Technical Presentation
66th session of COPUOS

Integration of geospatial information for sustainable development: practices of ESCAP

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Contents

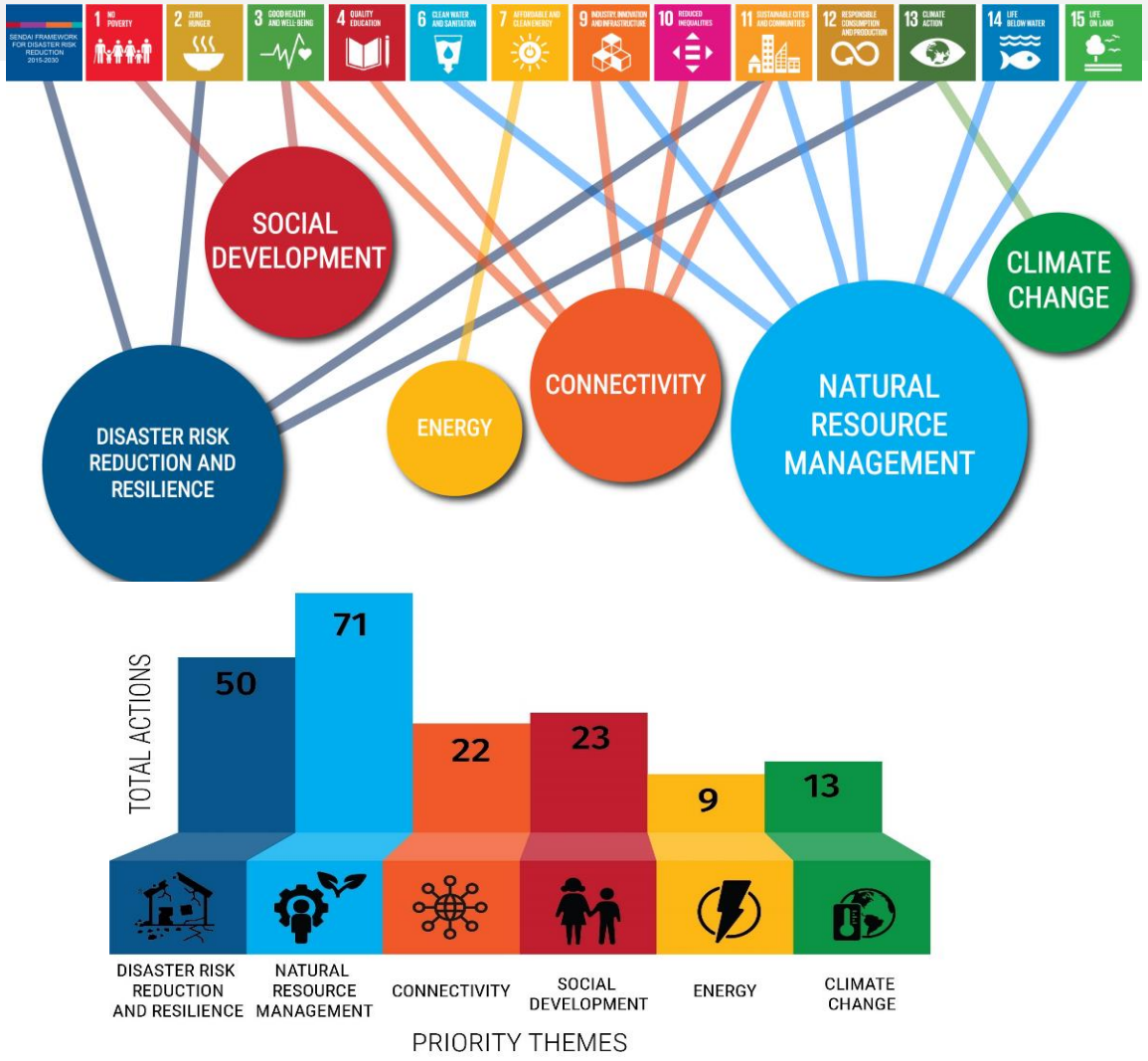
1. Implementation of the regional space Plan of Action
2. Geospatial applications at regional and subregional levels
3. Space+ for our Earth and Future

1. 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.



