

Leveraging digital and geospatial innovations for building capacity in Asia and the Pacific

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ICT and Disaster Risk Reduction Division of ESCAP*

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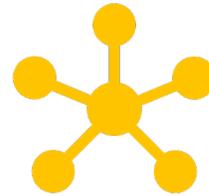
**Outcome of the 4th
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**Innovative
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**Leverage digital
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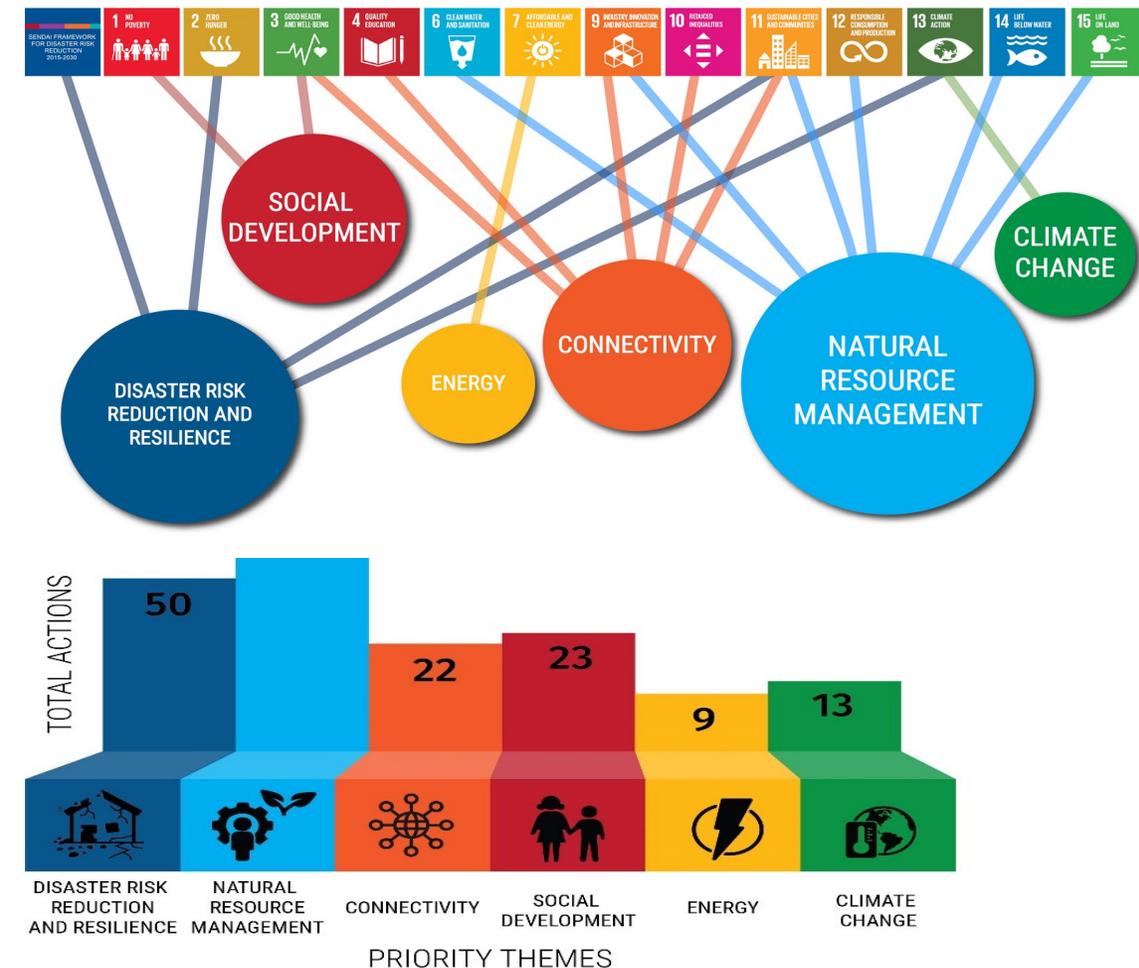


Challenges



Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018–2030)

- Members and associate members have taken actions in (a) disaster risk reduction and resilience; (b) management of natural resources; (c) connectivity; (d) social development; (e) energy; and (f) climate change;
- Implementation of the Ministerial Declaration on Space Applications for Sustainable Development in Asia and the Pacific and the Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018–2030), through resolution 75/6;
- Implementation of the Jakarta Ministerial Declaration on Space Applications for Sustainable Development in Asia and the Pacific, through resolution 79/9.



