Thailand's statement Agenda Item 9: Space and Sustainable Development By Ms. Kandasri Limpakom, Deputy Executive Director, Geo-Informatics and Space Technology Development Agency At the 65th Session of the Committee on the Peaceful Uses of Outer Space 3 June 2022

Mr. Chair,

This is the first time that Thailand takes the floor so we would like to congratulate you as the Chairperson of the 65th COPUOS. Thailand extends our gratitude to you, Mr. Niklas Hedman, and the entire team for the efforts in furthering the work of the Committee on the Peaceful Uses of Outer Space. We are pleased that the committee continues to successfully provide effective support to the peaceful uses of outer space. Thailand also welcomes the applications of Guatemala and Uzbekistan.

Mr. Chair, Distinguished delegates,

This is my privilege to appear before you today to share some of Thailand activities. There is tremendous value to understand the world in which we live and to predict the outlook of our planet as well as how it is being affected by climate change. The view from space inspires and serves humankind in ways that are truly unique. Space technology is a critical tool to ensure that we, as a society, not only survive but thrive in building a sustainable future and a resilient civilization.

Thailand utilized observation from space to study the Earth as a complex system with diverse interacting components: biosphere, hydrosphere, atmosphere, and lithosphere. By measuring and monitoring the interactions of these various components, we are able to develop a comprehensive near real-time applications to support many national needs. GISTDA, the space agency of Thailand, partners with key national agencies to develop monitoring and decision support systems that improved national capabilities for agriculture, water resources, and natural hazards; the management of resources; and development of environmental policy.

Disaster management has long been one of the world challenges. With climate change, the situation has worsened with more frequent and more intense natural hazards. Earth observation from space offers additional information of the Earth's climate system to complement the traditional point-based measurements from weather stations. GISTDA has been collecting and analyzing data from multispectral, multiangle, multitemporal, and multiple resolution satellite sensors to support decision maker and make those data publicly accessible for the regular monitoring of flood, forest fire, drought and PM2.5. Our recently developed PM2.5 platform provides an hourly PM2.5 concentration level using satellite data, which uniquely delivers complete coverage of the country. As part of this development, we currently research the possibility of identifying the sources of PM2.5 to support more spatially explicit policy for Thailand. In the future, we plan to further extend this collaboration with neighboring countries to cover regional transboundary air pollution issue. This, we hope, will ensure holistic resolution that address root causes of PM2.5 issues in the region

Food security is another challenge which can impede the progress of sustainable development. Thailand uses the satellite imagery for crop monitoring and crop health assessment to support the government and local organizations. Our in-house platform, GISAgro, allows the monitoring of crop growth from planting to harvesting and detects any abnormalities as the season progresses. The practical benefit of this platform is not only recognized by Thailand, but its potential is also acknowledged abroad. To safeguard regional food security, we have begun our collaboration with UNESCAP to expand similar systematic crop monitoring platform to Cambodia, Lao PDR, and Myanmar.

These two challenges, disaster and food security, are closely linked. We have several on-going projects that are combing the two fields. The 'Dynamic Agro-Potential Zone' project identifies suitable crop type and crop calendar based on changing seasonal climatic patterns. Another project called 'Geo-informatics Approach for assessing the risk of crops loss and damage associated with drought at farm level' uses multi-sensor space data to monitor drought onset and crop health at high spatial level. This project will support Thai government compensation program for farmers

Mr. Chair,

To support evident-based policy for sustainable development, Thailand is also developing Actionable Intelligence Policy or 'AIP' which combines many spatio-temporal inputs with scenario simulations to generate multiple outcomes from alternating area-based policies. Space technology plays a critical part which support mapping, monitoring, modeling, measuring, and managing

components. For our 'AIP for Climate-Resilient Agriculture' project, the effects of climate variability on agricultural outputs and more intensified extreme weather events will be incorporated to identify sustainable food security related policies. We will work with various stakeholders and experts to ensure practical usage of space technology to design Thailand's AIP.

Lastly, Thailand would like to thank all the Member States and look forward for our collaborations. Our country is committed to working with all stakeholders to extend the application of space technology and deliver values from space for thriving society in light of sustainable development.

Thank you, Mr. Chair.