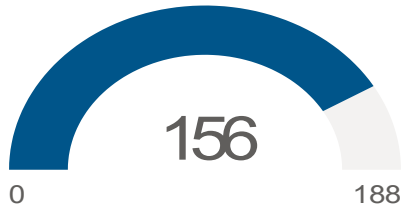
Activities taken at country level

SDGs

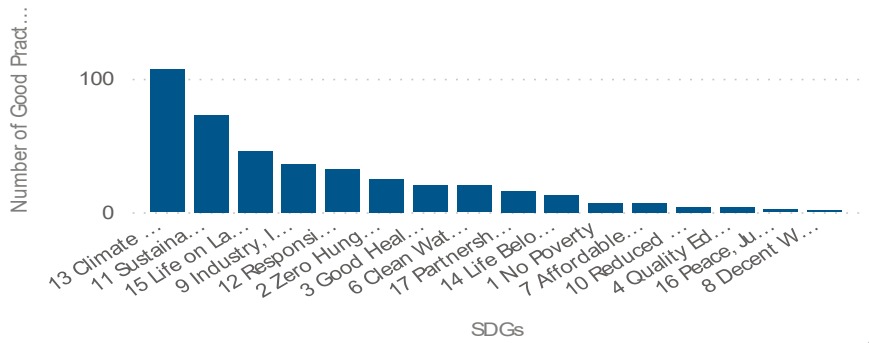
SDGs

All

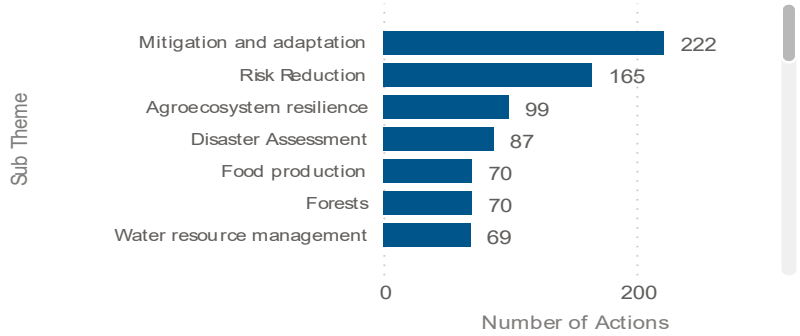
Number of Actions Implemented



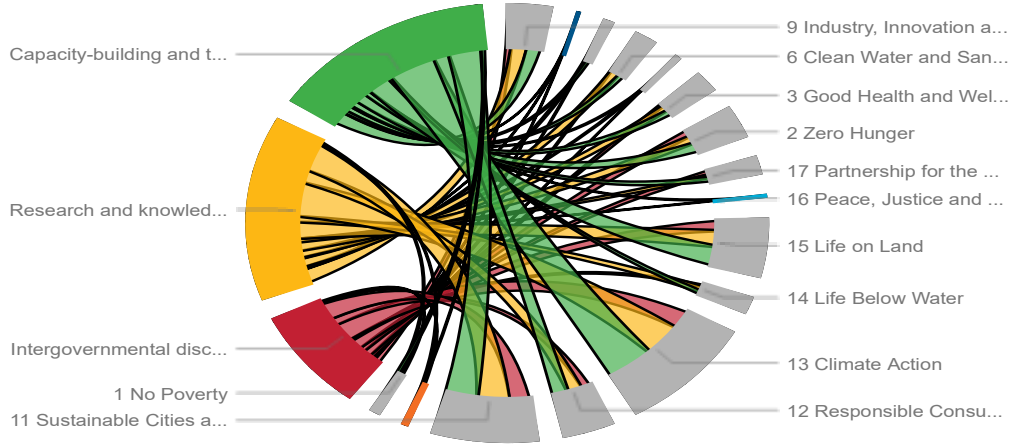
Most Implemented SDGs



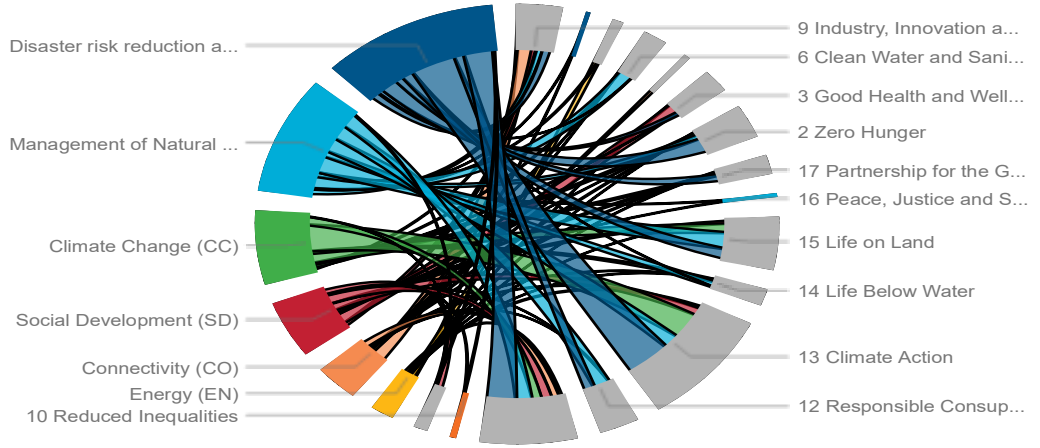
Top Contributing Sub Themes



Contribution of Action Areas to SDGs



Contribution of Thematic Areas to SDGs



Data Source: ESCAP Geospatial Good Practices Database

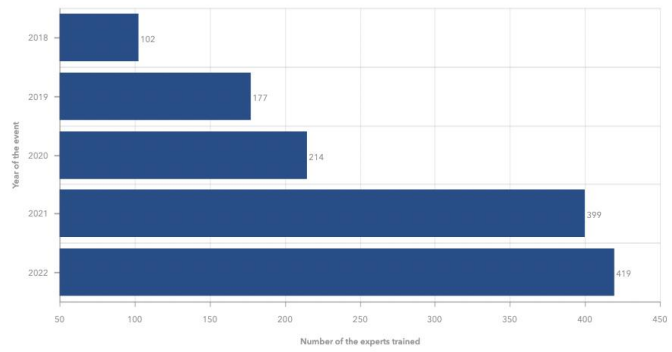
Training and capacity building

Total number of experts trained

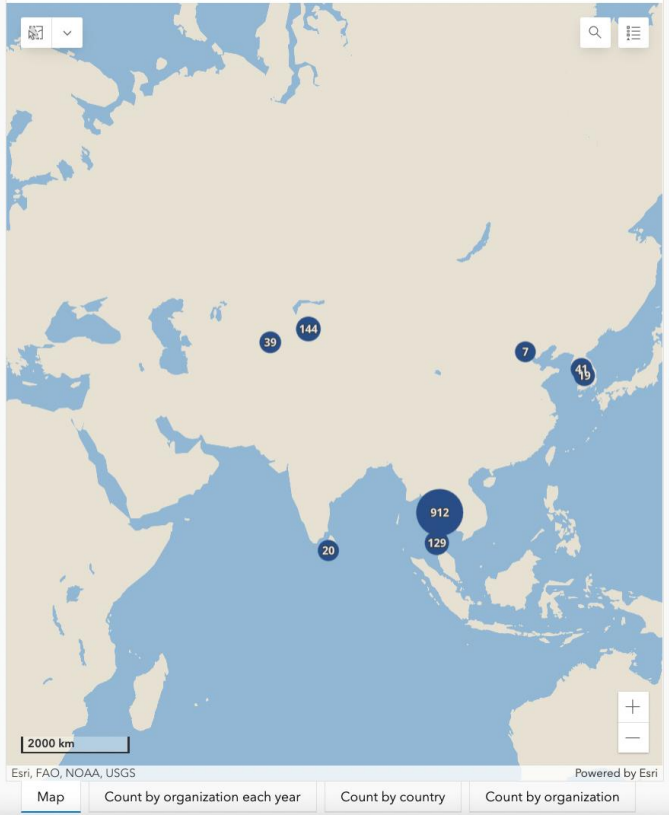
1.3k

Indicator | Gauge

Total number of experts trained each year



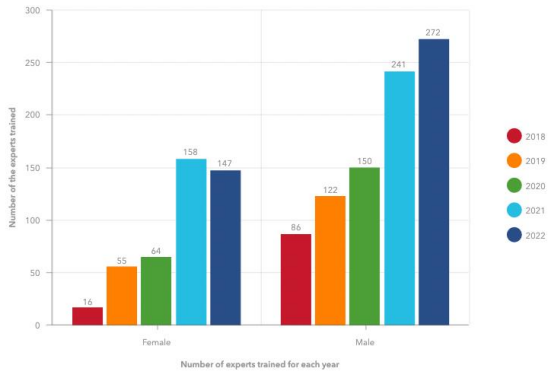
Map of capacity-building training (event venue)



Map | Count by organization each year | Count by country | Count by organization

Total number of experts trained in a different mode

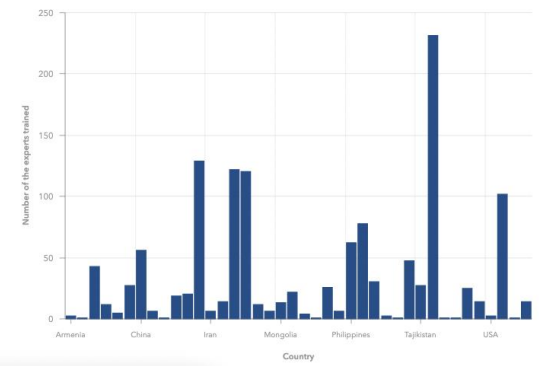
Total number of male and female experts trained each year



Total number of experts trained at each location

Location of the event	Number of the event
Damas International Hotel, Bishkek, Kyrgy…	11
