supplier (licensee) economic benefits of the current and proposed applications including using any measures of producer surplus. Producer surplus means the economic profits, i.e., revenues less all costs, after taking into account the costs of capital, to the current and proposed users. The costs of capital may apply the firm’s weighted average cost of capital to the value of the assets and working capital used to provide the service,

11.3.8. Costs incurred by current users to migrate to alternative bands (if any), indicating to which bands the current users might migrate. Such costs might include:

11.3.8.1. Investments to mitigate against mobile interference, such as protective site engineering measures or commercial arrangements with mobile operators,

11.3.8.2. Costs associated with contract changes, such as price changes relating to different satellite frequencies for example, or costs arising from outsourcing services currently delivered in-house, or loss of business,

11.3.8.3. Retuning or other adaptions to equipment in South Africa and elsewhere, potentially also affecting uplink operations in cases of fixed frequency pairings,

11.3.8.4. Equipment related costs such as purchasing and installing new equipment suitable for use with different frequencies, and loss of current equipment still within its expected working life, and

11.3.8.5. Relocation costs.

11.4 Technical feasibility of migration, including:

11.4.1 Relevant regional and international best practices for migration in South Africa,

11.4.2 Coexistence analysis, including coordination requirements to avoid potential interference with neighbouring bands, etc.

11.4.3 Maturity of the ecosystem,

11.4.4 International benchmark studies, and

11.4.5 Likely timelines for the migration.