

**SPACE4SDGS**

**Session IV: Space in the United Nations**

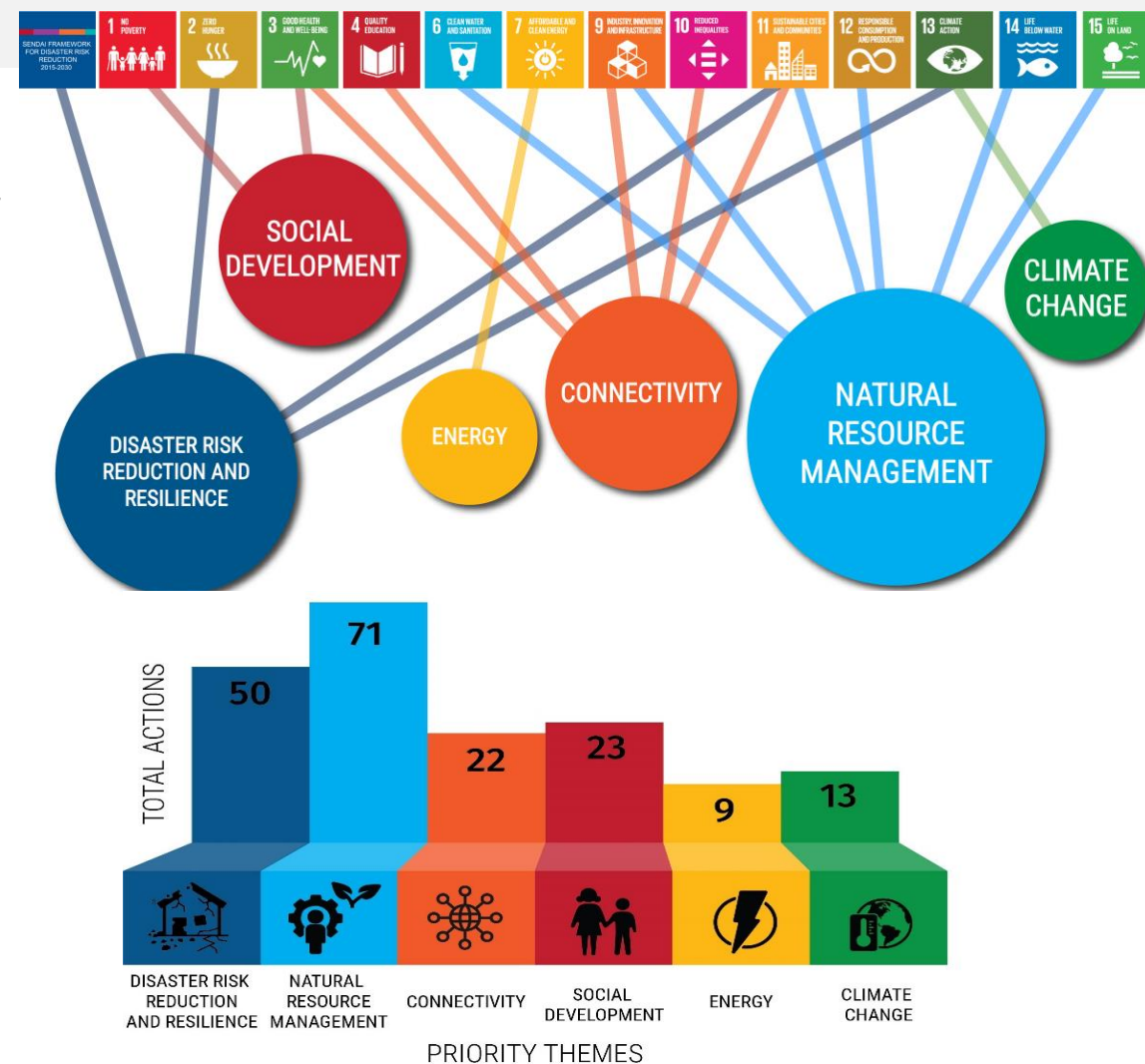
# **Report of the ESCAP in implementing Space2030 Agenda**

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# Regional Space Plan of Action

- The first phase of implementing the Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018-2030) has promoted the adoption of space and geospatial information applications across six thematic areas, including tele-health solutions using space technology to improve the capacity to react to emergency health situations, and health management.
- Collaboration with the partners in the UN system has been enhanced.
- Contributed to the Space2030 Agenda.



