

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

6th Floor, Sanchar Bhawan,
20, Ashoka Road, New Delhi 110001

Subject: Minutes of 4th meeting of Working Group-2 (1 to 6 GHz) of NFAP review/ revision

Kindly find enclosed the Minutes of Meeting of the 4th meeting of Working Group-2 (1 to 6 GHz) of NFAP review/ revision committee held on 30.12.2024 under the chairmanship of Sh. N K Bhola, Director(A), Wireless Monitoring Organization for reference and further action please.

Enclosure: As above.

(Davender Singh Rawat)
Engineer, WPC Wing

To,

1. All Stakeholders
2. Sr. DWA (ISR) – for information
3. Director (IT) – for uploading in DoT website

Minutes of 4th meeting of Working Group-2 (1 to 6 GHz) of NFAP review/ revision

Fourth meeting of Working Group-2 (WG-2) to review/ revise National Frequency Allocation Plan (NFAP) 2022 under the chairmanship of Sh. N K Bhola, Director(A), Wireless Monitoring Organization was held on 30.12.2024 in hybrid mode at Sanchar Bhawan, New Delhi. Stakeholders from various Government Departments, Telecom Service Providers, Manufacturers, Academia, Associations etc. participated in the meeting. List of participants is enclosed at **Annexure-I**.

2. In his opening address, the Chairman welcomed all participants and briefed the participants that this fourth meeting is conclusive meeting for the finalization of India Footnotes.

3. The suggestions received w.r.t. MoM of 3rd WG-2 meeting were deliberated in this meeting. The outcome of deliberations in the form of **Proposed IND Footnotes** along with WG-2 comments is placed at **Annexure-II**. All concerned stakeholders are requested to provide their comments on **Proposed IND Footnotes** latest by **04.01.2025**.

4. The meeting concluded with thanks to the Chair and all the participants/ stakeholders.

Place: New Delhi

Date: 30.12.2024

List of Participants

S. No.	Name	Organization
1	V J Christopher	WA, WPC Wing
2	N K Bhola	Director, WMO
3	Munesh Kumar	JWA, RLO
4	Umang Srivastava	Sr. DWA, WPC Wing
5	Khagendra Singh	DWA, RLO-NER
6	R K Nagaich	DD, WMO
7	Sachin Kumar	WPC Wing
8	M S N Kashyap	AWA, WPC/ WMO
9	Preetam Meena	WPC Wing
10	Davender Singh Rawat	WPC Wing
11	Yogesh Nandwani	WMO
12	Anurag Gupta	C-DoT
13	A S Yadav	AAI
14	Umesh Kumar	AAI
15	Maj Rajev Dwivedi	JCES
16	Harish	IIT Kanpur
17	Sarvendranath	IIT Tirupati
18	Divya Oberoi	GMRT, NCRA-TIFR
19	Bharat Bhatia	IAFI
20	Anil Tandan	DG, BIF
21	H S Srihari	DD, DCPW
22	Anuran Bhowmik	SeMT Tripura
23	Deepak Arya	Tata Communications Ltd. (TCL)
24	Dileep Lakhera	Airtel
25	Kshem Kapoor	COAI
26	Punit Rathod	Qualcomm
27	Jitendra Singh	Qualcomm
28	Sagarika Khtua	SMPS Electric
29	Dr. Sendil Kumar	Ericsson
30	Suresh Kumar Karthikeyan	Susan Future Technologies
31	Suresh Warriier	Elena Geo
32	Swati Rawat	RJIO
33	Bhanu	
34	C G Ramarao	
35	Krishna	
36	Pankaj Ghosh	
37	Poonam Arora	
38	Raunak Mishra	

Proposed IND footnotes

IND footnote No.	Existing text in NFAP 2022	WG-2 comments and Proposed IND text
IND 13	The facility use for radio astronomy service at Pune needs to be protected from any radio emissions which may fall within the frequency bands allocated to radio astronomy service. In addition to bands listed in No. 5.149, the facility may also be protected to the extent feasible in the frequency bands below 1500 MHz – especially in the ranges 68-74.8 MHz, 585-608 MHz, and 614-890 MHz bands.	<p>Comments: GMRT facility being a highly sensitive radio astronomy facility, be protected from harmful emissions in the vicinity. However, need for coordinated frequency assignments near GMRT is not considered necessary.</p> <p>MOD IND 13: The radio astronomy facility centered near the village of Khodad in Pune district at the location given by Lat: N19°05'26.31", Long: E74°02'59.65” and spread out over a radius of 30 Km needs to be protected from any radio emissions. In addition to bands listed in RR No. 5.149, the facility may also be protected to the extent feasible in the frequency bands between 50 MHz and 1500 MHz.</p>
IND 16		<p>Comments:</p> <ol style="list-style-type: none"> 1. Inclusion of HIBS as a new technology within IMT bands should be included in NFAP. 2. Merging of frequency ranges earmarked for IMT usage may be accepted. <p>MOD IND 16: See IND 16</p>
IND 27	Subject to ensuring protection to Aeronautical radionavigation service and Radio location service, the band 2700-2900 MHz may also be used for Microwave Multipoint Distribution System (MMDS), including broadband applications. International recognition for such purpose is not affordable	<p>Comments: The frequency band is exclusively allocated for radionavigation. Proponent could not establish international precedence for use of this band for FWA. Further consensus could not be achieved, and modification was opposed by AAI and strategic users. Hence, deletion of IND 27 is proposed as suggested by AAI.</p>

		DEL IND 27: Subject to ensuring protection to Aeronautical radionavigation service and Radio location service, the band 2700-2900 MHz may also be used for Microwave Multipoint Distribution System (MMDS), including broadband applications. International recognition for such purpose is not affordable
IND 28 A (new note)	--	<p>Comments: Stakeholder has proposed usage of FWA PTP application with higher EIRP in 5150-5250 MHz & 5725-5875 MHz band.</p> <p>Any change in parameters of delicensed band is not in scope of the Working Group. Hence, addition of new footnote is not feasible at this stage.</p> <p>No modification</p>
IND 29	Subject to not constraining the use of the frequency band 5 875 to 5 925 MHz by the services to which it has been allocated in the RR, the band may also be considered for V2X technologies/Intelligent Transport Systems.	<p>Comments: V2X/ITS constitutes all the existing technologies and is a broader term.</p> <p>MOD IND 29: The frequency band 5 875 to 5 925 MHz may be used for V2X/ITS under the mobile service, while not causing harmful interference to existing usage under co primary services allocated in the RR.</p>

Revised table for IND 16 (1 to 6 GHz)

S. No.	Bands	Relevant RR footnotes
1	1 427-1 518 MHz	5.341C, 5.346A
2	1 710-2 025 MHz	5.384A, 5.388, 5.388A
3	2 025-2 200 MHz	5.388, 5.388A
4	2 300-2 450 MHz	5.384A
5	2 500-2 690 MHz	5.384A
6	3 300-3 400 MHz	5.429F, Notes below
7	3 400-3 500 MHz	5.432B, 5.433A, Notes below
8	3 500-3 600 MHz	5.432B, 5.433A
9	3 600-3 670 MHz	Notes below

No modifications in the IND 16 Notes relating to 1 to 6 GHz.