

Prasar Bharati  
(India's Public Service Broadcaster)  
Prasar Bharati Secretariat  
Prasar Bharati House, Copernicus Marg  
New Delhi – 110 001

**Subject: Comments over Minutes of the first meeting of Working Group (WG) 1  
(of 1GHz) of NFAP 2022 Review/Revision -reg.**

Reference: WPC wing DoT email dt 23.07.2024 with letter dt. 23.07.2024

This has reference to WPC communication dated 23.07.2024 conveying Minutes of the meeting of Working Group (WG) 1 (of 1GHz) of NFAP 2022 held on 09.07.2024 (copy enclosed).

As per para 2 of the minutes, amendments in NFAP-2022 would be taking into account the decisions and outcomes of WRC-23, national requirements and technological advancements. The inputs from the stakeholders regarding specific allocations or footnotes in NFAP will be deliberated and considered.

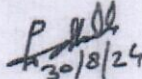
WPC wing of DoT has requested for comments of Prasar Bharati in respect of the various input along with necessary justification in the desired format.

The comments of Prasar Bharati (Doordarshan) in the matter w.r.t. National Frequency Allocation Plan (NFAP) in prescribed format are enclosed herewith.

Ministry of I&B is requested to kindly endorse the comments to WPC for consideration in course of revision of NFAP2022.

This issues with the approval of CEO Prasar Bharati.

Encl.: as above

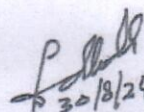
  
30/8/24  
D.C. Shukla  
DDG(Tech.)

Min.of I&B {By Name:Shri Shiv Ram Meena US (BP&L),Shastri Bhawan, N.Delhi  
Prasar Bharati ID No. 13(1)NFAP/2024/E-VII Dated 30.08.2024

Copy to:

1. Min.of I&B {By Name:Shri Heeraman Ram, US (BD&BFin),Shastri Bhawan, N.Delhi
2. PPS to CEO Prasar Bharati
- ✓ 3. Shri Preetam Singh, Engineer (WPC wing), DoT, Sanchar Bhawan, New Delhi
4. ADG(Innovation) PB/ ADG(Tech. and P&D DD) / ADG(HQ) DD
5. DDG (SMS ) AIR/DDG(SM) DD/DE(SM)DD

Prasar Bharati/ Doordarshan Contribution for updating National Frequency Allocation Table-2022 (upto1 GHz band)		
1	Name of Individual/Organization etc	Prasar Bharati/ Doordarshan
2	Address	Copernicus Marg, Mandi House, New Delhi
3	Mail ID	rajeev00kumar@prasarbharati.gov.in
4	Phone/Mobile no.	9868366232
5(a)	Nature of business	National Public Broadcaster
5 (b)	Type of Organization (Pvt. industry, Association, academia, PSU, government departments etc.)	Government
6	Frequency band (kHz/MHz)	470-526-582 MHz
7	Applications of service	Broadcasting Service
8	Minimum & Maximum power with unit	-
9	Purpose	Please refer enclosed Annexure
10 (a)	Countries in which similar applications are used along with web link (if known)	Almost all the countries in the world have allocated and utilized his frequency band only for Broadcasting Service
10 (b)	Provisions in frequency allocation table along with footnote of the country along with web link (if known)	5.296A,
11	Radio Regulations provisions (if known)	5.296A
12	Type of Radio communication service	TV Broadcasting
13	Combatale Wireless Standard for the device likely to work in the proposed band (ETSI, 3GPP, IEEE, EC, FCC, TEC etc or any proprietary standard)	2nd Generation Terrestrial TV Broadcasting Standard
14	Benefit for public	Please refer enclosed Annexure
15	If modification in NFAP-2022 footnote then quote relevant footnote no. of NFAP-22	IND-16
16	Remarks	Please refer enclosed Annexure for detailed reason and justification for Modification of IND-16

  
 30/8/24  
 Date & Signature

**Subject: Prasar Bharati (Doordarshan) Input on Revision of India Footnote IND-16 in NFAP-2022**

Broadcasting serves an important social function, and consequently many countries have established public service broadcasters as a matter of public policy. Public Service Broadcasters have following basic objective:

- To provide impartial news and information to help people understand and engage with the world around them;
- To support learning for people of all ages;
- To show the most creative, highest quality and distinctive output and services;
- To reflect, represent and serve the diverse communities of the country; and
- To reflect the National culture and values to the world.

