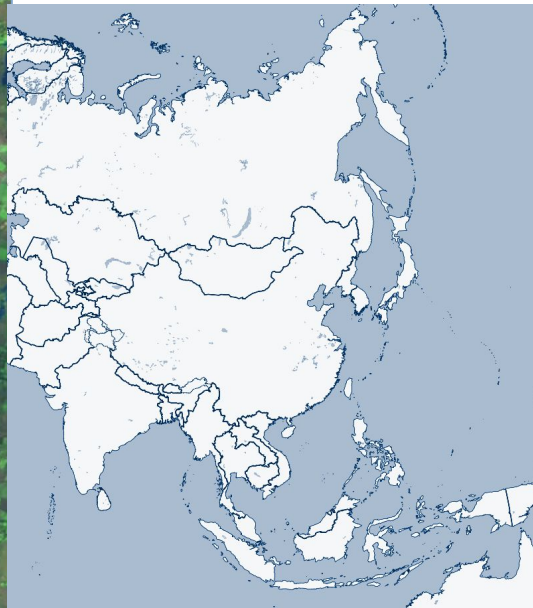


# Welcome!

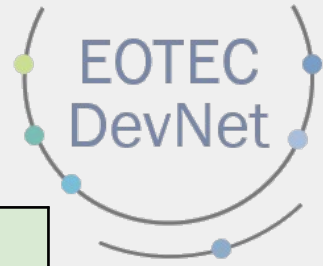
EARTH OBSERVATION TRAINING, EDUCATION,  
AND CAPACITY DEVELOPMENT NETWORK

*ASIA OCEANIA REGION COMMUNITY OF PRACTICE*  
**FLOODS WORKING GROUP**

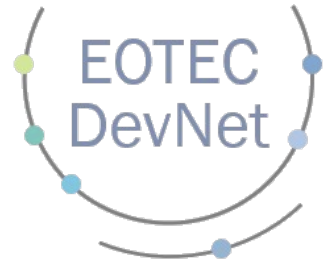
18 July 2024



# Today's agenda



Time (UTC)	Agenda item	Presenter/moderator
04:00	<b>Welcome</b>	<i>CM Bhatt</i>
04:05	<b>Introductions</b>	<i>All participants</i>
04:10	<b>Spotlight presentation</b> <i>Sentinel Asia and International Disasters Charter: Disasters Management using Space Technologies</i>	<i>Takeshi Shiraishi</i> <i>Executive Secretariat of International Disasters Charter and Secretariat of Sentinel Asia, Japan Space Forum</i>
04:35	<b>Demo of updated flood tools tracker</b>	<i>Yasha Moz, EOTEC DevNet Secretariat</i>
04:45	<b>Membership updates</b> <i>Share your news on training, tools, and other resources</i>	<i>All participants</i>
04:55	<b>Global leadership and Secretariat updates</b>	<i>EOTEC DevNet Secretariat</i>
05:05	<b>Upcoming opportunities</b>	<i>Secretariat, participants</i>
05:10	<b>Next meeting, other next steps, and thanks</b>	<i>CM Bhatt</i>
05:15	<b>Conclusion</b>	



# Spotlight presentation

SENTINEL ASIA AND INTERNATIONAL DISASTERS CHARTER:  
DISASTERS MANAGEMENT USING SPACE TECHNOLOGIES

**Takeshi Shiraishi**

Executive Secretariat of International Disasters Charter and Secretariat of  
Sentinel Asia, Japan Space Forum



# **Sentinel Asia and International Disasters Charter: Disasters Management using Space Technologies**

18 July 2024,  
EOTEC DevNet Asia Oceania Region Floods Working Group  
Meeting

SHIRAISHI, Takeshi  
Japan Space Forum, contractor to JAXA  
Sentinel Asia Secretariat and Disasters Charter Executive  
Secretariat

# Satellite Images for Disaster Management

## DAMAGE ASSESSMENT IN RAKHINE STATE, MYANMAR

As Observed by Pleiades Satellite on 19 May 2023



1,119  
DAMAGED BUILDINGS



This map shows the detected damaged buildings in Urban Village, Rathedaung Town, Sittwe Districts, Rakhine State, Myanmar on May 19, 2023, due to heavy rains and strong winds on May 14, 2023, from Cyclone Mocha.

