

Dear Sir, Madam,

**Purpose : Response to the call for comments on the Draft RSPG Report on 6G Strategic vision**

Aerospacelab, a Belgian satellite manufacturer and operator, with eight remote sensing satellites currently in orbit, appreciates the European Union's and the Radio Spectrum Policy Group's (RSPG) proactive efforts to develop 6G technology and their commitment to fostering innovation and economic growth. Nonetheless, we would like to respectfully urge caution and careful planning to ensure the development of 6G does not unintentionally compromise other radio frequency services that are essential for societal well-being, environmental monitoring, and national security.

Remote sensing satellites provide critical data used for climate monitoring, disaster response, and defense applications. These satellites downlink sensitive signals from hundreds of kilometers away, often operating with weak power levels that make them particularly susceptible to harmful interference. The preservation of clear and interference-free spectrum access is vital for these essential services to continue benefiting Europe and the global community.

At the International Telecommunication Union level, spectrum is allocated to remote sensing activities under the Earth Exploration Satellite Service (EESS). For data downlink, the following frequency bands are used:

- The S-band (2200-2290 MHz) faces significant congestion and only allows limited bandwidth
- The X-band (8025-8400 MHz) serves as the primary band for current remote sensing data downlink
- The Ka-band (25.5-27 GHz) has become increasingly attractive due to its larger bandwidth, which allows the transmission of greater volumes of data.

The identification of the frequency band 24.25-27.5 GHz for International Mobile Telecommunication at the World Radiocommunications Conference of 2019 and the Commission Implementing Decision (EU) 2019/784, which requires Member States to make available this same band for terrestrial wireless broadband systems, has already pushed some Member State to limit the possibility to deploy EESS earth stations in the Ka-band. There is a legitimate concern that future expansion of 6G into other EESS bands, particularly the X-band, could further erode access to these essential frequencies. Such developments could severely compromise the ability to receive critical data from Earth observation satellites.

We therefore urge the RSPG to refrain from advising the allocation of the X-band for 6G development, as doing so risks creating significant interference with Earth observation satellite operations. Protecting these frequencies is imperative to ensure uninterrupted access to vital data.

Spectrum being a scarce resource, we encourage finding alternative solutions to opening new frequency bands for 6G, through a reasonable and efficient use of spectrum, such as the reuse of spectrum from previous generation of mobile technologies.

In conclusion, while we recognize the transformative potential of 6G, we must underscore the importance of preserving access to critical spectrum for other radio frequency users through a sustainable approach to spectrum management. The data provided by remote sensing satellites supports Europe's leadership in climate action, disaster preparedness, and security.

Thank you for opening the draft Report on 6G Strategic vision for comments and for considering our perspective. Aerospacelab remains available to provide additional information or participate in further discussions on this important matter.

Respectfully,

Aerospacelab

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