# Regional Knowledge Exchange on Harnessing Digital Innovations for Space: Experiences and Insights

A side event at the twenty-ninth session of the Intergovernmental Consultative Committee (ICC-29) on the Regional Space Applications Programme for Sustainable Development (RESAP) in Asia and the Pacific

Wednesday, 3 September 2025
THE PLAZA, Seoul, Republic of Korea and online via Teams

## Background

The Fourth Industrial Revolution (4IR) is reshaping the geospatial landscape through the rapid integration of cutting-edge digital technologies such as artificial intelligence (AI), big data analytics, cloud computing, and the Internet of Things (IoT). These innovations are revolutionizing how geospatial information is generated, processed, and applied—unlocking new possibilities for addressing complex global challenges like climate change and disaster risk, while supporting progress toward the Sustainable Development Goals (SDGs).

Recognizing this potential, the Jakarta Ministerial Declaration on Space Applications for Sustainable Development in Asia and the Pacific affirmed the value of harnessing 4IR technologies to accelerate sustainable development. ESCAP's 2024 Compendium on Geospatial Practices for Sustainable Development in East and North-East Asia highlights how digitalization, connectivity, and automation are enabling the production and application of high-quality geospatial data at scale. Among the many digital innovations shaping the future of geospatial technologies, artificial intelligence (AI) is playing an increasingly important role. When combined with geospatial tools such as GIS, remote sensing, and satellite data, AI techniques—often referred to as Geospatial AI (GeoAI)—can enhance the analysis and interpretation of spatial information. While GeoAI is just one part of the broader digital transformation, it illustrates how emerging technologies are expanding the capabilities of space-based applications and supporting more informed, data-driven decision-making.

This regional expert meeting will explore how digital technologies—such as AI, IoT, cloud computing, and big data—are driving geospatial innovation across Asia and the Pacific. Speakers will showcase a wide range of initiatives already underway, including the use

of GeoAI, that are making geospatial data more available, accessible, affordable, and actionable (the 4As). The meeting will also address the challenges countries and organizations face in adopting and scaling these innovations, and discuss how to create the right policy, regulatory, and institutional environments to maximize their impact.

## Objectives

- Promote regional exchange of knowledge, good practices, and lessons learned in the integration of digital and geospatial technologies and supportive policies to scale their impacts.
- Identify opportunities and challenges in leveraging digital tools for sustainable development and space-based applications.
- Foster regional collaboration and knowledge exchange among stakeholders in Asia and the Pacific.

## Expected Outcomes

- Good practices and emerging trends in digital-geospatial integration showcased.
- Strengthened regional networks among experts, institutions, and governments.
- Recommendations to support innovation-driven geospatial strategies conveyed to the 29th session of the Intergovernmental Consultative Committee (ICC-29) on the Regional Space Applications Programme for Sustainable Development (RESAP) in Asia and the Pacific.

## Co-organisers

- Korea AeroSpace Administration (KASA)
- United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

## Target Participants

Experts from space agencies, geospatial data institutions, academia, private sector innovators, and development organizations.

## Programme

Moderator: **Ms. Eunjung Kim**, Policy Division Director, Korea Aerospace Research Institute (KARI)

| Time | Topics |
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| 13.30 – 13.40 | **Introduction**<br><br>• **Ms. Kareff May Rafisura**, Economic Affairs Officer, Space Applications Section, ESCAP |

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| 13.40 – 15.00 | **Multi-stakeholder panel presentation: National Space Policy and Capacity Building - Opportunities and Challenges**<br><br>This panel brings together voices from governments to showcase how digital innovations have the power to drive sustainable development—but they need the right environment to thrive. As highlighted in ESCAP's 2024 theme study, success depends on strong digital infrastructure, forward-looking policies, and smart regulations that foster innovation while safeguarding people and systems from potential risks. The session will begin by outlining common challenges faced by member States in utilizing space and geospatial technologies, including gaps in infrastructure, policy, and capacity. Building on this context, speakers will share practical experiences and lessons on building supportive ecosystems for digital innovation. Topics will include:<br><br>• Policy and regulatory reforms<br>• Leveraging private sector investments and expertise<br>• Skills development and capacity-building<br>• Cross-sector stakeholder engagement<br>• Promoting digital inclusion<br><br>Speakers (15 minutes each)<br>• **Mr. Kwanwoo Jung**, Korea AeroSpace Administration (KASA), Republic of Korea<br>• **Ms. Tanita Suepa**, Geo-Informatics and Space Technology Development Agency (GISTDA), Thailand<br>• **Mr. Ariel Blanco**, Philippine Space Agency (PhilSA), the Philippines<br>• **Mrs. Erna Sri Adiningsih**, National Research and Innovation Agency (BRIN), Indonesia<br><br>Open discussion (20 minutes) |
| | **Tea break** (10 minutes) |
| 15.10 – 16:50 | **Multi-stakeholder panel presentation: Innovative Solutions by Korean Space Companies**<br><br>This panel will feature presentations by Korean space and geospatial companies that are leveraging advanced satellite and AI technologies to address real-world challenges across sectors such as disaster risk reduction, maritime monitoring, and environmental management. |

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| | Participating companies will introduce solutions ranging from nanosatellite-based analytics and integrated space-to-ground data systems to AI-powered image analysis for early warning systems and object detection. It aims to highlight how private sector innovation contributes to the digital transformation of Earth observation and supports data-driven decision-making in support of sustainable development goals. Topics will include:<br><br>• The Integrated Space-to-Ground Data Value Chain: Approach to Digital Earth Intelligence (HANCOM InSpace)<br>• Transforming Observations Into Action: Global Collaborations In Environmental Monitoring Through Satellite Analytics (Nara Space Technology)<br>• Leveraging Satellite Technology for Multi-hazard Early Warning System (RainbirdGEO)<br>• AI-based integrated analysis service for satellite/drone imagery (Meissa Planet)<br>• Artificial Intelligence approach for ships detection from satellite imagery (UST 21)<br><br>Speakers (20 minutes each including Q&A))<br>• Dongeon Kim (HANCOM InSpace)<br>• Minsik Kim (Nara Space Technology)<br>• Seungsoo Shin (Meissa Planet)<br>• Yong-Sang Choi (RainbirdGEO)<br>• Ho-Kun Jeon (UST 21) |
| 16.50 - 17.00 | **Moderator's wrap up and final remarks** |

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