Geospatial Good Practices Database and Dashboard



ABOUT THE DATABASE AND DASHBOARD

This showcases the good practices and experiences amongst countries and stakeholders in line with the implementation of the **Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018-2030)**.

GOOD PRACTICES

511

ACTIONS IMPLEMENTED

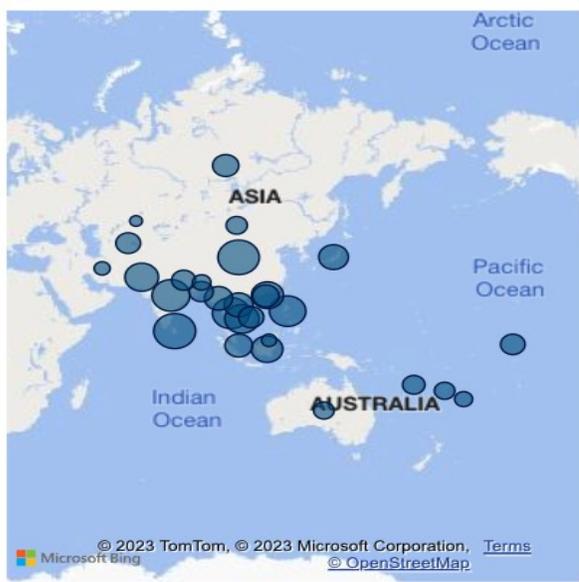
3388

SUB-THEMES IMPLEMENTED

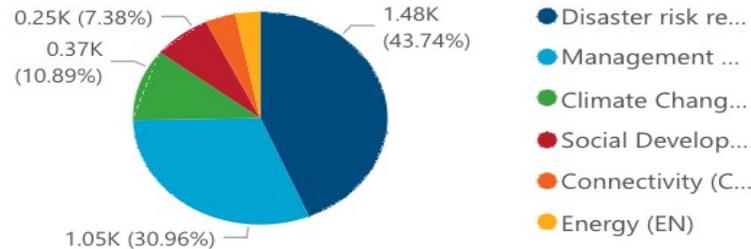