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### *Health management*

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Sustainable Development Goal 3: Good health and well-being

Targets: 3.9, 3.d

- Better understand health risks and identify the causal factors of disease spread, including human and animal, etc.
- Research on how geographic information system, global navigation satellite systems and satellite communications can be used to minimize the spread of health epidemics.
- Research methodologies for geo-referencing and disaggregating health data, such as obesity and malnutrition.
- Research and share knowledge on the use of satellite communications and frontier technology to address gaps in telemedicine.
- Extend research in early warning, risk mapping and risk reduction to incorporate health risks to livestock, agriculture and aquaculture.
- Develop capacity to map health risk hotspots using geospatial information and big data.
- Monitor health impacts, including those of livestock, agriculture and aquaculture through Earth observation.
- Share good practices from the health sector, and work with existing intergovernmental mechanisms, international and regional organizations and relevant implementing agencies that could benefit from the use of geo-information science.
- Promote cooperation among neighbouring countries and work with intergovernmental mechanisms and international and regional organizations to address transboundary health risks, i.e., the spread of disease or condition of air quality.
- Strengthen space cooperation for global health and newly encountered diseases.

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### *Innovation*

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Sendai Framework for Disaster Risk Reduction

Targets: 1, 2, 3, 4

- Identify interfaces between, and integration of, traditional space-based information and frontier technologies to address disaster risk management and build resilience.
- Research opportunities for including Global Satellite Navigation System for infrastructure and utilities mapping, relevant to disaster damage assessment and early warning systems.
- Research on tele-health solutions using space technology to improve the capacity to react to emergency health situations.
- Develop capacity in integrating and utilizing space and geo-informatics applications with new methods, tools and technologies, from other digital innovations, for the mapping process.
- Contribute to the sustainable reconstruction phase of infrastructure in the post-disaster phase and to the reinforcement of resilience through the Recovery Observatory concept.
- Promote the use of geospatial information management systems, global navigation satellite systems and communications satellite systems towards disaster risk reduction and management at the policy level.
- Discuss and promote the potential concept of a common regional information technology system to support activities related to space applications for sustainable development.
- Promote discussions on data and information protocols for the use of global navigation satellite systems in all phases of disaster management.
- Provide support to mitigate the effects of disasters occurring in Asia and the Pacific through the International Charter on Space and Major Disasters.



- 01 COVID-19 Cases Management
- 02 Living Supplies Management
- 03 Medical Capacity Management
- 04 Vaccine Registration Information

- Series of webinars and training on building a geospatial information platform have been organized, with the support from GISTDA, ARTSA and BRIN, from May 2020 to December 2022, and stakeholders from over 30 countries.
- Support countries in using geospatial data to analyze correlations between the COVID-19 pandemic and socio-economic sectors, and to identify risk hotspot areas by assessing risk drivers, such as high population density, mobility, poor sanitation, low connectivity and low awareness.
- Subregional training from Southeast Asia has been organized in May-July 2021. Thematic training workshop for countries in South Asia and Pacific will be organized in October 2021 and in December 2022.

# Timely provision of satellite imagery for disaster management

- On average, the secretariat provides over 40 reports and 150 gigabytes of satellite imagery and products to member States for early warning, response and damage assessment relating to various climate hazards, through the RESAP network and collaboration with the UNITAR/UNOSAT, UN-SPIDER and APRSAF.
- Member States shared space-based data, products and services free of charge through partnerships with other UN agencies and international/regional initiatives.
- ESCAP will collaborate with UNITAR/UNOSAT in AI for flood early warning and management.
- ESCAP will also work with UNU on flood and drought mapping through the use of integrated geospatial information.