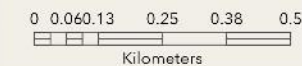
- Damaged Building
- Urban Village
- Village Boundary
- Road

Satellite Image:  
Pre-disaster : Pleiades on 28 Oct 2022,  
Post-disaster : Pleiades on 19 May 2023.

Copyright: "Pleiades © CNES (2023),  
Distribution Airbus DS"

GIS Data:  
Road © OSM (2023)  
Administrative Boundary  
© Myanmar Information Management Unit  
(2023)

Map Scale 1:7,000  
Coordinate System: GCS WGS 84  
Datum: D WGS 84  
Unit: Degree



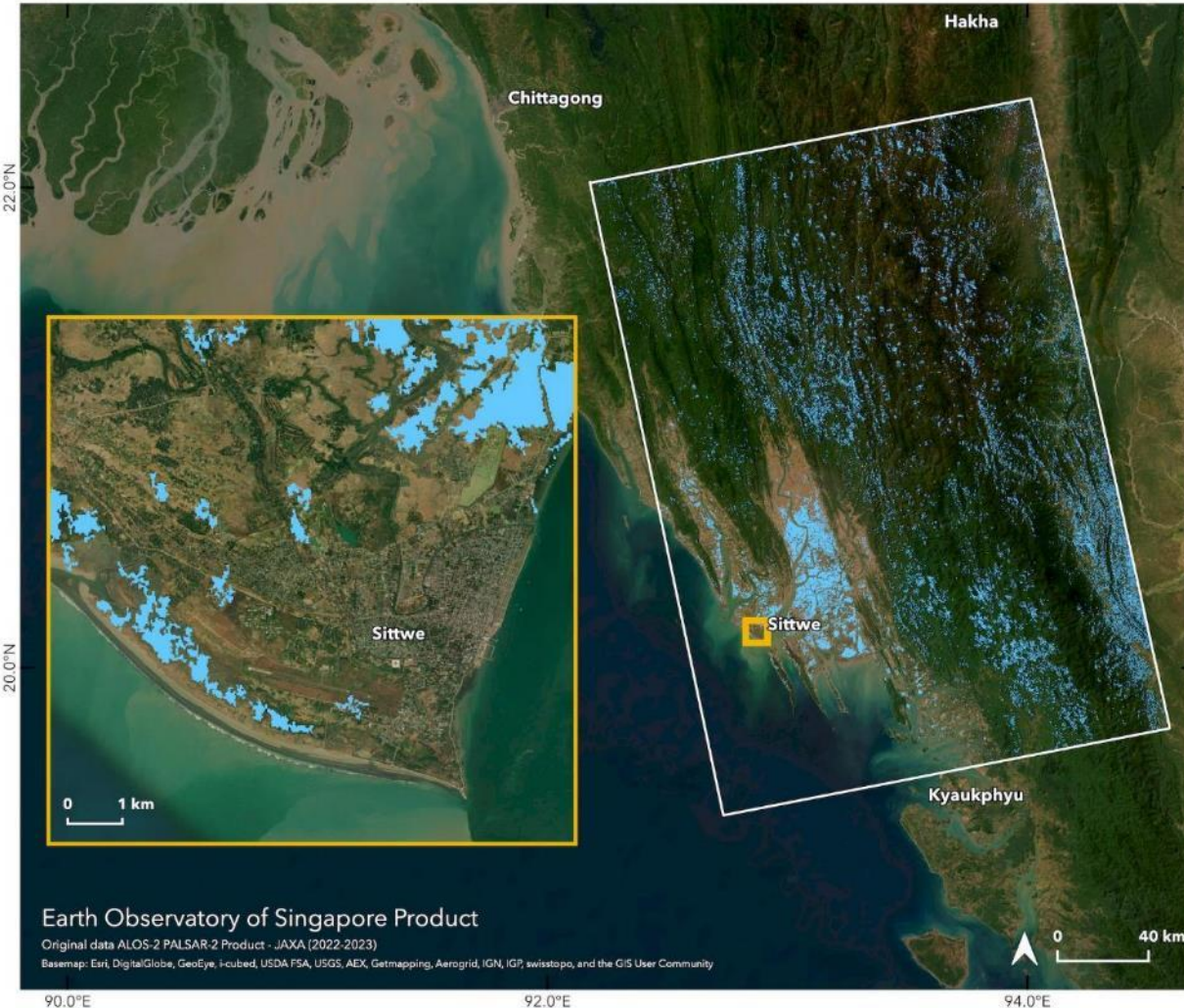
0 0.060.13 0.25 0.38 0.5  
Kilometers

Map product made by GIC-AIT (v1.0).