34

Country/Region

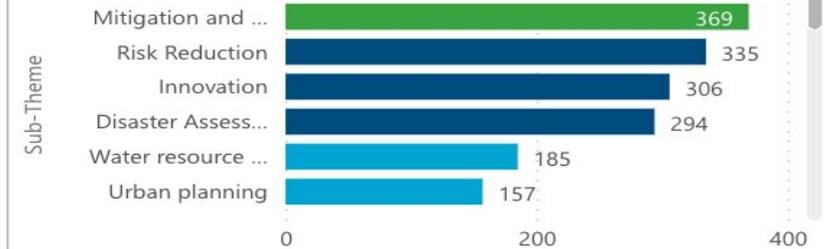
All



Number of Actions by Thematic Area



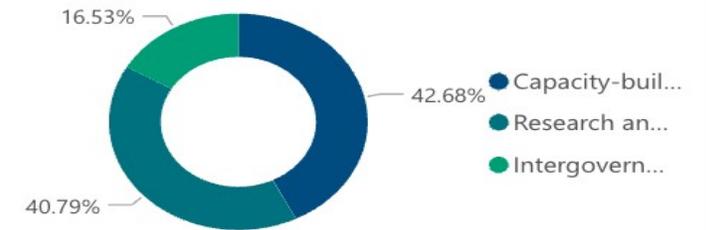
Top Contributing Sub-Themes



Timeline of Action Implementation



Number of Actions by Action Area



Good Practices

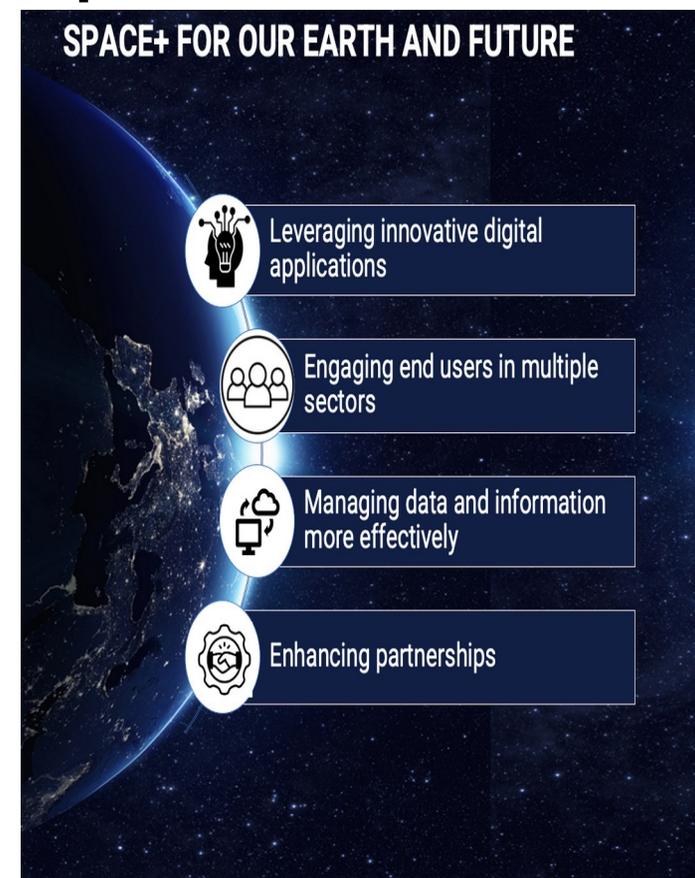
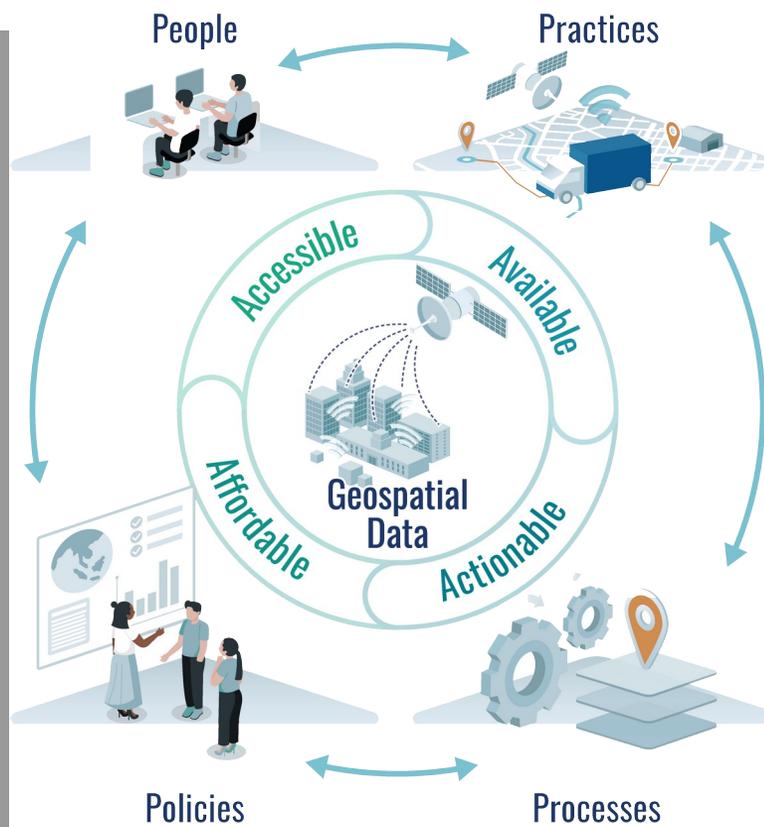
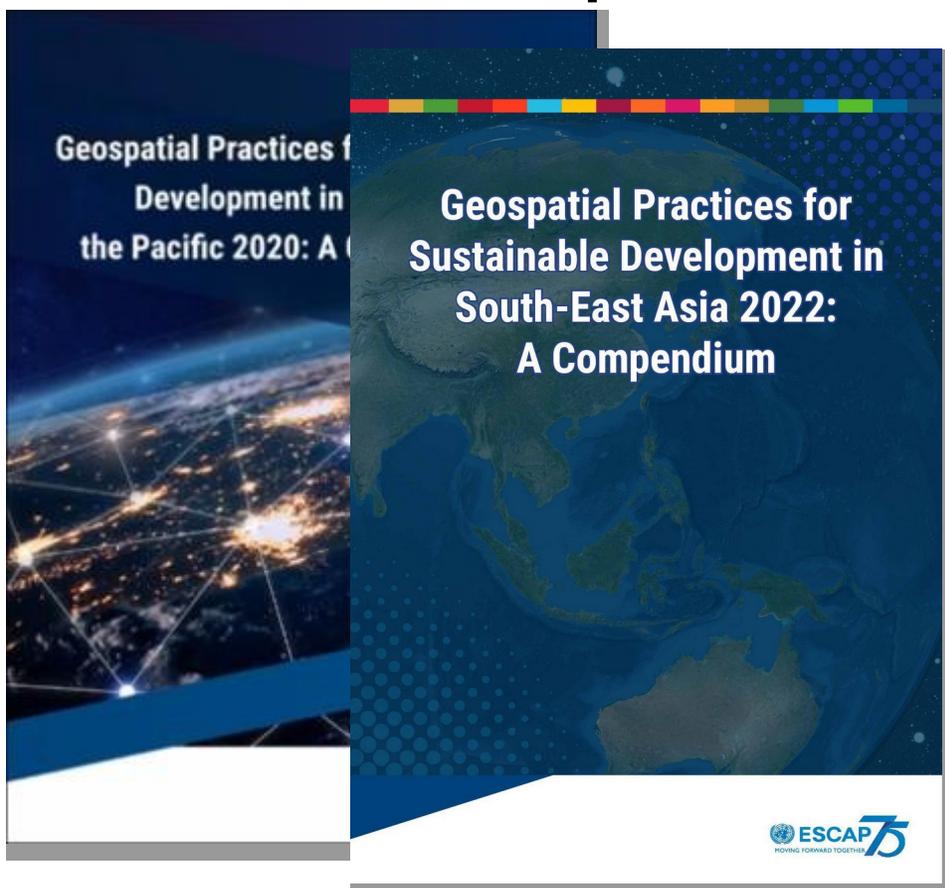
SDGs