ACCIMT, Colombo, Sri Lanka	20
Bangkok, Thailand	609
Cadastre Agency, Tashkent, Uzbekistan	39
Conference hall, Ministry of Emergency Si…	27
GISTDA Training Center (Bang Khen), Ban…	1
Hotel Kazzhol Almaty	26
KLALRC, Prince of Songkla University, Hat…	41
KOICA, Sejong, Republic of Korea	19
Nay Pyi Taw, Myanmar	9
NIER ESC premise, Incheon, Korea	41
Phuket, Thailand	70
RADI campus, Olympic Village S&T Park, …	7
Royal Beach Club Hotel, Issyk-Kul, Cholpo…	28
SKP, Si Racha, Thailand	57

Total number of experts training from each country



2. Geospatial applications at regional and subregional levels

01 COVID-19 Cases Management

02 Living Supplies Management

03 Medical Capacity Management

04 Vaccine Registration Information

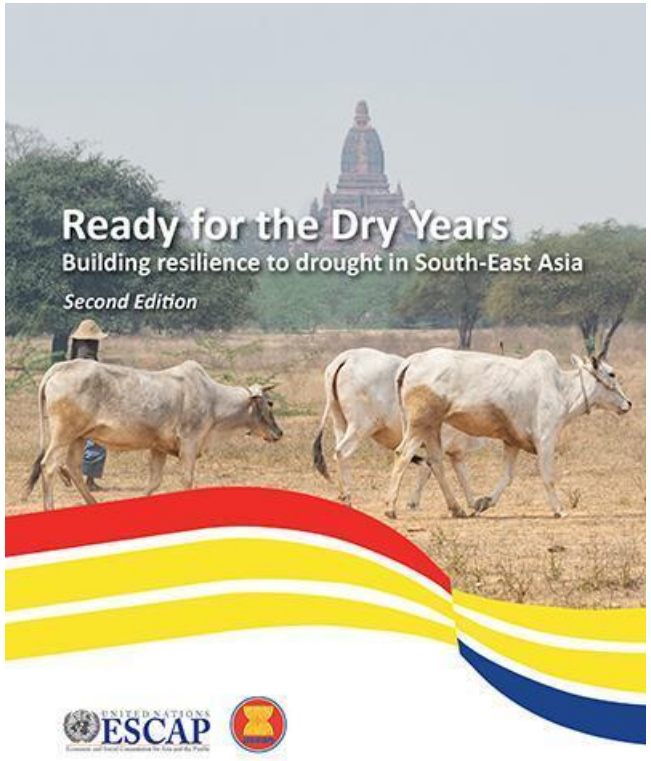
- Series of webinars and training on building a geospatial information platform have been organized, with the support from GISTDA, ARTSA and BRIN, from May 2020 to December 2022, and stakeholders from over 30 countries.
- Support countries in using geospatial data to analyze correlations between the 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.