Disclaimer: The accuracy of this product  
is not validated.



# Satellite Images for Disaster Management



EOS-RS Flood Proxy  
Map: Myanmar,  
Cyclone Mocha,  
14 May 2023, v0.4

The Earth Observatory of Singapore - Remote Sensing Lab (EOS-RS) created this preliminary Flood Proxy Map (FPM) depicting areas that are likely flooded in northern Rakhine, Myanmar due to Cyclone Mocha which made landfall on 14 May 2023. This map was derived from synthetic aperture radar (SAR) images acquired by the ALOS-2 satellite operated by the Japan Aerospace Exploration Agency (JAXA) before (11 Dec 2022) and during (14 May 2023) the event.

The image covers an area indicated by the large white polygon. Each light blue pixel measures about 25 m across. This map has not been validated. This flood proxy map should be used as a guide to identify areas that are likely flooded, and is less reliable over urban and vegetated areas.

Data were provided by Sentinel Asia and analyzed by the Earth Observatory of Singapore - Remote Sensing Lab (EOS-RS).

More map details and files at: [http://eos-rs-products.earthobservatory.sg/EOS-RS\\_202305\\_Myanmar\\_Cyclone\\_Mocha/](http://eos-rs-products.earthobservatory.sg/EOS-RS_202305_Myanmar_Cyclone_Mocha/)

Credits: Earth Observatory of Singapore - Remote Sensing Lab (EOS-RS), Original data ALOS-2 PALSAR-2 Product - JAXA (2022-2023)

Cyclone MOCHA in Myanmar, May 2023  
Satellite: ALOS-2 (JAXA)  
VAP created by Earth Observatory of Singapore – Remote Sensing Lab (EOS-RS)