Thematic Areas

Action Areas

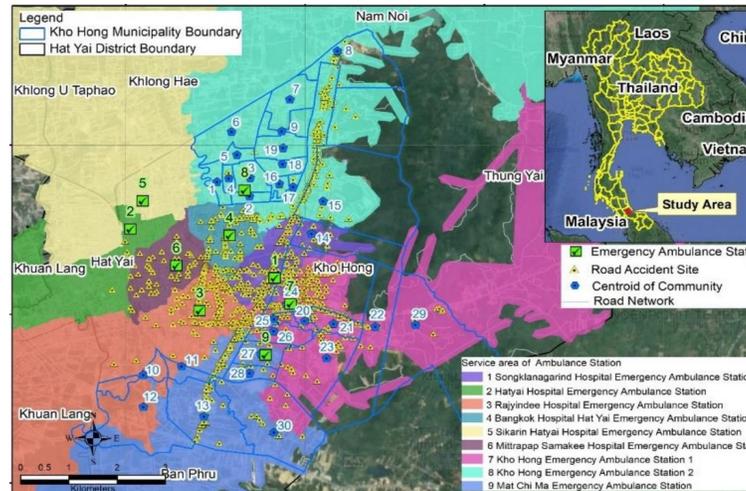
Innovative geospatial information applications for sustainable development