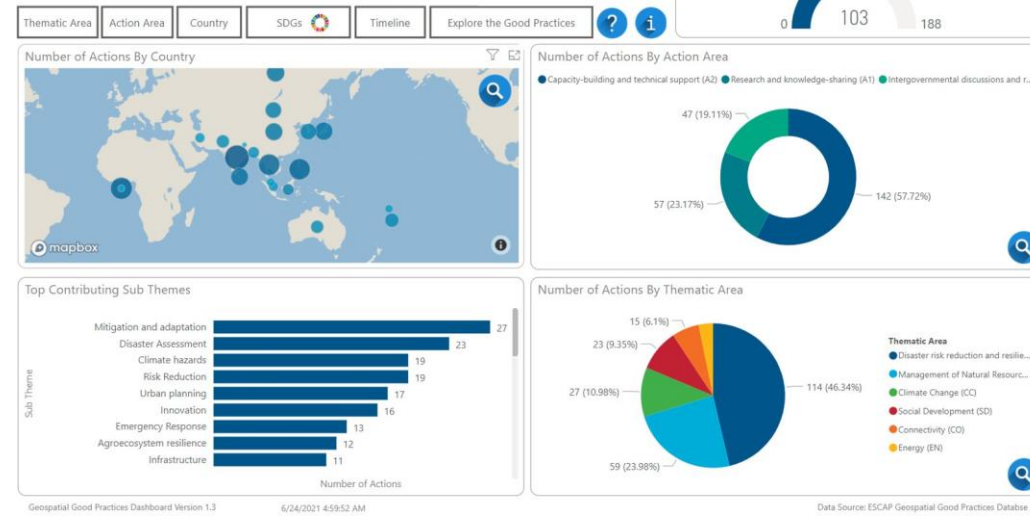


# Sharing good practices in the implementation of Plan of Action

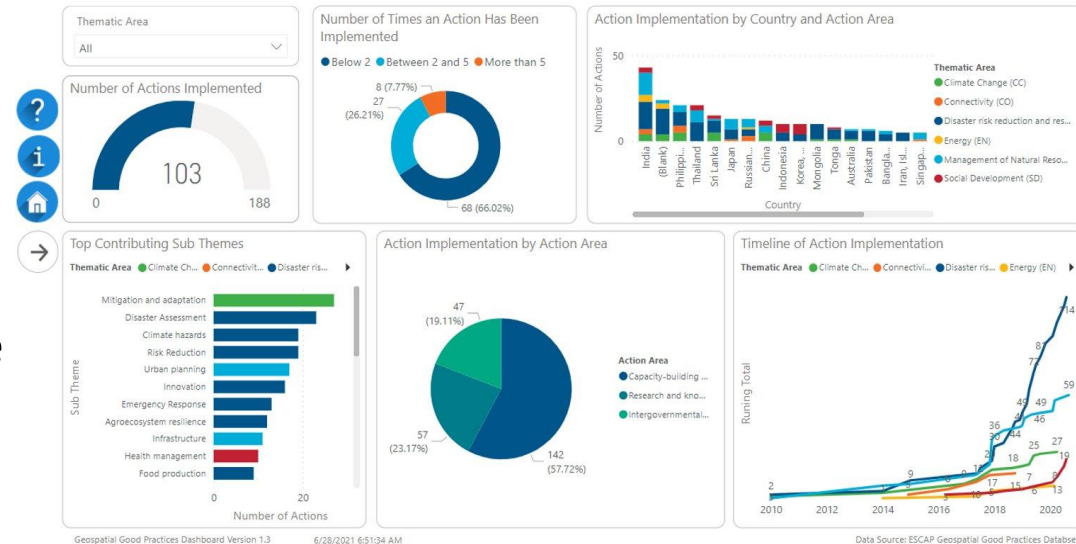
Developing a database and dashboard for collecting good country practices and monitoring the implementation of the Plan of Action.

- A visualized dashboard that tracks SDGs progress in Asia-Pacific countries across different periods
- Helps to systematically report on our progress towards SDGs and promote knowledge sharing
- Over 600 actions, including covid-19 hotspot mapping, were reported by several countries through the recent survey in 2022.
- Several actions of the cooperation partners in UN system have been included.
- Will encourage more from other UN entities to contribute with more good practices.

## Geospatial good practices dashboard



## Thematic Area



# Space+ for our Earth and Future: transcend conventional space applications and accelerate the implementation of the Plan of Action

## Space+ for our Earth and Future

### THE 4TH MINISTERIAL CONFERENCE ON SPACE APPLICATIONS FOR SUSTAINABLE DEVELOPMENT IN ASIA AND THE PACIFIC

Wednesday, 26 October 2022  
09:00 -16:30 hours (Jakarta time)