EOS-RS Twitter: @eos\_rs





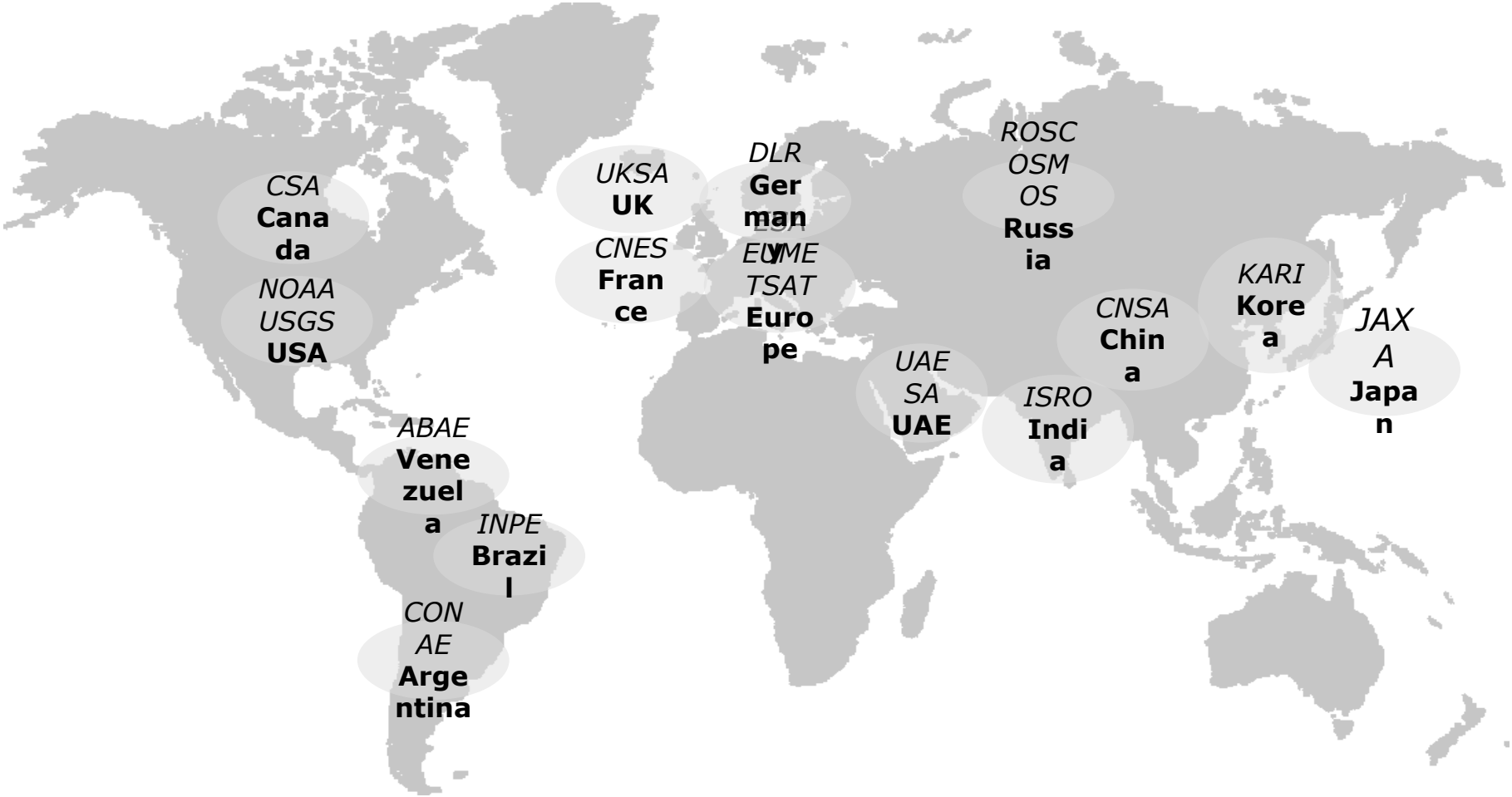
# International Charter – Space and Major Disasters



- An international agreement by Satellite Operators to provide priority access to satellite data in the event of Major Disasters.
- Founded by European Space Agency, Canadian Space Agency, and French National Centre for Space Study (CNES) in 1999 following UNISPACE III.
- Declared operational November 1, 2000. Current Member Agencies: 16
- Disaster response
- Multi-satellite - Free Data - Priority & fast access
- Satellite Tasking and Archive data
- Data processing to a pre-determined level