Compendium series: sharing knowledge and experience

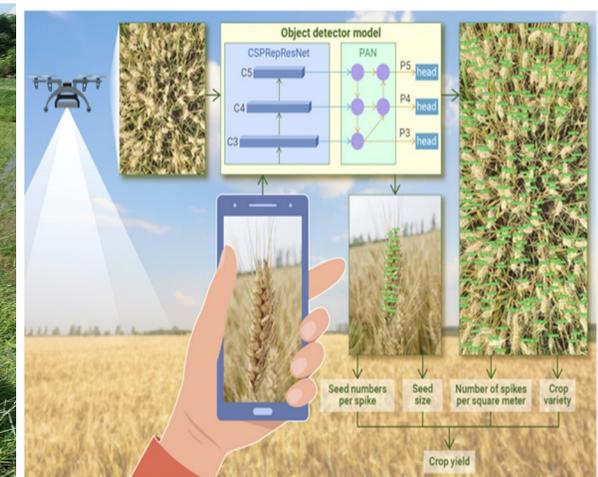
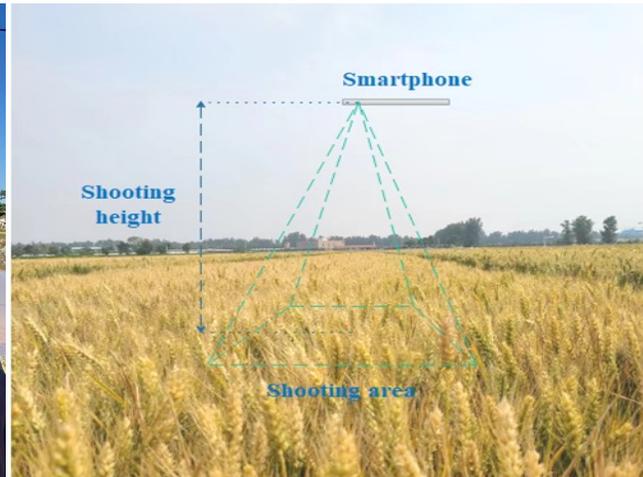


Building institutional capacity for the use of integrated spatio-temporal data in local SDGs monitoring and decision-making