## SPACE+ FOR OUR EARTH AND FUTURE



Leveraging innovative digital applications



Engaging end users in multiple sectors



Managing data and information more effectively



Enhancing partnerships

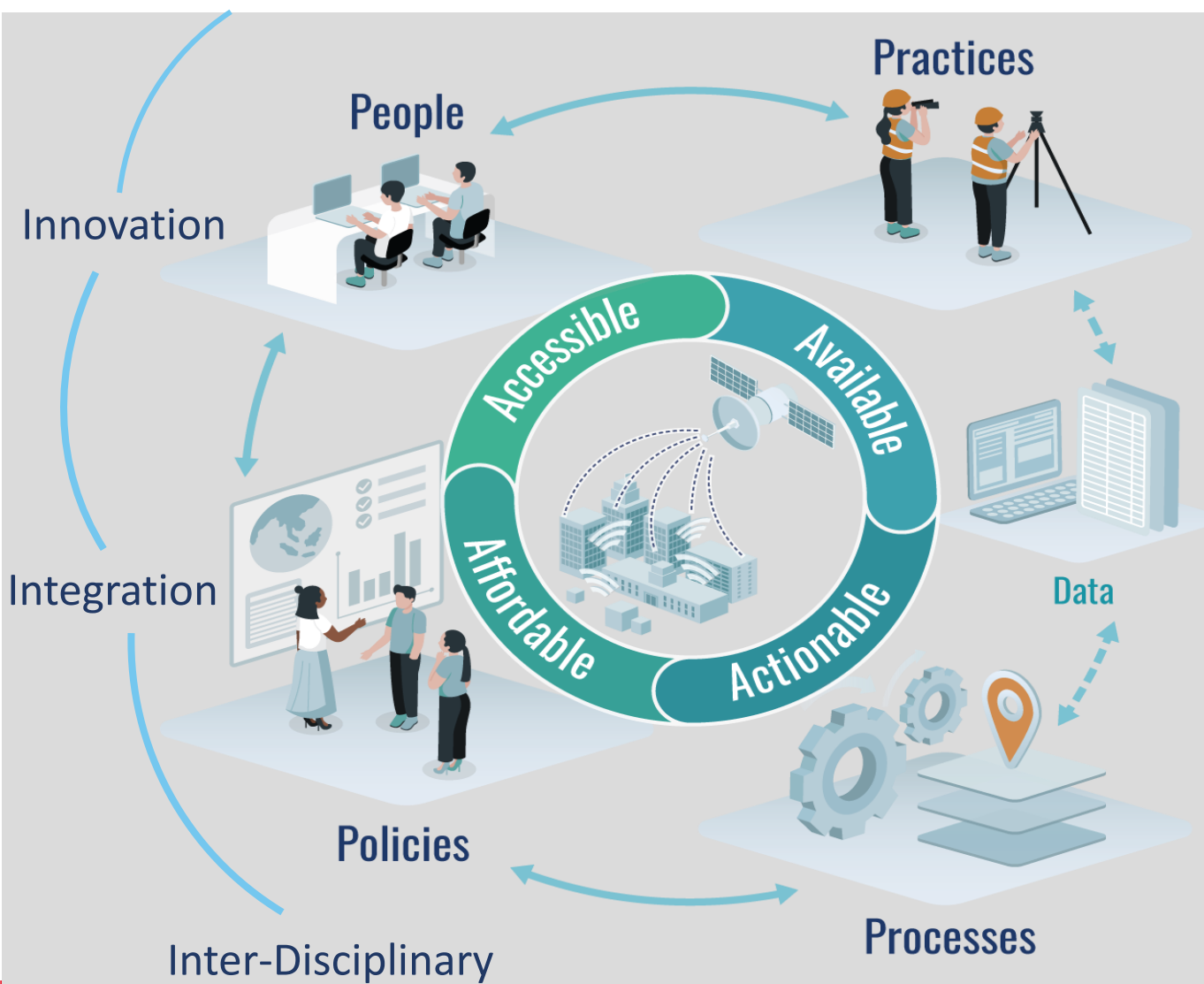


## 4As, 4Ps & 3Is

This 3 Tier mechanism shall pave the way towards going beyond the traditional applications of space technology

**Geospatial data should be Accessible, Available, Actionable and Affordable to benefit People and inform Practices, Processes and Policies**

**Innovate** in preparation of plan of action, **Integrate** relevant geospatial and field-level inputs, while keeping the entire process **Inter-disciplinary**





