66th session of Committee on the Peaceful Uses of Outer Space
Thailand Statement on
Agenda Item 11. Space and climate change
June 6th, 2023

Chair, Distinguished Delegates,

Climate change has increasingly stressed the world's ecosystem and undeniably became a pressing issue for all nations. In many countries including Thailand, climate change has caused more frequent natural hazards and worsen the damages from disasters. Space technology is an essential tool for combatting climate change. Thai space agency, Geo-Informatics and Space Technology Development Agency or GISTDA has conducted various activities, in addressing three aspects of climate actions, which include impact monitoring, mitigation, and adaptation.

There are some examples of GISTDA activities on monitoring of climate change impact. With their spatiotemporal coverage, earth observation satellites can be used for monitoring of long-term changes of essential climate variables (ECVs) and climate-related disaster. GISTDA routinely monitors flood events to estimate the extension of flooded areas, which can be analyzed to identify frequency and intensity of flood. Similarly, agricultural loss from drought is being monitored and estimated using multi-sensor satellite data. Our CropDrought mobile and web application allows farmers to monitor drought-status of their own fields, while also supports government agencies for compensation planning.

In terms of Climate Change mitigation, GISTDA also provides satellite-derived information to assist the reduction of Greenhouse Gases (GHGs).

- First mitigation activity is the management of greenhouse gases emission from forest fire. By the accumulation of historic satellite data of geographic and physical factors of specific areas over the years, mathematical models have been developed to predict fire risk zones, which support to decrease the occurrence of forest fire and reducing GHG emitted from burning. To open the data for public uses, we launched a mobile application called “Burn Check” to support the management of forest fire from Agriculture, Forestry, and Other Land Use (AFOLU).

- The second mitigation activity is the national level carbon stock and sequestration. This activity utilized information from satellite measurement to monitor both green and blue carbon. The satellite data is able to serve carbon sequestration and storage assessment for the whole country by measuring land surface parameters, such as Green area, Forest Canopy Density, and Aboveground Biomass. GISTDA is also working to integrate satellite data and ground-based eddy covariance to scale-up the estimation of carbon footprint for all land cover types. The technology can collect the data remotely without field surveys and allow regular monitoring of carbon sequestration.

In addition, Thailand has placed important on Climate change adaptation. The reversal of climate change effect is not instantaneous. Hence, adaptation actions are necessary to ensure the continuation of the economy and people livelihood. GISTDA is developing Actionable Intelligence Policy which aims to provide tools for decision-makers to visualize impacts from current and future policies, as well as assess optimal policy.

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Observation from space inspires and serves humankind in ways that are truly unique. There is tremendous value of understanding our changing planet and predicting the future outlook of our Earth. We believed that remote sensing is an essential part of the national efforts to understand the climate system and its changes, to enhance scientific knowledge, to better support government management and to improve life quality. We are working together with various stakeholders and experts on ensuring practical usage of space technology to design Thailand climate change adaptation, and mitigation strategies. Thailand fully supports the United Nations and COPUOS to promote the use of Earth observation and other space-related systems to implement climate actions, improve the transparency of carbon credit, in addition to extend application from space technology in order to deliver values from space to preserve our Earth.

Thank you for your attention

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