Agenda Item (11): Space and Climate Change

Statement by the Representative
of the Republic of Korea
at the 64th session of the Scientific and Technical Subcommittee
of UN COPUOS
31 August 2021

Thank you Honorable Chair for giving me the chance to address the Committee on the Peaceful Use of Outer Space. On behalf of the Korean delegation, I'd like to express my deepest gratitude to the member countries for their dedication to this Space and Climate Change agenda.

Recently, more and more people all over the world are suffering from extreme weather events like floods, deadly heat waves, wildfires, and droughts caused by climate change. Facing these challenges, the global community is moving toward carbon-neutral by 2050 and this requires accurate and scientific understanding of climate change through constant monitoring of climate forcers and advancement of analysis techniques. To do this, we need to continuously observe short- and long-lived climate forcers over a wide range of areas, which can be done by satellite sensors.

In February 2020 the Republic of Korea launched the Geostationary Environment Monitoring Spectrometer, or GEMS, the first of its kind in the world to measure atmospheric concentrations of climate forcers and air pollutants like aerosols, nitrogen dioxide, and ozone from geostationary orbit. Image data from GEMS has been accessible to the public since March this year. GEMS scans from Japan to India in the east-west direction and from Mongolia to Indonesia in the

north-south direction every hour during daylight, an average of eight times per day. The unprecedented capacity of GEMS will enable a better understanding of the generation, development, and transport of air pollution and thereby contribute to improving air quality.

GEMS data can also be applied to research on interactions between climate change and air quality, and advancement of disaster monitoring and analysis techniques to preemptively respond to air pollution events followed by natural disasters like wildfires and volcanic eruptions.

Moreover, the Korean government is developing a next geostationary air quality mission to measure not only air pollutants but also greenhouse gas emissions. We plan to launch it by 2030. We are trying our best to provide scientific evidence, based on which national policy on carbon emission and climate change can be established to realize the national and global initiative of carbon neutral.

As you may well know, air pollution is a cross-boundary issue, requiring an integrated air quality monitoring system across the region. With this in mind, we are trying to contribute to international cooperation by building the Pan-Asia Partnership for Geospatial Air Pollution information (PAPGAPi) with Asian countries included in the GEMS domain, where GEMS data are shared and ground-based remote-sensing instruments are distributed to improve air quality and monitor climate change in the region.

Thank you for listening.