**1. Background**

- i. The UHF band 470-698 MHz is primarily Broadcasting band for terrestrial TV broadcasting across world. In India, This is limited to 646 MHz due to allocation of 646-698 MHz for Defence Band. This band is being used by Doordarshan in India by deploying analog and digital terrestrial transmitters.
- ii. Roadmap for further expansion of Digital terrestrial broadcasting is being developed consequent to recent MoU signed between Prasar Bharati and IIT Kanpur. Several DTT Transmitters may be required to be installed in this band to provide pan-India Digital Terrestrial broadcasting. The quantum of spectrum required for DTT services will primarily depend on appropriate DTT architecture (MFN/SFN/Hybrid) to be used for the future DTT expansion as well as number of DTT Transmitters to be included in the DTT multiplex to be planned at different locations in the service area.
- iii. Availability of spectrum for terrestrial TV broadcasting has already been constrained by:
  - a. Two segment of TV broadcasting bands, namely, VHF Band-I (54-68 MHz) and UHF 646-698 MHz have been allocated for Defence Band.
  - b. The frequency band 470-520 MHz band is also being used by Defence for some strategic usage.
  - c. Identifying part of broadcasting band, i.e., 700MHz band (698-804 MHz) for IMT services.
- iv. Availability of spectrum is very crucial for planning DD TV Transmitters. It is appropriate to mention that DD had planned the transmitters of Uri, and Himbotingla in the lower spectrum band, i.e., under 526 MHz applied accordingly for DL, but WPC has allocated frequencies in upper bands for these transmitters on account of unavailability of spectrum in the lower band due to strategic usage.
- v. Thus, the availability of Frequency Band 470-582 for Terrestrial TV Broadcasting need to be continued.

## 2. Current position in NFAP-2022:

ITU Radio Regulation-2020 have footnote 5.296A to facilitate conditional allocation/use of part of UHF broadcast spectrum to IMT application by certain specified countries only. This footnote was added based on decision taken during WRC-15 (Based on above studies) and little modification in WRC-19 and reproduced below for reference:

*5.296A In Micronesia, the Solomon Islands, Tuvalu and Vanuatu, the frequency band 470-698 MHz, or portions thereof, and in Bangladesh, Maldives and New Zealand, the frequency band 610-698 MHz, or portions thereof, are identified for use by these administrations wishing to implement International Mobile Telecommunications (IMT) – see Resolution 224 (Rev.WRC-19). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. The mobile allocation in this frequency band shall not be used for IMT systems unless subject to agreement obtained under No. 9.21 and shall not cause harmful interference to, or claim protection from, the broadcasting service of neighboring countries. Nos. 5.43 and 5.43A apply. (WRC-19)*

India had approached WRC-15 with a proposal to identify the band 610-698 MHz band for IMT application but could not get the approval from WRC-15 due to objection from neighboring countries. India's name was not included in this footnote 5.296A.

In spite of that, DoT identified part of 470-698 MHz for IMT in the NFAP-22 under India Footnote IND16:

**IND 16** The following frequency bands, or parts thereof, have been identified for implementation of International Mobile Telecommunications (IMT):

**Note 1:** New assignments to the broadcasting service may not be made in 470-582 MHz range. The frequency range 526-582 MHz may be used for mobile service/IMT in coordination with the broadcasting service.

**Note 2:** The frequency range 582-617 MHz may be used primarily by mobile service/IMT and rural point to point links.

**Note 3:** The frequency range 617-698 MHz may be used for IMT except that certain point to point links, subject to population being less, may be protected initially at few locations. Such sporadic non-IMT users shall vacate the band in near future.

PB/DD raised the matter at all possible platform to retain at least 470-582MHz band for broadcasting services. It was also submitted that ITU Radio Regulation does not allow to use any part of 470-698 MHz Broadcasting Spectrum for IMT in India.

