Committee on the Peaceful Uses of Outer Space

65th Session

Japan Item 12– "Space and climate change"

Mr. Chair, Distinguished delegates,

Climate change has been an issue of common concern for humankind for several decades. Earth observation by satellites enables us to globally monitor and record climate change precisely and consistently and to contribute to SDG13, "Climate Action." The Intergovernmental Panel on Climate Change (IPCC) guidelines mention the application of satellite data including Japan's GOSAT, GOSAT-2, and ALOS-2 for estimating and reporting on greenhouse gas emissions and removals to the United Nations Framework Convention on Climate Change (UNFCCC).

We would like to elaborate on Japan's satellites that monitor atmospheric conditions to tackle climate change. In 2009, the Ministry of the Environment (MOE), the National Institute for Environmental Studies (NIES) and Japan Aerospace Exploration Agency (JAXA) launched the Greenhouse gases Observing SATellite (GOSAT) series as the world's first satellite dedicated to monitoring greenhouse gases such as carbon dioxide (CO_2) and methane (CH_4). In 2018, GOSAT-2 was launched with an enhanced capacity to observe carbon monoxide (CO) in addition to CO_2 and CH_4 to estimate anthropogenic emissions. GOSAT and GOSAT-2 have been contributing to addressing climate change by accumulating data on the global concentration of greenhouse gases for more than a decade and have shown that the global atmospheric concentrations of CO_2 and CH_4 have been increasing every year accompanied by seasonal variation. Leveraging this cutting-edge GOSAT series, Japan will continue its efforts to reduce greenhouse gas emissions to combat climate change under the Paris Agreement by observing and monitoring the sources of anthropogenic greenhouse gas emissions and estimating the emissions and their removal on a global-scale.

Another relevant satellite is the Global Change Observation Mission - Climate, GCOM-C. GCOM-C was launched in 2017 to conduct surface and atmospheric measurements related to the carbon cycle and radiation budget, such as clouds, aerosols, ocean color, vegetation, snow and ice. These observations will contribute to enhancing the prediction accuracy of future environmental changes.

In addition to developing and operating satellites for observing atmospheric conditions, Japan has been conducting national research projects to tackle climate change. In September 2020, JAXA and a Japanese company launched a joint research project on

utilizing passenger aircraft for remote sensing observation of atmospheric components over the main islands of Japan. This research aims to understand the sources of emission distribution from different sectors in city areas by combining data obtained by aircraft and GOSAT. It also contributes to the Paris Agreement by providing useful data that may be considered to reduce anthropogenic emissions from cities and for evaluating the effect of emission reduction efforts.

As for tackling climate change globally, Japan continues to engage in international cooperation efforts. JAXA and the Japanese National Institute for Environmental Studies, NIES, are cooperating with ESA, CNES, DLR, NASA, and EUMETSAT to support the implementation of the Paris Agreement. This cooperation promotes the use of satellite Greenhouse Gas observation data to improve the accuracy of the National Greenhouse Gas Inventory Report.

We would like to reiterate that Japan will continue our efforts to tackle climate change issues.

Thank you for your attention.