<https://disasterscharter.org/>

# Disasters Charter Members







# Sentinel Asia

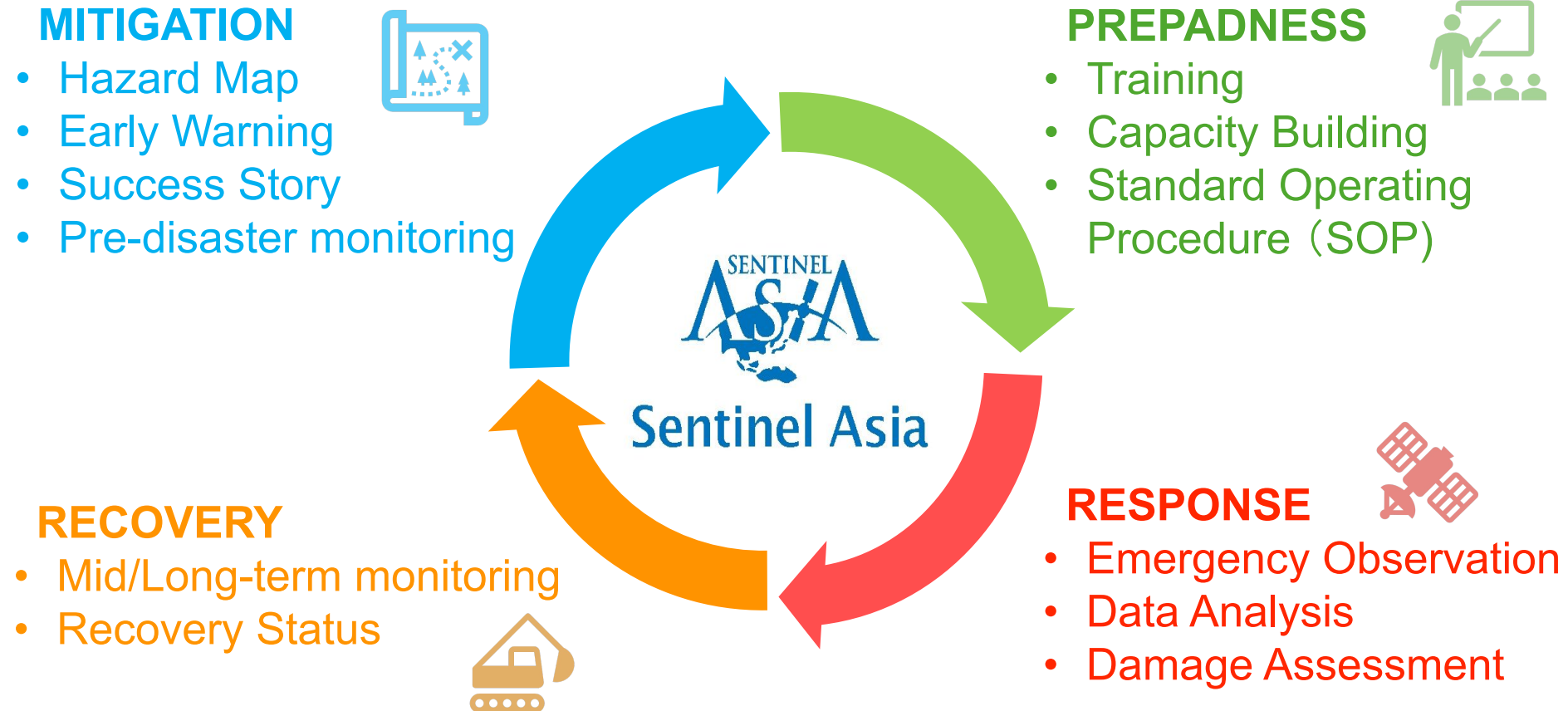


- An initiative proposed at the Asia-Pacific Regional Space Agency Forum (APRSAF) in 2005, to showcase the value and impact of Earth observation technologies, combined with near-real-time internet dissemination methods and Web-GIS mapping tools for disaster management support in the Asia-Pacific region.
- Current Joint Project Team (JPT) Members:
  - 99 organizations from 29 countries/regions and 17 international organizations
  - 116 in total.

<https://sentinel-asia.org/>

# Concept of Sentinel Asia Strategic Plan

“Challenges for Disaster Risk Reduction by a Collaboration between Space and Disaster Management Agencies”





# Comparison: Sentinel Asia and the Charter



	Sentinel Asia	Disasters Charter
Region to respond	Asia and Pacific	Worldwide
Members	space community, disaster management organizations, regional/international organizations sharing disaster information activities	National/International agencies who operate earth observation satellites
Disaster response	All the phases of the disaster	Emergency Response
Requestor	Sentinel Asia member agencies	Authorized Users United Nations Sentinel Asia member
Disasters Maps	Data Analysis Node members provide value adding service	Project Managers and Value Adders from third parties provide value adding service