Pilot cities: Makassar and Bandung, Indonesia; Songkhla, Thailand



Building resilient agricultural in the Lower Mekong Basin



Partnership



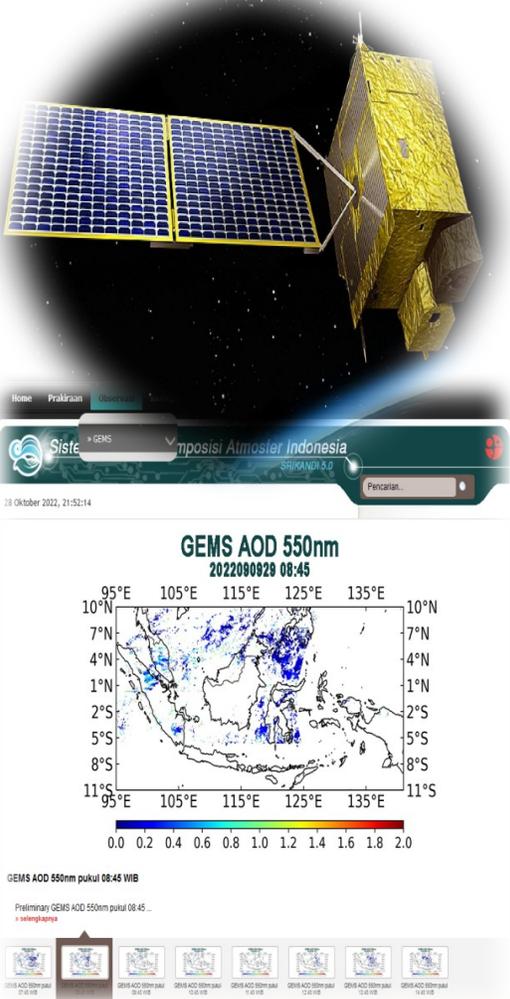
GISTDA



GIC

NECTEC

Building the Pan-Asia Partnership for Geospatial Air Pollution information



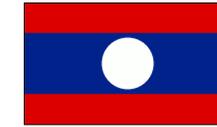
Bangladesh
SPARRO



Cambodia
MoE



Indonesia
BRIN



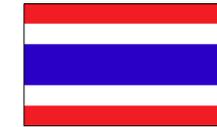
Lao PDR
MONRE



Mongolia
IRIMHE



Philippines
PhilSA



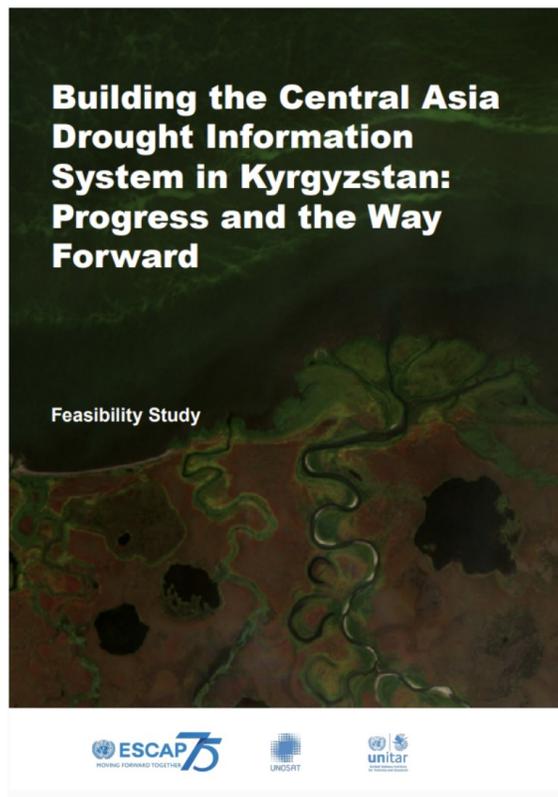
Thailand
GISTDA



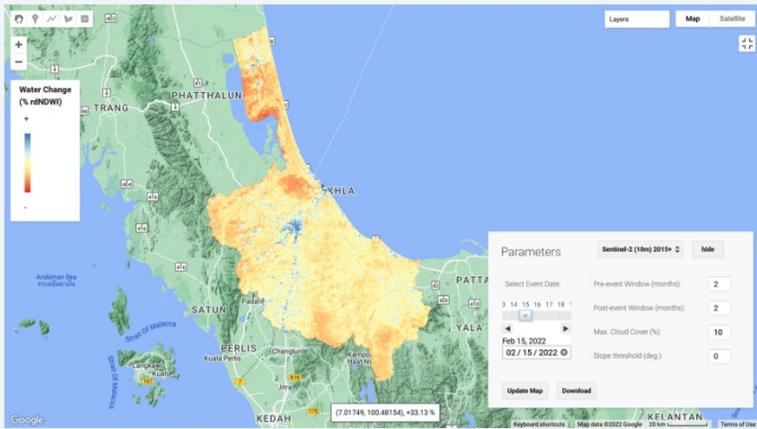
Viet Nam
MONRE



Central Asia Drought Information System (CADIS) Pilot Project



Massive Open Online Courses (wlc.un.edu)



Completion rate 23%
 Active 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

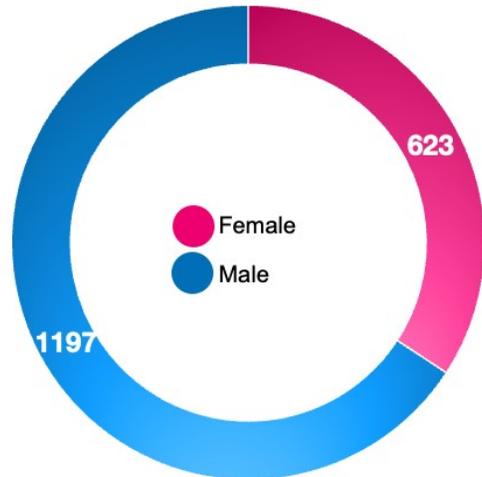
This online course introduces the participants to Earth Engine Code Editor platform and the implementation of drought detection and monitoring algorithm using passive and active remote sensing.