# Integrating geospatial information to tackle problems in building back better and achieving SDGs

## One Data

## One Map

## One Platform

Same Location

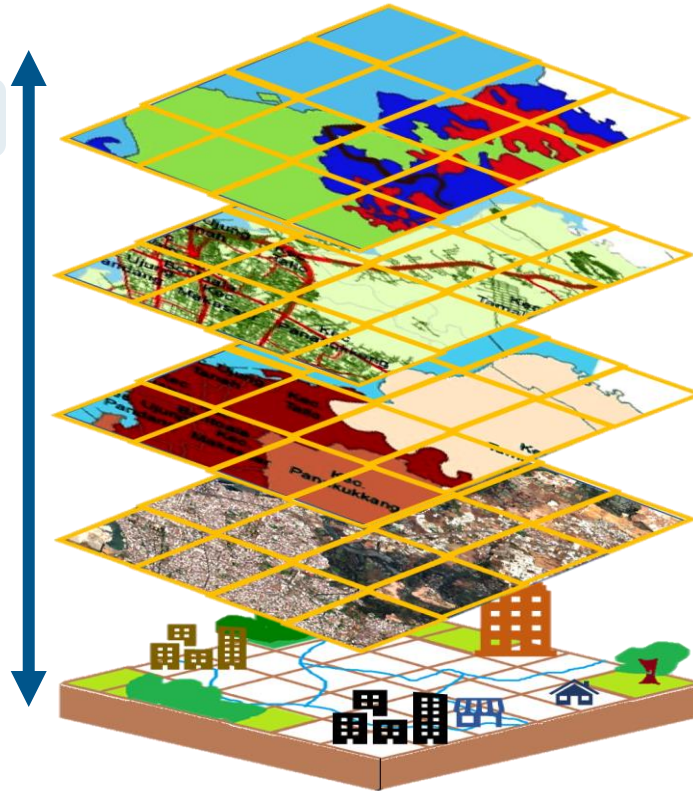
Land Department Division

Health Ministry

Statistical Bureau

Space Agency

Local government



Land Use

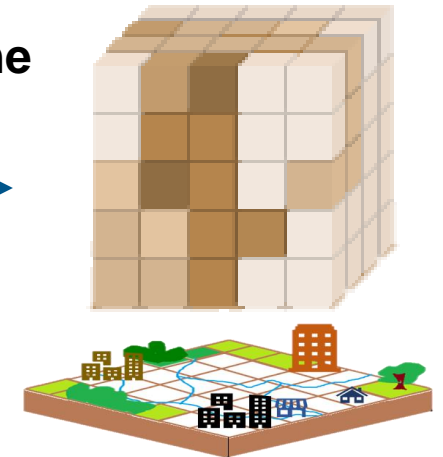
Health, COVID-19 cases

Population

Satellite Image

Ground data

Same Time



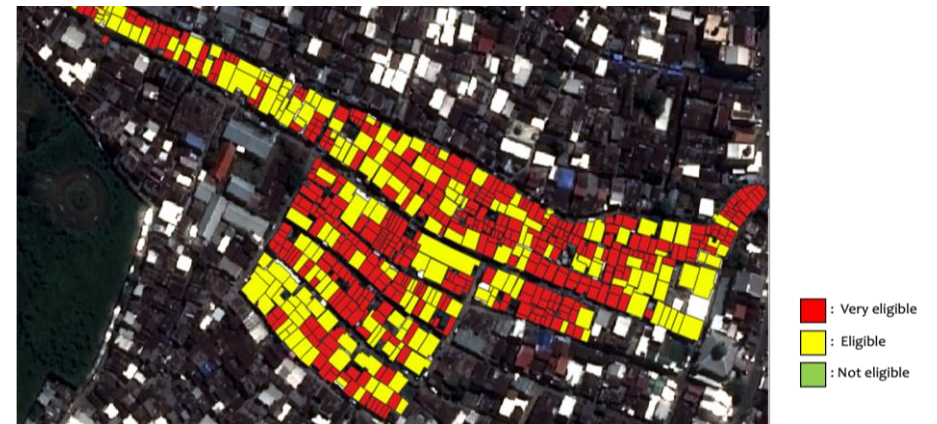
# Integrated spatio-temporal data for local SDG monitoring

**Project objective:** To increase the use of integrated spatio-temporal and statistical data for local SDG monitoring and decision-making.