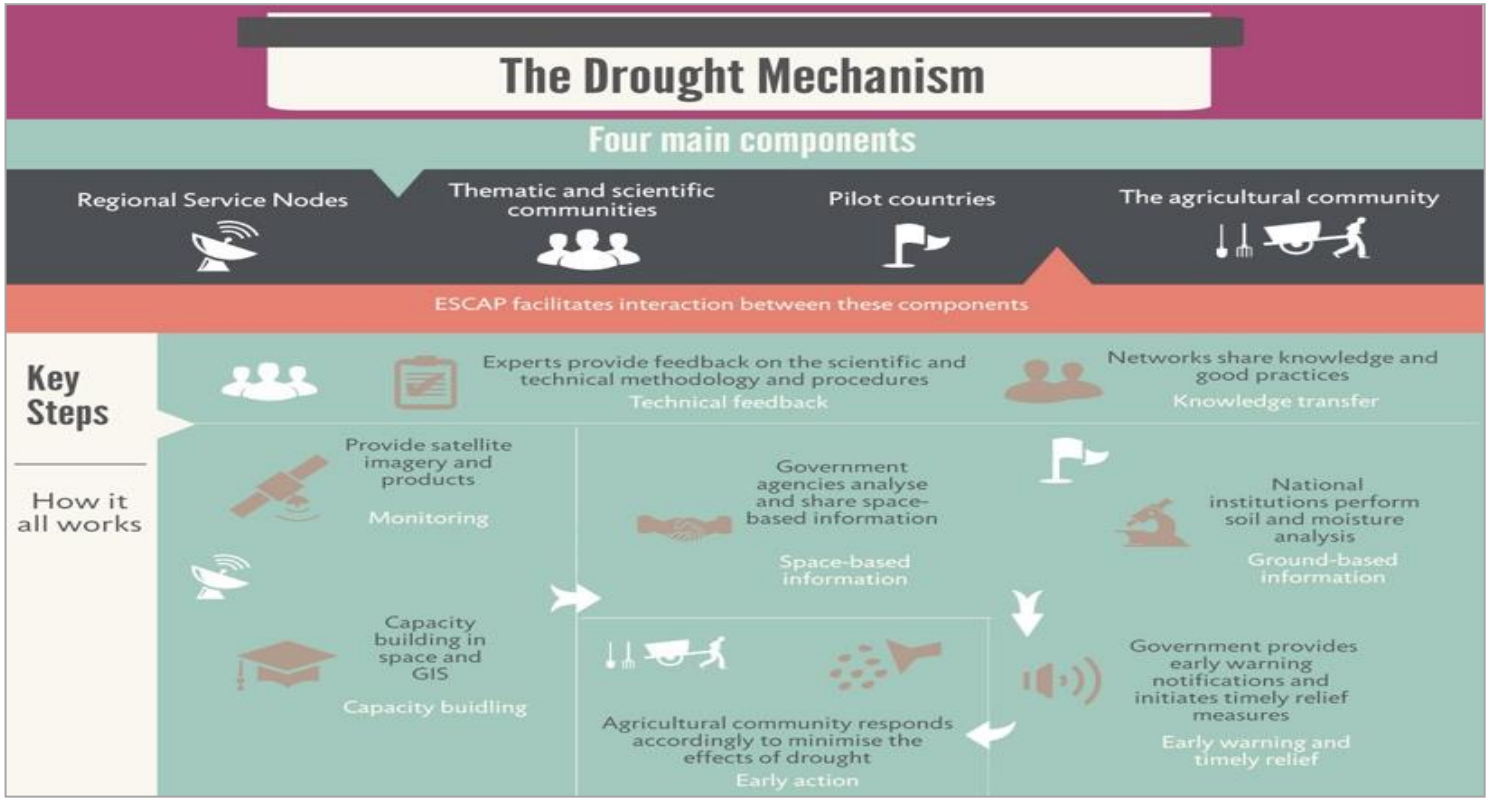
Resilient agriculture in the Lower Mekong Basin

- Develop a crop monitoring system combing ground-based information with satellite data, funded by AIR, China, and GISTDA, Thailand.
- Build awareness and capacity of government officials to utilize the system and innovative technology.
- Contribute to implementing the regional Space Plan of Action (2018-2030) and food. security at the national and provincial levels.
- To share the relevant tools with countries in the region and collaborate with SERVIR-Mekong and APRSAF.

Addressing drought: from space and ground

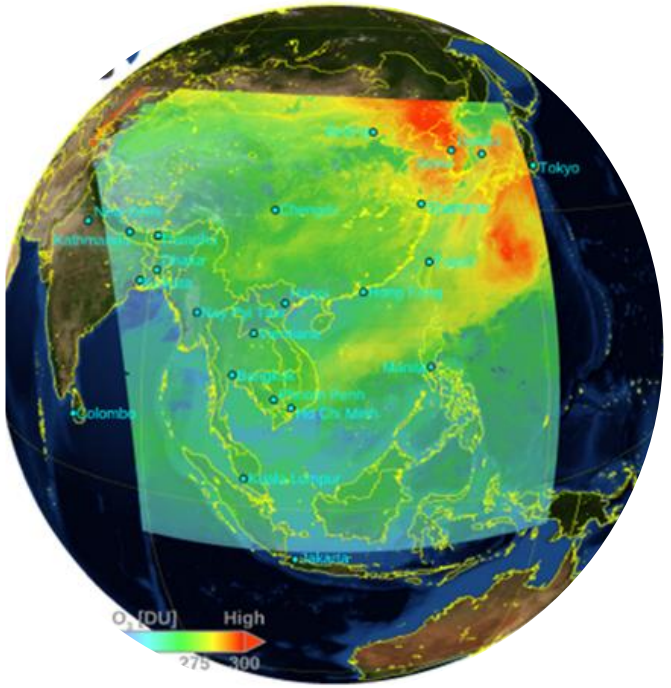
Regional Drought Mechanism to improve the use of integrated geospatial and field data for drought monitoring, early warning and response