## 3. Proposal for Revision/Modification in NFAP-2022:

- i. India once again approached WRC-23 to include India name in the footnote 5.296A, inspite of objections from MIB/PB/DD. This time also, WRC-23 did not

agree to include the India name in the footnote 5.296A. The current footnote is iterated below:

*5.296A In Micronesia, the Solomon Islands, Tuvalu and Vanuatu, the frequency band 470-698 MHz, or portions thereof, and in Bangladesh, Lao P.D.R., Maldives, New Zealand and Viet Nam, the frequency band 610-698 MHz, or portions thereof, are identified for use by these administrations wishing to implement International Mobile Telecommunications (IMT) – see Resolution 224 (Rev.WRC-23). This identification does not preclude the use of these frequency bands by any application of the services to which they are allocated and does not establish priority in the Radio Regulations. The mobile allocation in this frequency band shall not be used for IMT systems unless subject to agreement obtained under No. 9.21 and shall not cause harmful interference to, or claim protection from, the broadcasting service of neighboring countries. Nos. 5.43 and 5.43A apply. (WRC-23)*

Therefore, ITU Radio Regulation does not allow to use any part of 470-698 MHz Broadcasting Spectrum for IMT in India.

- ii. Further, TRAI in its recommendation on "Auction of Spectrum in frequency bands identified for IMT/5G" dated 11.04.2022 has stated that it is not feasible to use 526-612 MHz band for IMT:

*a) Considering the facts that presently (i) band plan(s) for the frequency range 526-612 MHz is yet to be defined by 3GPP/ITU, (ii) development of ecosystem for IMT in 526-612 MHz frequency range will take some time and (iii) MIB is using 526-582 MHz band extensively across the country for TV transmitters; the 526-612 MHz frequency range should not be put to auction in the forthcoming auction.*

- iii. In a recent communications {Ref DoT letter no 12-11/2024/IR dt 18.07.2024}, DoT, Ministry of Communication has emphasized the fact in following words:

*"2 (ii) Complete Block out of satellite based broadcasting is easily possible with simple high power transmissions aimed towards our satellites providing broadcasting services from the territory of neighbouring countries. The same is not possible with terrestrial based broadcasting because to completely block out, a high power transmitter/ source need to be installed within India."*

and advised following:

*"3(ii) "to establish alternate terrestrial mode of broadcasting facility for strategic reasons."*

- iv. During the meeting of Working Group-1 on 07.08.2024, IMT industry expressed that 612 MHz and above frequency may need to be harmonized for IMT to match the International practices.

In view of the points mentioned above, it is proposed to retain frequency band 470-582 MHz exclusively for Broadcasting Services in India. Following changes are requested to be made in the NFAP-2022:

**i. Remove frequency band 470-582 MHz from the list of identified IMT bands under footnote IND16;**

**ii. Also to Delete Note-1 under IND16.**

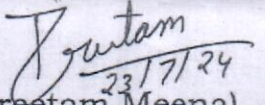
Immediate

Government of India  
Ministry of Communication  
Department of Telecommunications  
Wireless Planning & Coordination Wing

**Dated: 23.07.2024**

**Subject: Minutes of the first meeting of Working Group (WG) 1 (upto 1 GHz) of NFAP - 2022 Review/ Revision**

Kindly refer to the first meeting of **Working Group (WG) 1 (upto 1 GHz) of NFAP - 2022 Review/ Revision** Committee which was held under the chairmanship of Shri.Viresh Goel, Jt. Wireless Advisor to the Govt. of India on 09.07.2024 and find enclosed the minutes of the meeting for reference and further necessary action please.

  
23/7/24

(Preetam Meena)

Engineer (WPC Wing)

Tel No. 9868049160

Encl: As above

To,

1. All stakeholders
2. Sr.DWA (ISR), WPC wing for information pls.
3. Director (IT), DoT, Sanchar Bhawan with a request to upload in DoT website.