# Disaster Occurs! How to request:



- Sentinel Asia Members

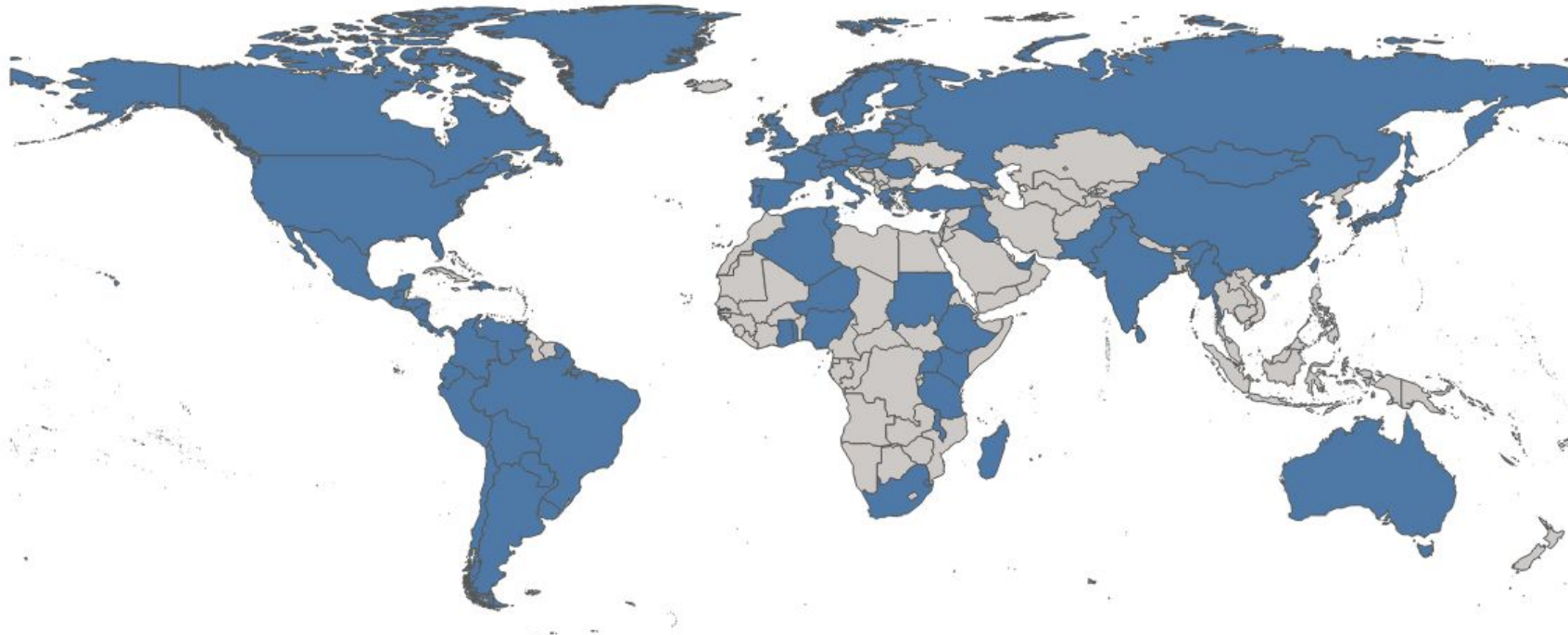
Sentinel Asia (SA) member can send emergency satellite observation by sending “Emergency Observation Request (EOR)” to Asian Disaster Reduction Center (ADRC).

These Sentinel Asia members can request emergency observation on behalf of other non-member entities.

# Disaster Occurs! How to request:

- Disasters Charter Authorized Users

Charter's Authorized Users (AU) can request Charter activation, also for other users.



**94 Authorized Users in 85 countries and the EU**



# Escalation from Sentinel Asia to Disasters Charter



- SA members can request emergency observation by the Disasters Charter through “Escalation” mechanism, in addition to the SA observation at a same time.



# Any UN entities near you?



United Nation's Office for Outer Space Affairs (OOSA) is authorized to activate the Disasters Charter on behalf of local disaster management agencies.

Another UN entity, UNITAR/UNOSAT can do the same for the local UN offices.

# Interested in trainings?

Sentinel Asia offers training opportunities to JPT members in several ways:

Face-to-face Trainings:

On the occasions of annual JPT member meetings (JPTM), several training sessions are held.