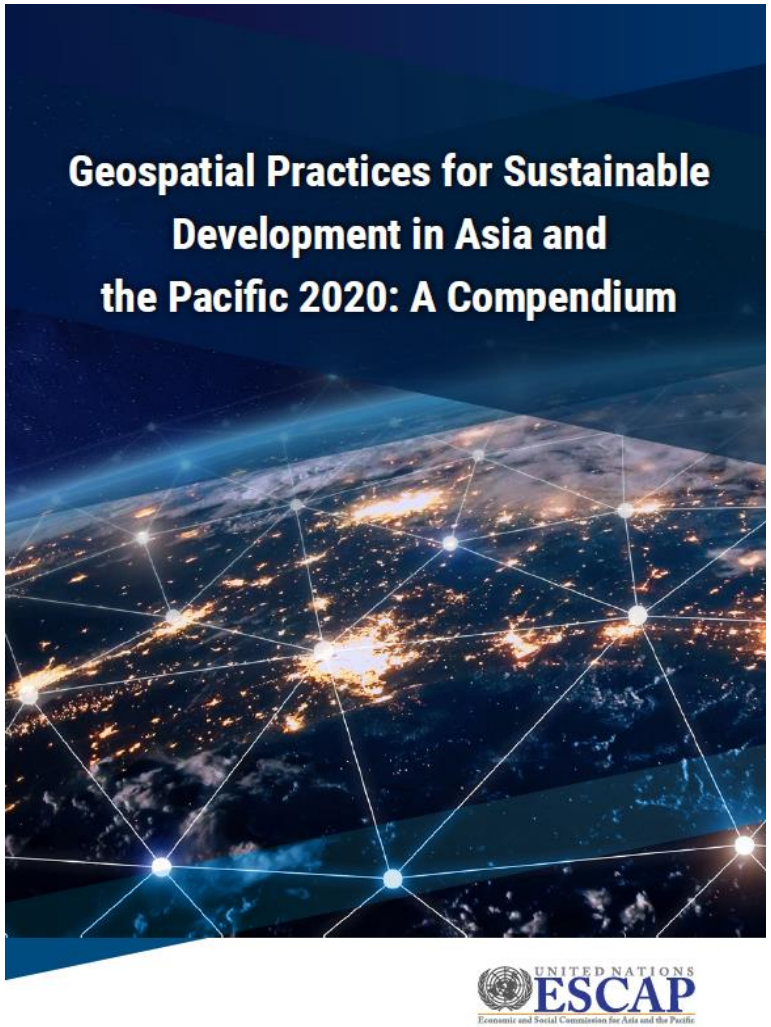


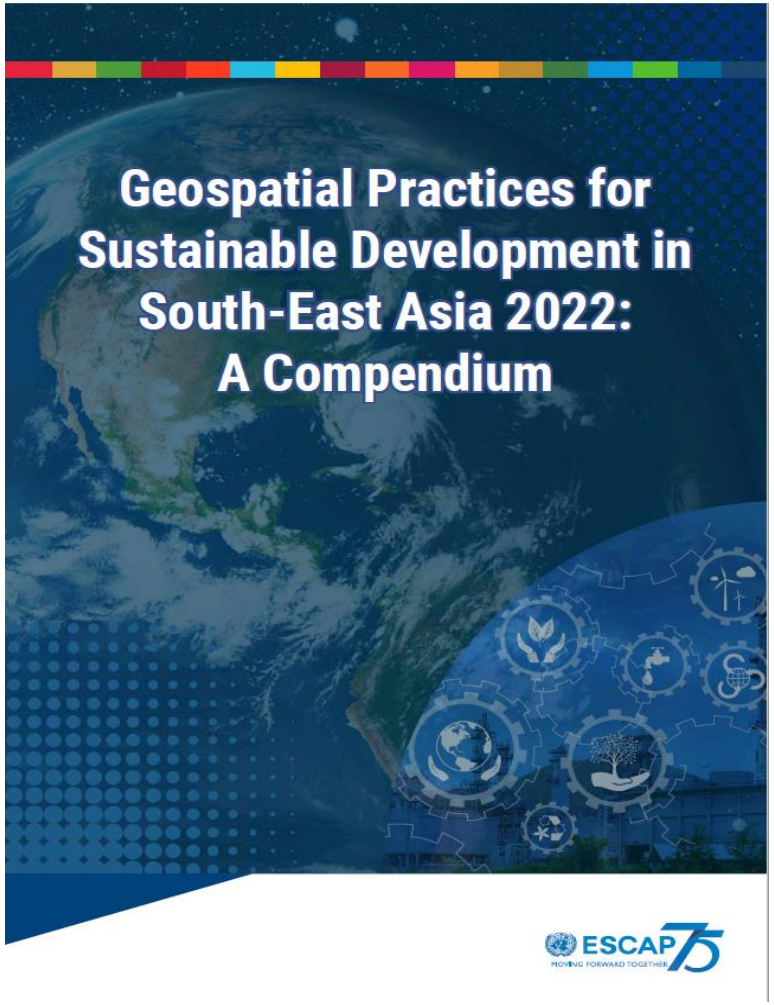


Monitoring air pollution in Asia from space

Geostationary Environment Monitoring Spectrometer (GEMS) is a UV-visible spectrometer to monitor air pollutants (O3, NO2, SO2, HCHO, CHOCHO, and aerosols) at an unprecedented spatial and temporal resolution from a geostationary Earth orbit.