1320950/2024/Spectrum Management Section - DG DD  
Government of India  
Ministry of Communications  
Department of Telecommunications  
Wireless Planning & Coordination Wing

Dated: 23.07.2024

**Subject: Minutes of the 1st meeting of Working Group (WG) 1 (upto 1 GHz) of NFAP - 2022-Review/ Revision**

First meeting of Working Group-1 of NFAP Review/ Revision Committee was held in virtual mode on 09th July 2024 during 1130 -1230 hours, under the chairmanship of Sh. Viresh Goel, Joint Wireless Adviser to the Govt. of India. Stakeholders from Government as well as private organization including startups, academia participated in the meeting. Agenda of the meeting is enclosed as **Annexure-I**.

2. The meeting started with a welcome note and introductory remarks by the Chairman. Chairman of Working Group-1 provided brief of the responsibilities assigned to this working group. He also briefed about the discussions held in the recently held NFAP review committee is meeting for better clarity and ease of processing of the input contributions. It was informed that amendments in NFAP-2022 would be taking into account the decisions and outcomes of WRC)-23, national requirements and technological advancements. The inputs from the stakeholders regarding specific allocations or footnotes in NFAP will be deliberated and considered however, specific inputs related to the delicensing of frequency bands is not within the scope of the WG-1.

3. After that participants were requested to introduce themselves. The meeting had very diverse participation from Industry, Academia, representatives from WPC Wing, DoT and various other government organizations such as JCES, MIB, Airport Authority of India etc. and list of participants is enclosed as **Annexure- II**.

4. An overview of the decisions taken at WRC-2023 was presented by Sh. Vishal Singh Yadav, Deputy Director. It was pointed out that WRC-2023 has considered various Agenda Items (AIs) during its meeting held



In November- December 2023 out of which decisions taken in respect of 06 AIs (AI 1.4, 1.5, 1.7, 1.8, 1.11 and 1.12) are relevant for WG-1. A brief of these 06 AIs was provided to apprise the participants of the outcomes. The format for receiving input contributions from various stakeholders (**enclosed in Annexure-III**) was also discussed.

5. Four (04) no. of contributions were received from three (03) stakeholders on this subject prior to this meeting, which were presented by the concerned stakeholders. The input contributions received are placed at website <https://dot.gov.in/spectrum> in "NFAP-2025".

6. The contributions were introduced and presented by the respective stakeholders.

6.1 M/s Susan Future Technologies Private Limited representative introduced their first contribution on identification of complete band 698-960 MHz for High Altitude Platform Station as IMT Base Station (HIBS) in accordance with the RESOLUTION 213 (WRC-23).

6.2 M/s Susan Future Technologies Private Limited representative introduced second contribution on setting up a pan-India integrated Broadband PPDR (BB-PPDR) Communication Network in the frequency band 814-824/859-869 MHz (Paired). Some of the stakeholders commented upon regarding a portion of the band is used by PMRTS; requirements of PPDR etc.

6.3 M/s Tata Communications limited representative presented their contribution regarding frequency band 918-922 MHz for LPWAN requirement may be made available. During the discussions, it was informed that delicensing related issues may not be under the purview of WG-1 and the proponent may approach the WPC Wing in this respect.

6.4 M/s Shure Audio Technologies Private Limited representative presented a contribution for Frequency band 470-694 MHz for Programme Making and Special Events (PMSE) applications. It was also informed that the contribution is not for delicensing of the band but for identification of the band for PMSE.

7. Subsequently, it was also discussed that channelling Plan in VHF or other frequency bands, as applicable, shall be included in revised NFAP. In this regard Chairman WG-1 informed that as per discussions in the meeting chaired by Wireless Adviser, Channelling Plan in respective bands may be included in the upcoming NFAP. In addition, the Chairman requested the stakeholders to submit the Channelling plans for deliberations in the subsequent meetings.

8. In the end Chairman, WG-1 requested stakeholders to provide their written comments, counter-comments in respect of the various input along with necessary justification, so that they may be discussed during subsequent meetings. Stakeholders were again invited to provide contributions.

9. The meeting ended with the vote of thanks to the Chairman.

Enclosure: Annexure-I, II, III