

UNITED STATES OF AMERICA

DRAFT PRELIMINARY VIEWS FOR WRC-15

Agenda Item 1.11: to consider a primary allocation for the Earth exploration-satellite service (Earth-to-space) in the 7-8 GHz range, in accordance with Resolution **650 (WRC-12)**

BACKGROUND: The Earth exploration-satellite service (EESS) requires an additional Earth-to-space allocation in the frequency band 7 190-7 235 MHz because of congestion in the bands 2 025-2 110 MHz and 2 200-2 290 MHz, which currently support several hundred satellites, making coordination extremely difficult.

This Earth-to-space allocation, along with existing space-to-Earth allocations in the band 8 025-8 400 MHz, would also allow EESS satellites to employ a single transponder for both uplinks and downlinks, reducing design and launch costs. Currently, no suitable Earth-to-space allocations are available for tracking, telemetry and control (TT&C) of EESS satellites at frequencies higher than the 2 025-2 110 MHz global allocation. Additionally, the band 2 200-2 290 MHz can support payload data downlinks for only a few EESS satellites. These factors require current EESS satellites to be equipped with two transponders: one operating near 2 GHz for TT&C and the other operating at the higher frequencies required for medium- and high-rate payload data downlinks, typically in the band 8 025-8 400 MHz. With a suitable EESS Earth-to-space allocation near the 8 025-8 400 MHz band, a single transponder could accommodate both satellite control and payload data downlink requirements.

The band 7 145-7 235 MHz is currently allocated to the fixed, mobile and, space research (Earth-to-space) services on a primary basis, subject to the conditions on the use of the space research service in No. **5.460**. ITU-R preliminary studies suggest that sharing with existing services within 7 190-7 235 MHz may be feasible, while difficulties have been cited with regard to sharing in the 7 145-7 190 MHz band segment, where the use of the space research service is restricted by No. **5.460** to deep space. Most of the remainder of the 7-8 GHz band is allocated to the fixed-satellite service (FSS) on a worldwide primary basis. Additional preliminary studies suggest that sharing may be difficult between EESS and FSS in this frequency range.

U.S. VIEW: The United States supports a primary allocation to EESS (Earth-to-space) within portions of the 7-8 GHz range with priority to the band 7 190-7 235 MHz, if the studies in accordance with Resolution **650 (WRC-12)** prove compatibility with existing services. The United States supports allocation within other portions of the 7-8 GHz range only if EESS (Earth-to-space) in the 7 190-7 235 MHz band proves insufficient, noting that sharing may be difficult between EESS and existing globally allocated FSS in the 7-8 GHz range.