[Enroll Now](#)

Total number of participants 1820

Reporting date: 25 Jan 2024
 Course launch date: 28 December 2022

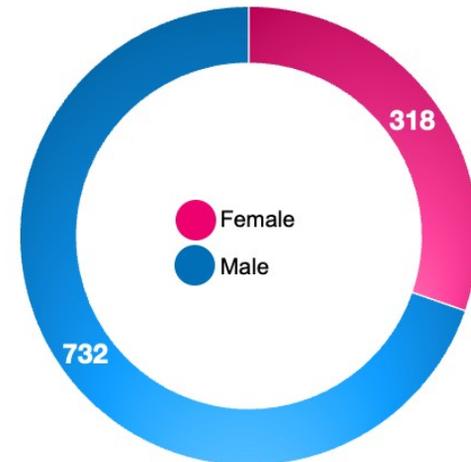
Completion rate 27%



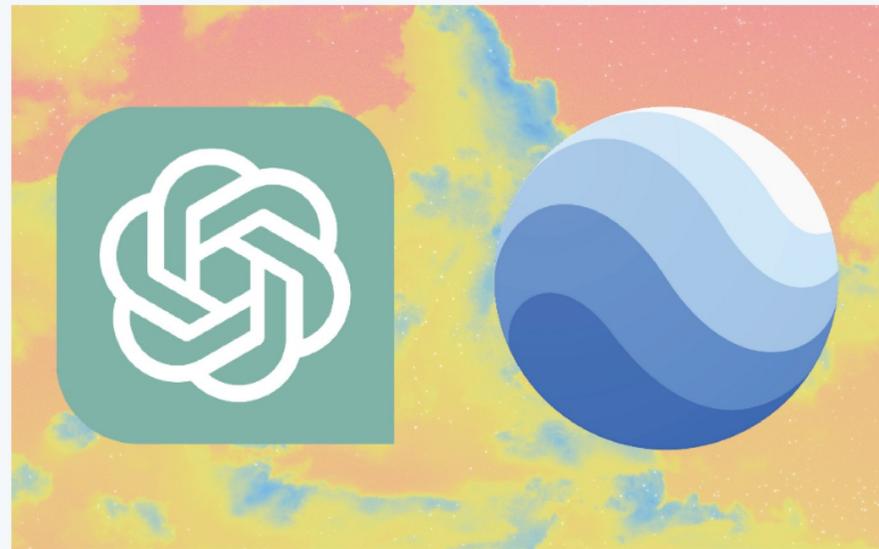
Total number of participants 1050

Reporting date: 25 Jan 2024
 Course launch date: 28 December 2022

Completion rate 23%



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

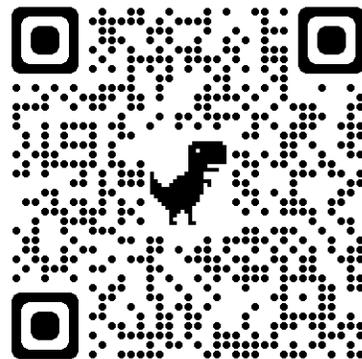


Introduction to Geospatial Data Analysis with ChatGPT and Google Earth Engine

This online course introduces the participants to ChatGPT and Earth Engine Code Editor platform to process and interpret geospatial data.

