Statement by Thailand Agenda item 4. Space for sustainable development: technology and its applications, including the United Nations Programme on Space Applications 62^{nd} Session of Scientific and Technical Subcommittee of COPUOS 3 - 14 February 2025

Chair and Distinguished delegates,

Over the year 2024, Thailand leveraged its space capabilities towards achieving priorities in 4 areas, consisting of space applications for people, for farmers, for policy makers, and for services of the future.

First, Space Applications for People

One of the challenges threatening Thai people's health is air pollution, which is more severe year after year due to Climate Change. Air Quality Index assessed from information monitored by satellites and remote sensing system stand as indispensable factor for pollution management and short-term prediction. The satellite database on air quality has been released publicly and through a mobile application, Check Phoon, for public use. Moreover, Thailand is one part of the Airborne and Satellite Investigation of Asian Air Quality or ASIA-AQ, the international collaboration of National Aeronautics and Space Administration from the United States, National Institute of Environmental Research from the Republic of Korea, and various organizations including a group of agencies in Thailand. The program has collected essential atmospheric and air pollution data by Airborne missions. Our researchers have teamed up and partnered with international scientists to understand air quality in Asia, in addition to identify air pollution sources and pollutant gradients across the region. The delivery of Thailand's comprehensive report on the origins of pollution is anticipated within March 2025, next month.

Apart from air pollution topic, the geospatial data has been used in a health map platform, Life D, for warning of contagious diseases and noncommunicable diseases. Last year, we started with respiratory disease, the illness that associate with air pollution problem, and then expanded to include heatstroke and Dengue fever. The platform can be accessed in web and mobile application. In the next year, the mission will bring a new service dedicatedly designed for elderly and disabled persons, to keep them update on the assistant facilities in public area. These projects are counted as prime examples of Thailand in using space applications to enhance healthcare and well-being sector in the country.

Second, Space Applications for Farmers

Agriculture is our vital economic engine, supplying food not only for people in Thailand, but also lessening hunger in many countries around the world. To ensure food security especially in the region, space technology is an effective tool to increase value of agricultural yields, concurrently minimize production costs. The geo-informatics platform, SG Farm, allows community engagement in providing input on agricultural activities, equips with GIS QR Code traceability, and includes Climate Change information such as parameters related to weather and land cover from satellites. The platform promotes communities in accessing geo-spatial data and enables insights that are tailored made for their farms and fields. The agricultural platform has been enlarged to serve neighboring countries and also obtain data input provided from them. The active collaboration in space for agriculture makes a stronger food security in the region.

Third, Space Applications for Policymakers

Among the priorities for policy makers is the extensive utilization of space-based applications in addressing and tackling carbon-related challenges. Carbon Atlas, a green and forest monitoring system, has been developed with the intention to gather environmental data measured by satellites for assessing green areas and carbon sequestration, leading to fair carbon trading. On the top of that, the satellite data also plays an important role in the implementation of Clean Air Management Act as the indispensable factors for definition of Airshade covering the whole country. The Airshade parameter will be adopted for air pollution management and warning mechanism done by relevant authorities.

Fourth, Space Applications for Services of the Future

The concept on smart city could benefit people's living in the upcoming days. By leveraging our remote sensing capability, for instances, Mobile Mapping System, Lidar Scanner, and GNSS, we have gathered 3D position data of buildings, road shape, and area surrounding in selected cities. The database of flood history, which is a common disaster in Thailand, has been integrated in the platform. The convergence of various geospatial information could provide insights for promoting smart city in the country.

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The report Thailand made reflects key highlights of using space applications in the year 2024, which mostly have been undertaken continuously for many years. There are more activities on applying space capability serving other economies and promote sustainable development. Thailand still remains commitment on enhancing space application for better community, better life, and better future of all people.

Thank you