

**Questionnaire  
on  
Long-term vision for the upper 6 GHz band**

**PART B**

Questions directed to the stakeholders providing incumbent services in the upper 6 GHz band, such as:

- Fixed service
- Fixed satellite service
- Radio astronomy service
- SST (Sea Surface Temperature) sensors
- UWB

**Deadline for responses:** 20 August 2024 at 12:00 (noon) CEST

**To be submitted to:** [cnect-RPSG@ec.europa.eu](mailto:cnect-RPSG@ec.europa.eu)

**Please limit your answers to maximum 2-3 pages and favour responding through associations as far as possible.**

- I) Explain impact of possible future usage of the upper 6GHz for MFCN and/or WAS/RLAN on existing services:
- 1) What are your current and future spectrum needs (before and beyond 2030) in the upper 6GHz band?
  - 2) What impact on your service do you expect from the introduction of MFCN and/or WAS/RLAN in the upper 6GHz band?
  - 3) What measures could improve compatibility from your perspective?

## **EUMETNET's response to the questionnaire**

EUMETNET is a European network of 33 National Meteorological Services established to foster cooperation in various areas of meteorology. It provides a framework for organising joint programmes among its members that support their fundamental activities by providing collective observing systems, data exchange and processing capabilities, basic forecasting products, research and development, professional training support, and effective exchange of knowledge and experiences. At the core of our members' mission is monitoring and forecasting weather and climate, which relies heavily on data obtained exploiting different radio-frequency bands, including the upper 6GHz band.

### **1) What are your current and future spectrum needs (before and beyond 2030) in the upper 6GHz band?**

The frequency ranges 6425–7075 and 7075–7250 MHz are unique for EESS (passive) measurements since they correspond to the peak sensitivity to sea-surface temperature (SST). Thus, passive remote sensing measurements of SST are currently predominantly performed in the 6425–7075 and 7075–7250 MHz ranges.

SST, together with ocean salinity, is one of the drivers of ocean circulation, which is key for any numerical weather prediction or numerical ocean prediction model. Given its importance to weather prediction, measurements in this frequency band are used by EUMETNET members as a key input to our numerical weather prediction models.

The ITU's Radio Regulations RR 5.458 notes that bands 6425–7075 MHz and 7075–7250 MHz are used for passive microwave sensor measurements for Earth-exploration satellite and space research and that Administrations should bear these needs in mind in future planning.

### **2) What impact on your service do you expect from the introduction of MFCN and/or WAS/RLAN in the upper 6GHz band?**

EUMETNET members expect the introduction of MFCN and/or WAS/RLAN in the upper 6 GHz band to have a negative impact on our current usage of this frequency band.

This expectation is based on the results of studies in the *Working document towards a preliminary draft of the new ITU-R Report RS. [EESS(passive)6–7 GHz]* ([https://www.itu.int/dms\\_ties/itu-r/md/23/wp7c/c/R23-WP7C-C-0041!N07!MSW-E.docx](https://www.itu.int/dms_ties/itu-r/md/23/wp7c/c/R23-WP7C-C-0041!N07!MSW-E.docx)), which demonstrates that SST measurements would be severely constrained by the high-density deployment of communication systems (e.g. MFCN or RLAN) in this range.

### **3) What measures could improve compatibility from your perspective?**

EUMETNET members support studies being undertaken until WRC-27 Agenda Item 1.19 to consider new primary EESS (passive) allocations in the 4.2–4.4 GHz and 8.4–8.5 GHz frequency bands in which SST measurements can also be performed. Measurements in these frequency bands could be used to complement continued measurements in the 6 GHz band and mitigate the impact of RFI on these measurements.