Before the

RADIO SPECTRUM POLICY GROUP

Brussels

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COMMENTS OF COMMERCIAL SMALLSAT SPECTRUM MANAGEMENT ASSOCIATION

The Commercial Smallsat Spectrum Management Association ("CSSMA") welcomes the opportunity to comment on the European Union (EU) Radio Spectrum Policy Group (RSPG) Draft Report RSPG24-030 FINAL on the EU 6G Strategic vision. We hope for ample opportunities to provide useful contributions on spectrum matters relevant to the European Union, its businesses, and its citizens.

CSSMA understands and supports the need for early recognition of spectrum to facilitate the initial launch and operation of 6G networks/services from 2030. Early recognition will allow for streamlined planning and rollout of 6G networks and its benefits.

CSSMA is, however, deeply concerned about the potential consideration of bands such as those under consideration by WRC-27 Agenda Item 1.7, and in particular the 7/8 GHz band. In fact, introducing IMT-2030 technologies in 7/8 GHz frequencies would significantly disrupt existing remote sensing operations and related data outputs, impairing institutional and

commercial satellite systems such as those leveraged by the EU Copernicus Programme, as well as by EU Member States' national programmes.

Space and ground-based electro-optical, radar, radiofrequency sensing, and other observation instruments deliver critical information about the Earth, its natural phenomena, and its environment through repetitive long-duration monitoring and/or measurement. As highlighted by relevant stakeholders in *Bridging Space and Earth: The Role of 7/8 GHz in Delivering Space-Based Insights,*[1] remote sensing, or Earth observation (EO) satellites offer important and innovative national security, civil, scientific, and commercial applications including:

- imagery, analytics, and other data, enabling enhanced awareness and transparency globally, including in Ukraine;
- data collection systems aiding biology/humanity (mapping; urban and rural land planning, use, and impacts; and human distribution), health (land and air pollution detection and monitoring), geology (energy and resource exploration and seismic observation), and hydrology (global and local water supply, soil moisture and depth, and coastal and maritime hazards);
- deeper agricultural data for farmers, scientists, and governments to access to gain insights on global issues such as food security;
- climate monitoring and environmental responsibility reporting; and

[1]Bridging Earth and Space: The Role of 7/8 GHz in Delivering Space-Based Insights (2024) <https://payloadspace.com/wp-content/uploads/2024/10/EESS-Xband-White-Paper-V2.4.pdf>

- all issues affecting businesses from monitoring shipping lanes, cargo, and other supply chain activity to retail signals and risk assessment.

These applications and services rely on the use of the 8025-8400 MHz band (space-to-Earth operations). Satellites are operated in either non-geostationary or geostationary orbit for:

- *Stored mission data missions*- Satellites may host Earth Exploration-Satellite Service (EESS) instruments that acquire, store, and transmit this data when in view of low-density fixed ground stations.

- *Direct readout missions* - Satellites may broadcast satellite-based EESS instrument and platform interrogation data and/or rebroadcast ground-based EESS instrument data to low-density and/or high-density fixed ground stations. They can transmit continuously.

The 7/8 GHz band is currently widely used and shared among governmental, institutional, and commercial remote sensing missions, producing invaluable socio-economic benefits globally and across sectors, as identified by relevant reports such as *Amplifying the Global Value of Earth Observation*[2] by the World Economic Forum and Deloitte; the OECD's *Earth's Orbit at Risk;*[3] or the 4th Edition of PwC's *Main Trends and Challenges in the Space Sector,*[4] in which Earth Observation spectrum access is clearly marked as a threat.

[2] World Economic Forum, Amplifying the Global Value of Earth Observation (May 2024) <https://www3.weforum.org/docs/WEF_Amplifying_the_Global_Value_of_Earth_Observation_2024.pdf>
[3] OCED, Earth's Orbit at Risk (2023), <https://www.oecd.org/content/dam/oecd/en/publications/reports/2022/09/earth-s-orbits-at-risk_d8902e97/16543990-en.pdf>
[4] PwC France, Main Trends and Challenges in the Space Sector, 4th Edition (2024) <https://images.content.pwc.com/Web/PwCGlobal/%7Bca36326d-6f10-41e8-a3d7-c62affd547cc%7D_PwC_MainTrendsAndChallenges_4thEdition_EN_V5.pdf>

This band is particularly critical, being the only frequency segment with consistent bandwidth size, proper physical characteristics, and allocated to EESS on a primary basis globally. Uncertainty regarding the future use of X-band and the lack of alternative bands with similar characteristics poses challenges for long-term planning in the space sector. This uncertainty risks deterring growth and limiting the equitable access to data and the benefits derived from it.

To preserve these workhorse EO frequencies for current and future deployments, the CSSMA opposes any identification of IMT in the 7/8 GHz band. As highlighted by the Draft Report itself, this position is aligned to that already supported by CEPT during the WRC-23 cycle, due to the unchanged strategic nature of such spectrum.

Instead, CSSMA urges the RSPG and the Union to consider (and advocate for) frequency bands already identified for IMT by the WRC-19 and WRC-23, as well as legacy bands in use by legacy mobile wireless network technology generations (2G, 3G, 4G, 5G) already harmonized in Europe, including the still underutilized mmWave IMT bands. This will allow a streamlined rollout of 6G, including facilitate the role of MNOs by enabling the leverage of existing infrastructure and stations.