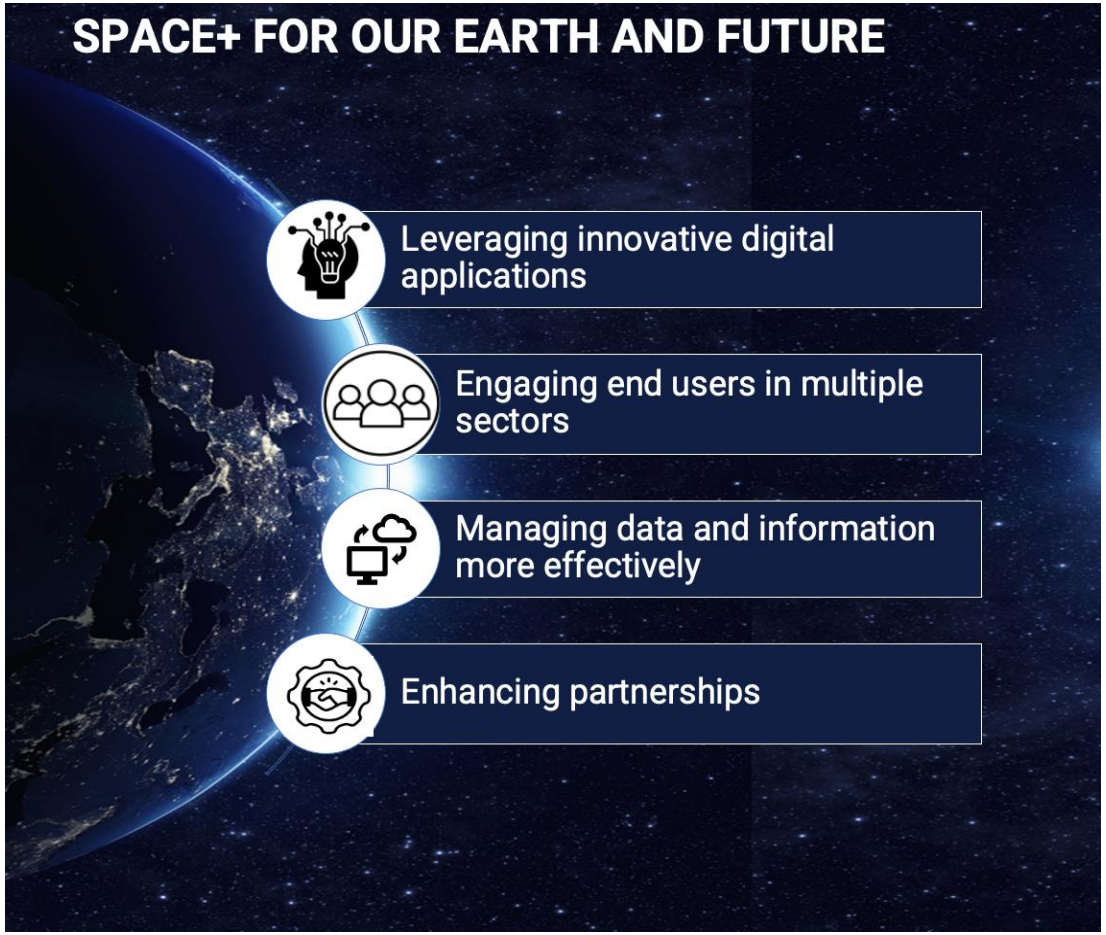


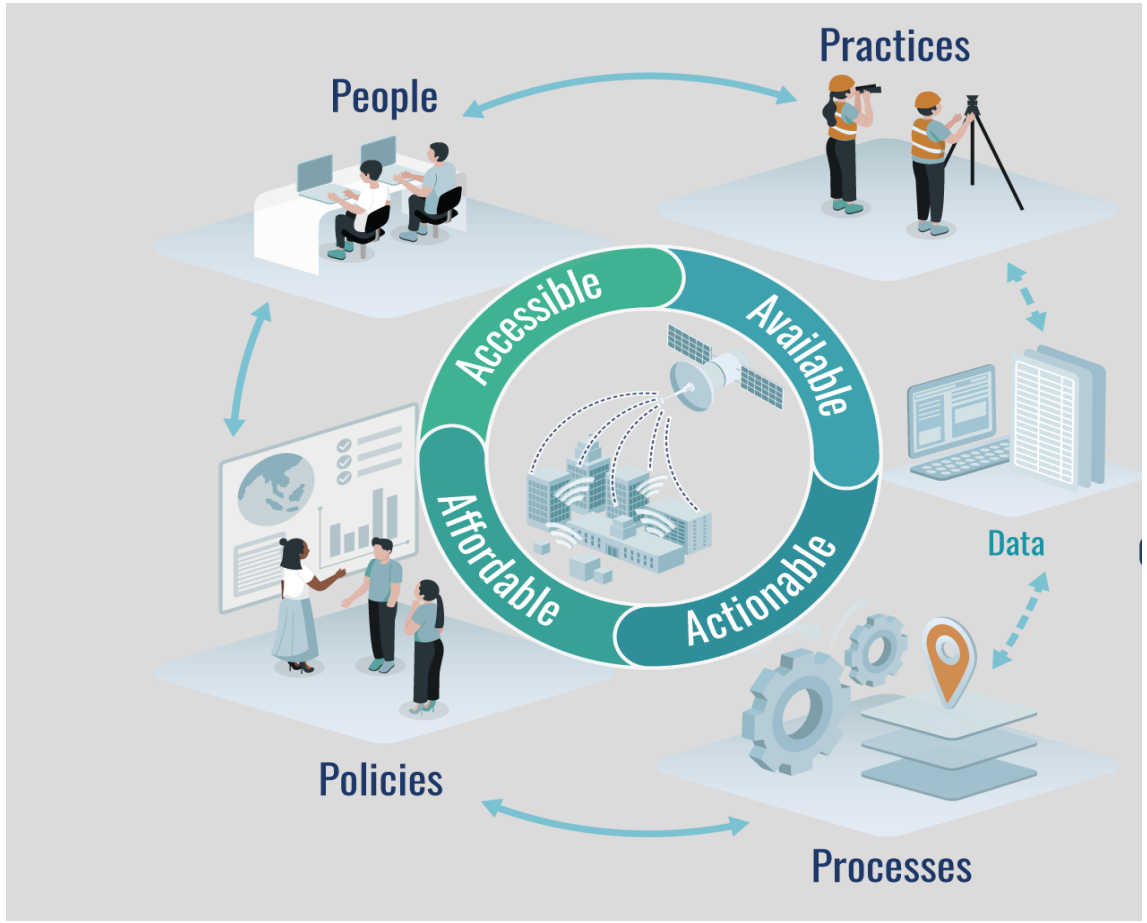


Geospatial practices in North and Northeast Asia 2024: A Compendium

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

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





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

One Data

One Map

One Platform

Same Location

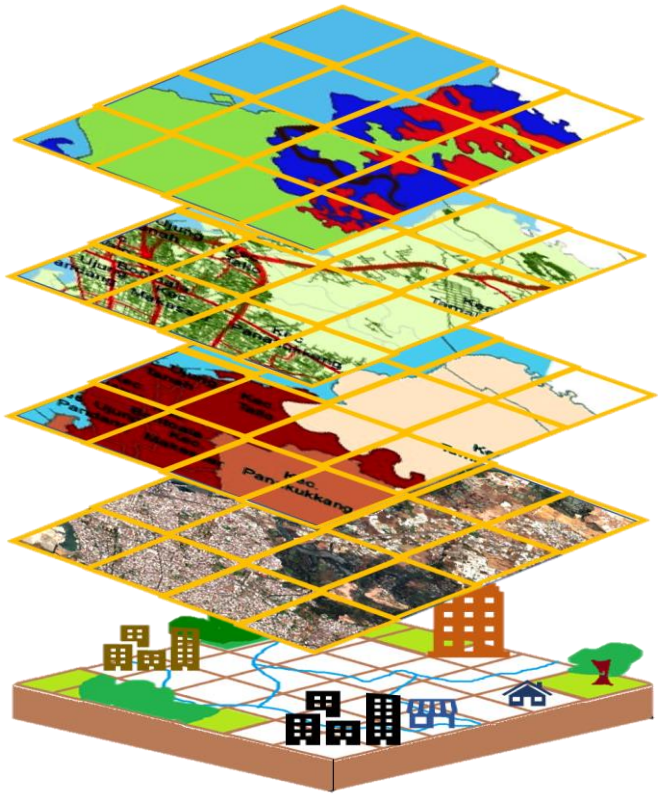
Land Department Division

Health Ministry

Statistical Bureau

Space Agency

Local government



Land Use

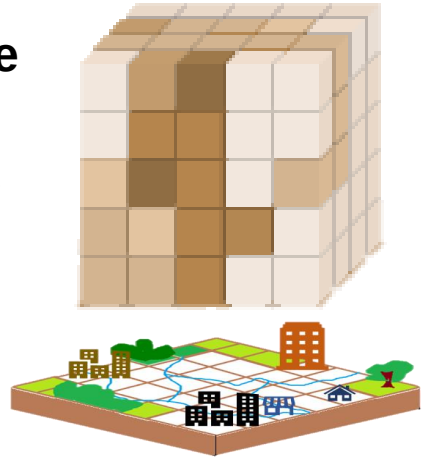
Health, COVID-19 cases

Population

Satellite Image

Ground data

Same Time



Disaster risk hotspot mapping through innovative digital applications

We are working with countries and cooperation partners to build an **ARRAY** of tools and apps to address the data and information needs in Asia and the Pacific