**Project outcome:** Enhanced institutional capacity of national geospatial information applications agencies, and local governments in target countries, to utilize integrated spatio-temporal and statistical data for local SDG monitoring and decision-making, including poverty and health

**Output:** Increased capacity of technical officials and policy makers from national geospatial information applications agencies and local government in target countries to utilize integrated spatio-temporal and statistical data for local SDG monitoring and local level policymaking.

Will share the experiences with UNCTAD and UNRC.



Example of the eligibility map to receive the social assistant payment produced by the slum house classification-based on deep learning method.

# Air pollution management and monitoring training using GEMS and Pandora instrument for Asia

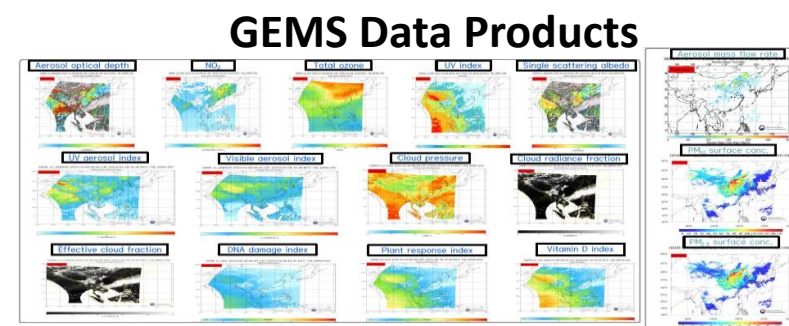
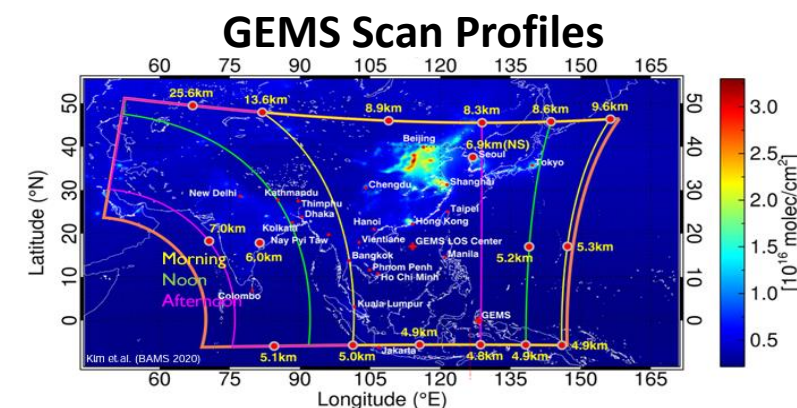
**Project objective:** To enhance the capacity of participating member States to access and utilize space derived data and applications for air pollution monitoring and management.

**Project outcome:** Government agencies in target countries have access to and utilize space applications to monitor and introduce measures to improve air quality.

