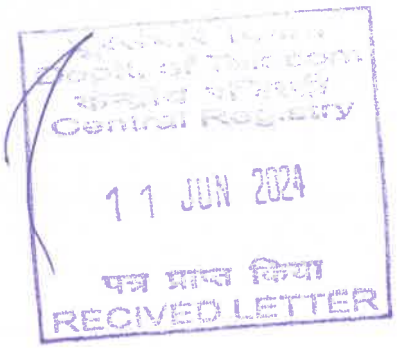
TATA



06 June 2024

Shri Viresh Goel
Joint Wireless Adviser and Chairman WG-1
Wireless Planning Coordination Wing, 6th Floor
Department of Telecommunications
Ministry of Communications
Sanchar Bhawan,20, Ashoka Road
New Delhi – 110001

Subject: Tata Communications Ltd comments / inputs for Frequency bands up to 1 GHz (inclusive) under Working Group-1 (WG-01) constituted for review/ revise NFAP 2022

Dear Sir,

This is with reference to the WPC office Memorandum No. T-11012/03/2024-ISR dated 14-03-2024 and 01-05-2024 regarding constitution of various working groups under the committee formed to review and revise National Frequency Allocation Plan (NFAP) -2022.

In this regard, please find attached Tata Communication Limited's application inputs / comments for frequency band up to 1 GHz for your perusal as Annexure.

We request you to kindly consider our inputs while finalizing WG-1 recommendations to review / revise NFAP 2022 and would be happy to provide any additional information, if required.

With kind regards

Alka Selot Asthana
Vice President and Head – Regulatory Affairs
Tata Communications Limited
+919871010884, Alka.asthana@tatacommunications.com

Encl: As above

Annexure

Proforma for Inputs / Comments (for frequency bands up to 1 GHz Band): 918 MHz to 922 MHz band, for updating National Frequency Allocation Table – 2022		
SOURCE DETAILS		
1	Name of the Organization	Tata Communications Ltd.
2	Correspondence Address	VSB Bangla Sahib Road, New Delhi – 110 001
3	Name and Designation of Authorised Signatory	Ms. Alka Selot Asthana, Vice President and Head Regulatory
4	Email Address of Signatory	alka.asthana@tatacommunications.com
5	Phone / Mobile No. of Signatory	+91 9871010884
6	Nature of Business / Category of Organization	Telecom Services & ICT Services / Service Provider

Technical Details

1	Frequency band (GHz)	**918 MHz to 922 MHz**
2	Applications in the frequency band	The ISM band 865 to 867 MHz is utilized by various applications leading to high interference. Therefore, there is immense need for extended requirement of 1 MHz (up to 868 MHz) for LPWAN requirement. Further, there is also a need for additional requirement of 2-3 MHz spectrum within frequency range of 918-922 MHz band for LPWAN & low power short range communications considering evolving Ecosystem for IoT & M2M Services. Some of the present use cases are as follows: 1. LPWA network for Smart Street lighting, worker safety, agriculture, and industrial automation, Asset tracking systems for logistics and supply chain management, 2. RFID (Radio Frequency Identification) systems for tracking and inventory management. 3. Wireless sensor networks for environmental monitoring. 4. Remote control systems for home automation, industrial machinery, and automotive applications. 5. Telemetry and data transmission in utilities such as smart metering and infrastructure monitoring. 6. Wireless medical devices for patient monitoring and healthcare applications. 7. Industrial process control and monitoring systems. These IoT applications leverage the ISM band's characteristics, such as its global availability, minimal regulatory constraints, and suitability for low-power, short-range communication.
3	Minimum and Maximum transmit power with unit (dBm/Watts)	Ranging from 25mW (14 DBm) to 1W (30DBm) per Radio Unit depending upon indoor or outdoor area deployment with Adaptive power control.
4	Channel Bandwidth	Minimum supported Channel Bandwidth 125 KHz and Maximum up to 1.4 MHz
5	Duty Cycle	≤ 10 % duty cycle for network access points. ≤ 1 % duty cycle for all end devices
6	Purpose	The present allocation of 865-867 MHz is already being used by many services/users hence need additional requirement of 1 MHz to serve the end users efficiently.

		There is considerable ecosystem developing in 915-935 MHz bands for low power license exempt devices. Therefore, it is requested that the portion of this band as suggested above should also be made delicensed in India also in line with global trends. This will help in a faster adoption of IoT and M2M services in the country. Moreover, it will give an opportunity for Indian manufacturers to compete in the global market in this segment.
7	Countries in Which Similar applications are used along with web link (If known)	US, Australia, Japan, Singapore

8	Combatable Wireless Standards for the device likely to work in the proposed band (ETSI, 3GPP, IEEE, EC, FCC, TEC etc. or any proprietary standard)	LPWA network

PROPOSAL DETAILS		
1	Frequency band (MHz/GHz)	918 MHz to 922 MHz
2	Required modifications in NFAP 2022	Extended requirement of 1 MHz (868 MHz) for LPWAN requirement. Additional requirement of 2-3MHz Band within frequency range of 918-922 MHz band for LPWAN & low power short range communications
3	Suggested text for IND footnote	**NA**
4	Remarks, if any	**NA**

Seal/ Signature of Authorized Signatory:
Place: New Delhi