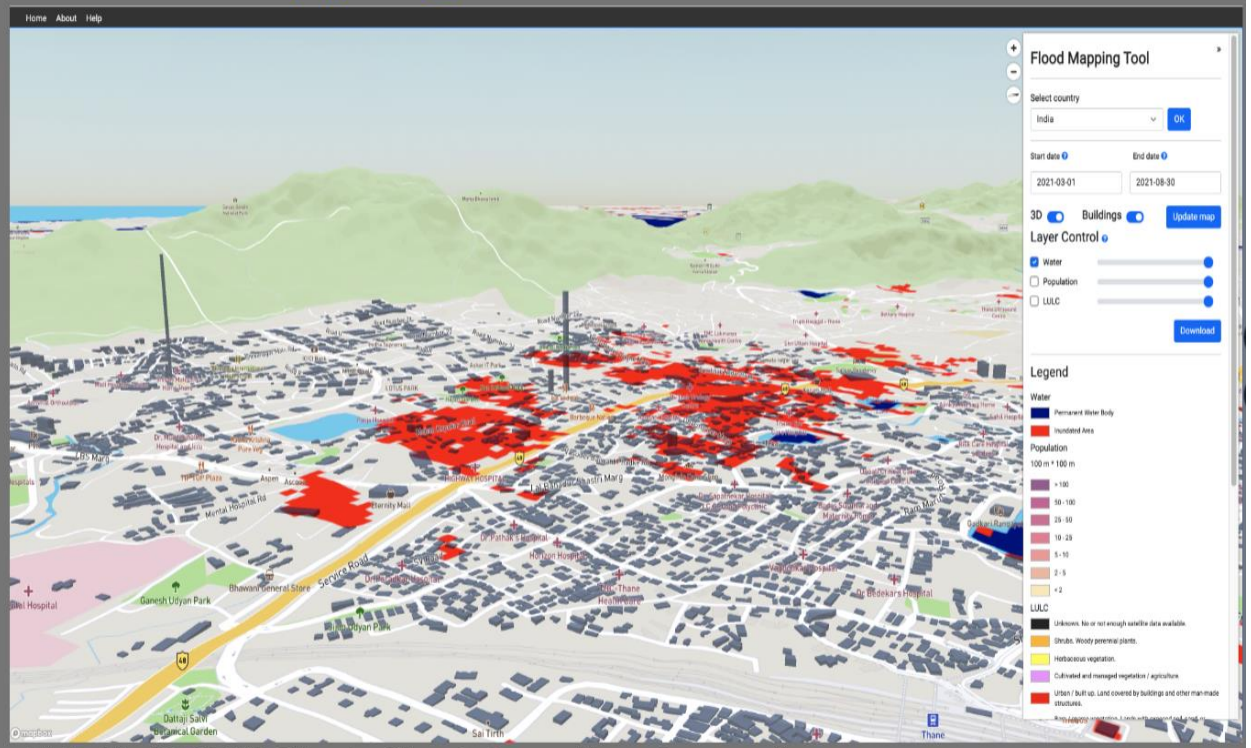
2023

Flood Hotspot Mapping

Wildfire Hotspot Mapping

2026

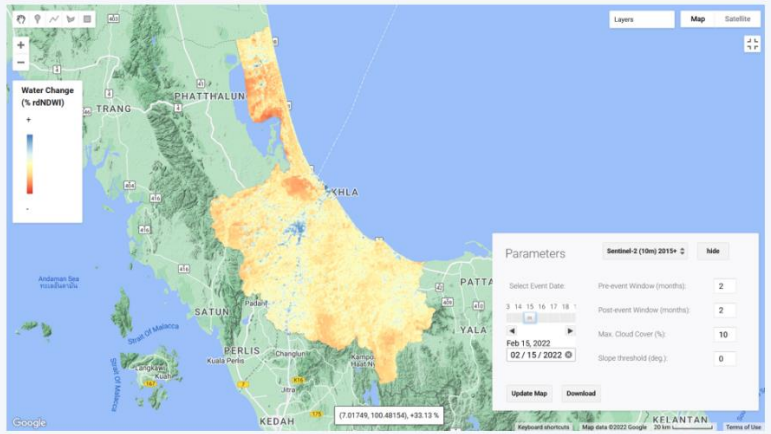
Flood Mapping Tool (floodmapping.inweh.unu.edu)



- Listed in 2022 UN Climate Change Innovations Compendium
- Won the 2021 Popular Science Best of Whats New Award

Disaster risk hotspot mapping: Big Earth Data, Cloud Computing and AI save costs and time, as well as provide more accurate information and analytical insights that are both spatial and temporal

Good Practices: massive open online courses (collaborated with UNU INWEH)



Active and Passive Satellite Data Analysis Using Cloud Computing for Surface Water/Flood Mapping

This online course introduces the participants to Earth Engine Code Editor platform and implementation of surface water detection algorithm using passive and active remote sensing.

Enroll Now

Spatiotemporal Drought Assessment by Leveraging Google Earth Engine Platform

This online course introduces the participants to Earth Engine Code Editor platform and the implementation of drought detection and monitoring algorithm using passive and active remote sensing.

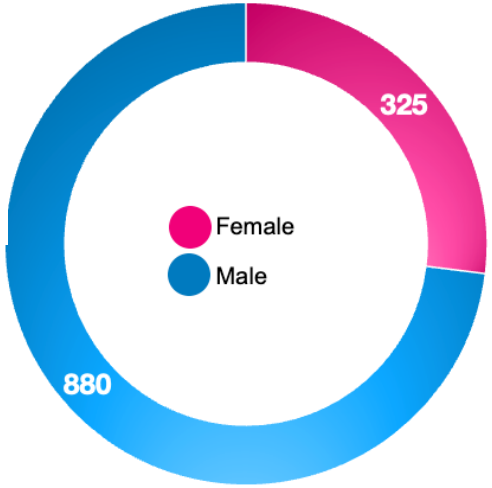
Enroll Now

Total number of participants 1205

Reporting date: 21 April 2023
Course launch date: 28 December 2022

Completion rate 23%

Total number of countries 95

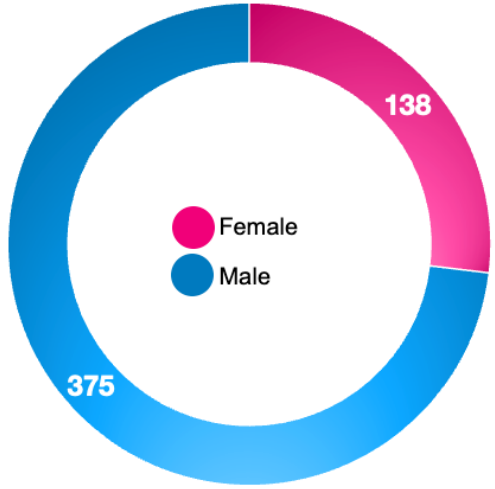


Total number of participants 513

Reporting date: 21 April 2023
Course launch date: 28 December 2022

Completion rate 19%

Total number of countries 95



Participants are from universities, research institutes, and government agencies.

ESCAP organized a side event on engaging the youth for SPACE+ during the 10th Asia-Pacific Forum on Sustainable Development, in Bangkok from 27-30 March 2023, with support from BRIN, GISTDA and PhilSA and universities in Asia.

ESCAP

MOVING FORWARD TOGETHER

Thank you

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