## Output:

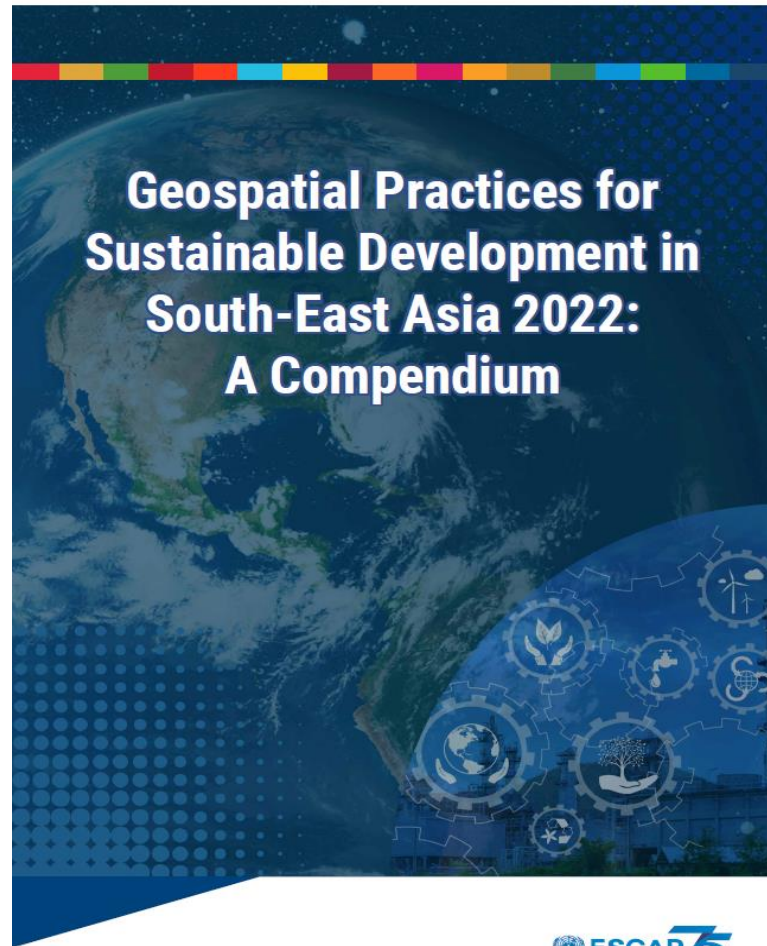
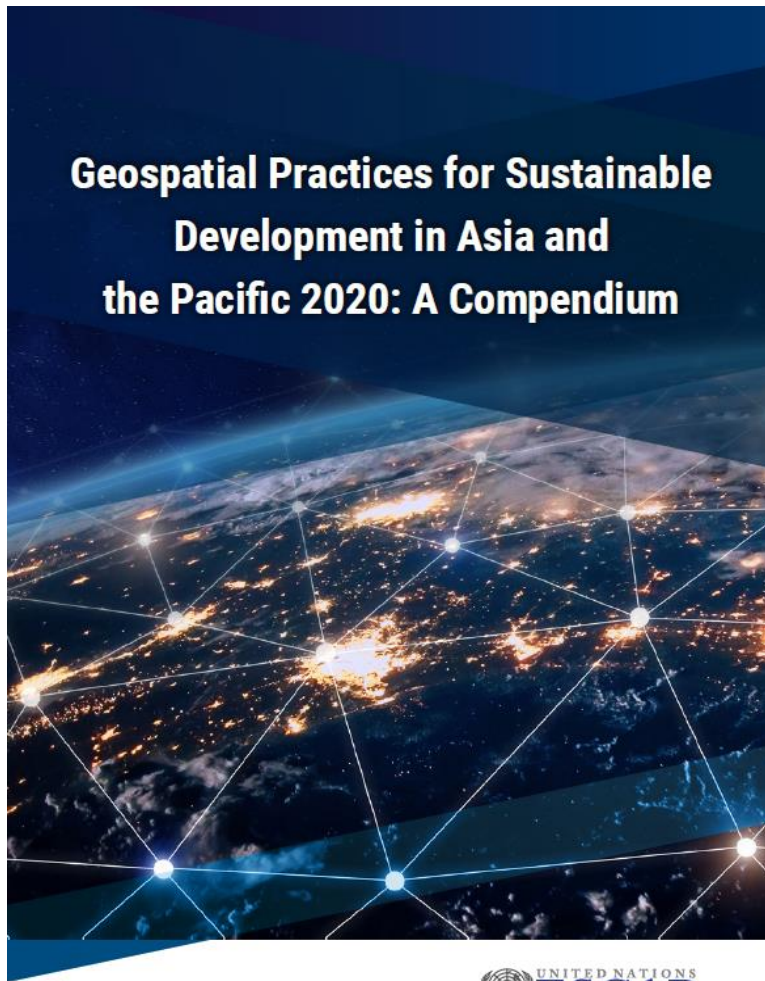
- Enhanced capacity to operate and maintain the Pandora spectrometer system and utilize remote sensing data for air pollution monitoring.
- To engage in regional and subregional level cooperative dialogue for the improvement of national and subregional air quality.

Will share the practices with UNEP and UNDP.



Courtesy of NIER





➔ Geospatial practices in North and Northeast Asia 2024: A Compendium

Practices for Covid-19 response will be one of the important areas





ESCAP will organize a side event on engaging the youth for SPACE+ during the 10<sup>th</sup> Asia-Pacific Forum on Sustainable Development, in Bangkok from 27-30 March 2023, and will invite OOSA, UNITAR/UNOSAT, UNU and other entities to join as co-organizer.





**ESCAP**



MOVING FORWARD TOGETHER



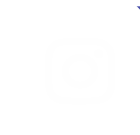
# Thank you



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