ENROLL NOW

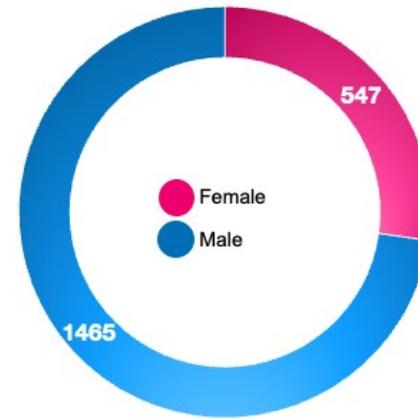
wlc.unu.edu



Total number of participants **2012**

Reporting date: 23 Jan 2023
Course launch date: 18 December 2022

Completion rate **19%**



Gender-based distribution of the participants

Average age of the participants: 32 yrs

Total number of countries **110**

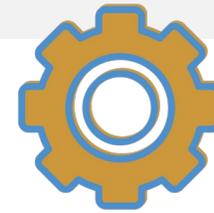
Avg enrollements per day **58**

Total number of countries **110**

Country	Number of Participants	Country	Number of Participants
Pakistan	222	Netherlands	2
India	71	Ghana	2
Algeria	18	Haiti	2
Bangladesh	16	Tonga	2
Madagascar	12	Bolivia, Plurinational State of	2
Nigeria	11	United Kingdom	2
Philippines	11	Peru	2
United States	10	Jordan	2
Ethiopia	10	Romania	2
Kazakhstan	9	Paraguay	2
Canada	8	Guatemala	1
Egypt	8	Togo	1
Germany	7	Laos People's Democratic	1
Thailand	6	Turkey	1
Iran, Islamic Republic of	6	Oman	1
Rwanda	5	Greece	1
Mexico	5	Australia	1
Morocco	5	Brazil	1
Afghanistan	5	Palestine, State of	1
Sudan	4	Trinidad and Tobago	1
Saudi Arabia	4	Papua New Guinea	1
Russian Federation	4	Iraq	1
France	4	Liberia	1
Sri Lanka	4	Niger	1
Kenya	4	Argentina	1
Uzbekistan	4	Syrian Arab Republic	1
Cameroon	4	Israel	1
Namibia	4	Tajikistan	1
Belgium	3	Poland	1
Myanmar	3	Chile	1
China	3	Yemen	1
Indonesia	3	Bhutan	1
Nepal	3	Hong Kong	1
Japan	3	Korea, Republic of	1
Tanzania, United Republic of	3	Azerbaijan	1
Kiribati	3	Uganda	1
Viet Nam	3	Austria	1
Zambia	3	land Islands	1
Cambodia	3	Senegal	1
Tunisia	2	Nicaragua	1
Somalia	2	Botswana	1
Cte d'Ivoire	2	Moldova, Republic of	1
Armenia	2	Zimbabwe	1
my	2	Malawi	1
Libya	2	Malaysia	1
Hungary	2		
Colombia	2		
Benin	2		

Virtual Satellite Constellation for Disaster Risk Management (VSC)

The **VSC** will develop a mechanism for sharing satellite imagery within Asia and the Pacific to build resilience in disaster risk hotspots



Develop a satellite imagery sharing mechanism for enhanced pre-disaster monitoring of risk in high disaster - low risk countries

Improve the capacity of local governments and disaster management-related agencies to be prepared and manage disasters over their entire cycle

Provide inputs to the spacefaring nations on the design of future satellites and sensors which address national and regional data needs

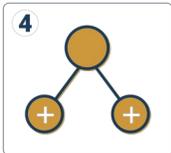
1 Set up an informal working group to work out the operational details and conduct a study to map free and commercial remote sensing data providers and share the catalogue with all member States.



2 Invite spacefaring countries to set aside a percentage of their satellite operational time or data archive for use by high disaster-risk and low-capacity countries.



3 Invite target countries to identify disaster risk hotspots for satellite imaging.



4 Match support and demand for satellite data by the secretariat using the VSC Catalog and form a working group to facilitate data transfer.

5 Provide technical assistance to the target countries in hosting, storing, processing and analysing the satellite data.

6 Share the data requests with all the spacefaring nations to ensure that the regional needs are addressed in future satellite and sensor design.

7

Contribute to the Asia-Pacific Plan of Action on Space Applications for Sustainable Development (2018–2030) in the areas of:



Disaster Risk Reduction and Resilience



Social Development



Management of Natural Resources

Leverage the power of Large Language Models (LLMs) to develop an open-access platform to better monitor and manage disaster risks_SatGPT



Label images: LLMs will be used to label images with relevant information, such as the type of disaster, the extent of the damage, and the number of people affected.



Classify data: LLMs will be used to classify remote sensing data, such as distinguishing between different types of disasters or different levels of damage.



Generate reports: LLMs will be used to generate reports that summarize the findings of remote sensing data analysis and integrate sectoral data to aid decision-making and policy formulation.



Extract features: LLMs will be used to extract features from remote sensing data, such as the location of a disaster, the severity of the damage, and the risk of future disasters.

Challenges

- How to augment digital innovations and engage end users across multiple sectors, including the private sector, to strengthen the integration of geospatial information for sustainable development
- How to provide more capacity-building activities, including space applications for youth and knowledge sharing of best practices to promote the adoption of new technologies
- How to strengthen partnerships at the regional level for more financial and technical supports to countries, in particular, those with special needs.



THANK YOU

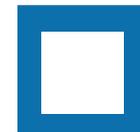
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