<https://sentinel-asia.org/meetings/SA3JPTM8/index.html>

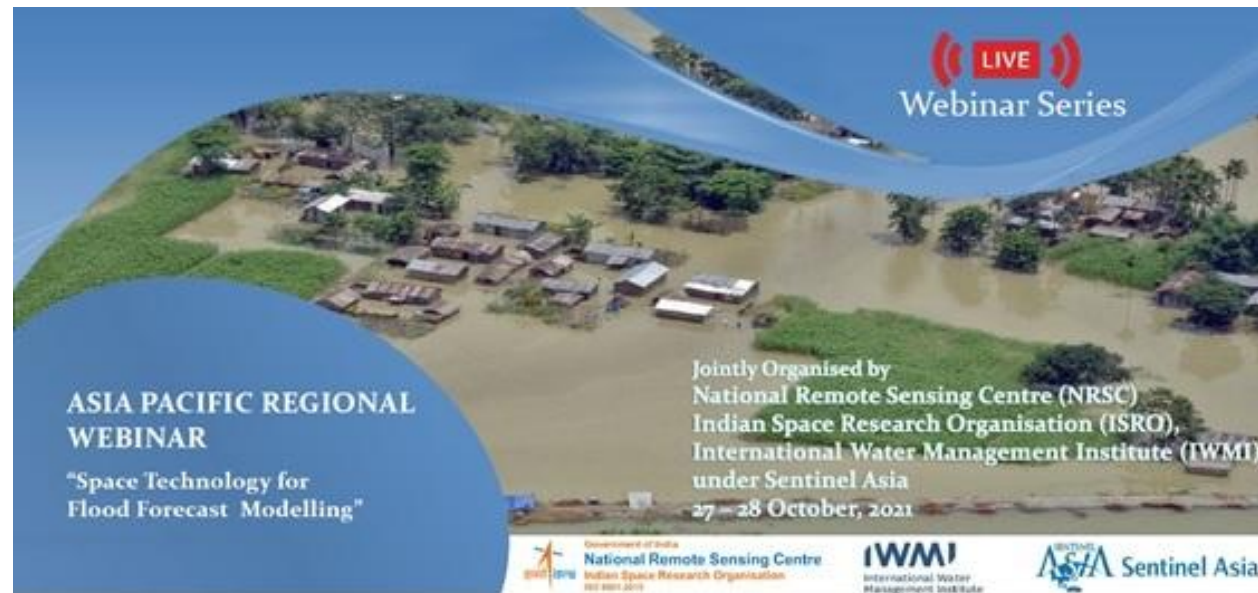




# Interested in trainings?

## Webinars:

Some SA members organizes training webinar, for example, “Space Technology for Flood Forecast Modeling”



## Training materials:

Some training materials are available on SA website:

<https://sentinel-asia.org/e-learning/TechnicalMaterials.html>

# Way Forward

To join Sentinel Asia:

Contact Sentinel Asia Secretariat at [z-sentinel.asia@ml.jaxa.jp](mailto:z-sentinel.asia@ml.jaxa.jp)  
<https://sentinel-asia.org/index.html>

Or interested in being an Authorized User of the Charter?

Refer the “Universal Access” procedure on

<https://disasterscharter.org/web/guest/how-to-register-as-a-user>



**Any Questions?**



**Or Contact:**

**For Sentinel Asia**

[z-sentinel.asia@ml.jaxa.jp](mailto:z-sentinel.asia@ml.jaxa.jp)

**For Disasters Charter**

[ExecutiveSecretariat@disasterscharter.org](mailto:ExecutiveSecretariat@disasterscharter.org)



## *Flood Tools Tracker*

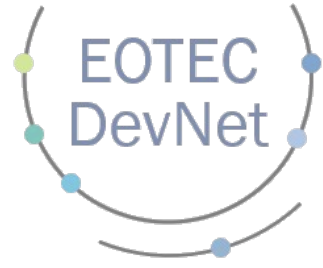
A sneak peek at improvements to  
the tracker



## *Main Updates*

- *New user-friendly interface with more images and tool descriptions*
- *Updated classification of tools based on disaster risk response stages and temporal use*
- *Ability for users to leave feedback on the tools they used*
- *Ability to highlight resources on the home page*





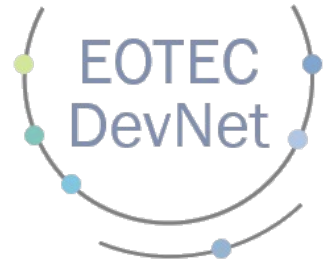
## *How can thematic working group members help improve the tracker?*

- *Volunteer as beta testers and offer feedback on the tracker*
- *Review information on the tools you use for accuracy*
- *Add new tools and capacity building resources*
- *Spread the word about the tracker*

*Member updates*

What are you working on? Share updates on your activities...!

