

## **Agenda Item 4: Space for Sustainable Development**

**Republic of Korea**

**UN COPUOS Scientific and Technical Subcommittee,  
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Thank you, Chair.

Climate change represents one of the most significant challenges facing humanity, with its impacts becoming increasingly severe. Addressing this crisis is an urgent priority for ensuring a sustainable future for our planet. In this context, satellite technology plays a crucial role by providing the data needed to better understand climate change and develop effective response measures.

Notably, satellites enable the observation of the majority of the 55 global essential climate variables, making them indispensable for climate monitoring. Beyond tracking changes, satellite-based data supports comprehensive policy-making—from development and implementation to monitoring and evaluation—demonstrating the practical value of space technology in advancing climate action.

Recognizing this, the Korea AeroSpace Administration (KASA) released the Third Satellite Information Utilization Plan in 2024. This plan focuses on enhancing the use of satellite data to address climate challenges. The Republic of Korea is leveraging satellite technology to monitor extreme weather events such as typhoons and heavy rainfall while also developing capabilities to track global greenhouse gases, ground temperatures, and sea surface temperatures. Key initiatives include monitoring high-concentration air pollutants and conducting long-term analyses of coastal marine

ecosystems to better understand the impacts of climate change.

Geostationary satellites such as GK-1 and GK-2A/-2B form the backbone of Korea's climate monitoring efforts. These satellites are used to observe meteorological phenomena, air pollutants, and climate change-causing substances. To expand these capabilities, we are currently developing the next-generation GK-5 satellite, which will focus on meteorological and space weather observations.

The Republic of Korea also places a strong emphasis on international cooperation. Through projects like the NOAA Open Data Dissemination initiative, we provide meteorological data to the Asia-Pacific region and support developing countries, including Ethiopia, Vietnam, and Cambodia. Recently, GK-2A data reception and analysis systems were installed in Cambodia to enhance their local disaster response and environmental monitoring capabilities.

Furthermore, the GK-2B satellite plays a pivotal role in global climate collaboration. It monitors substances such as aerosols and ozone, along with air pollutants like fine dust and nitrogen dioxide. Alongside the U.S. TEMPO and Europe's upcoming Sentinel-4, GK-2B contributes to a global air quality observation network, facilitating joint research and sharing observation data. Through the Pandora Asia Network, we provide technical assistance and support to countries in the region, further strengthening collaborative efforts.

To deepen its contribution, KASA initiated discussions in 2024 with UN ESCAP to assist climate-vulnerable countries in the Asia-Pacific region. This partnership focuses on leveraging satellite data to enhance disaster response capabilities and promote sustainable development, aligning with global climate goals.

Lastly, as a member of the Group on Earth Observations (GEO), the Republic of Korea remains committed to playing an active role in implementing the GEO Post-2025 Strategic Plan, which will be announced in May 2025. This reflects our long-term vision of contributing to global efforts in climate monitoring and response through advanced satellite technology.

Thank you.

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