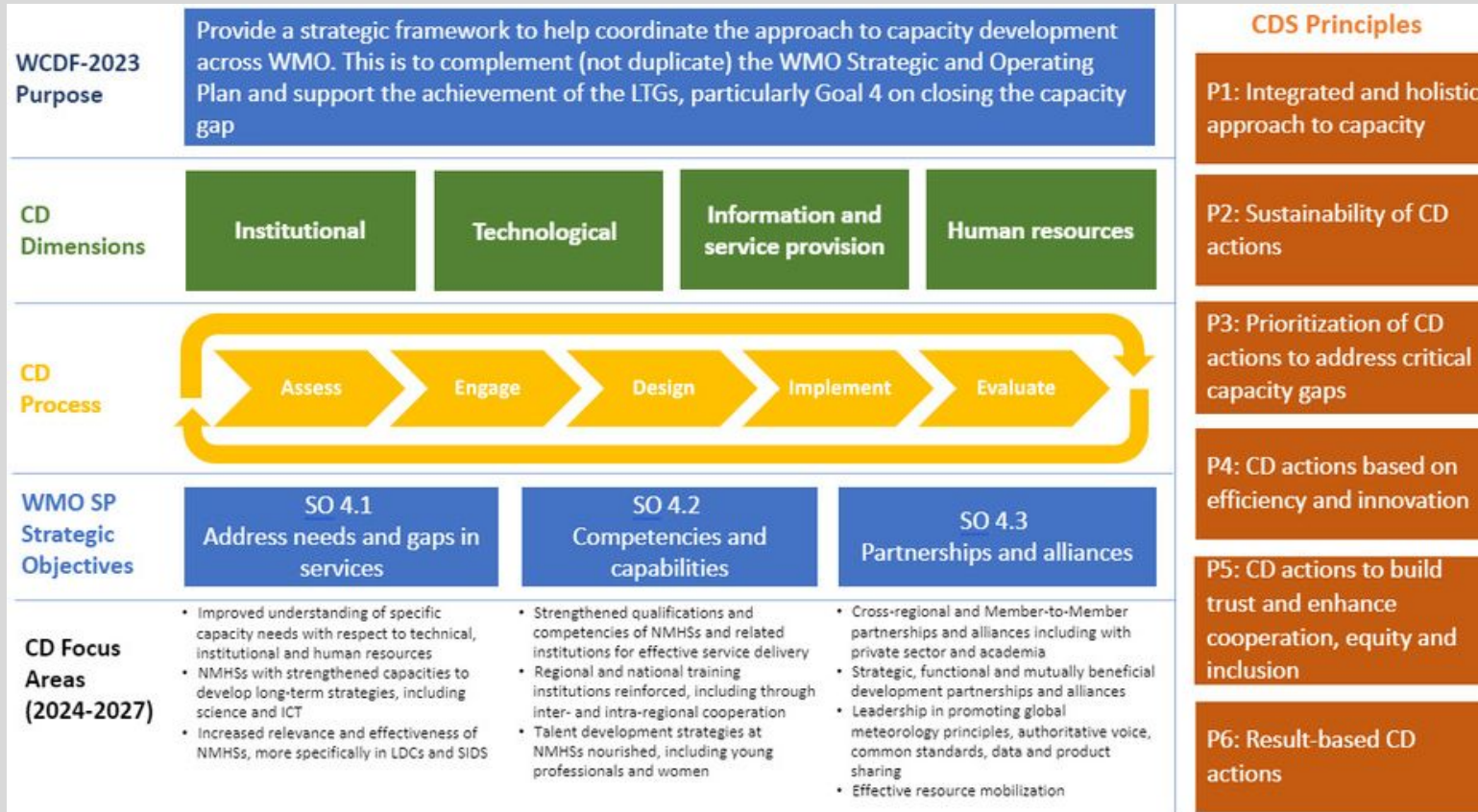
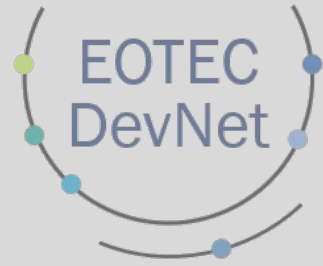




# Global and Secretariat updates

# WMO Capacity Development Framework

## Opportunity to share case studies



### CDS Principles

P1: Integrated and holistic approach to capacity

P2: Sustainability of CD actions

P3: Prioritization of CD actions to address critical capacity gaps

P4: CD actions based on efficiency and innovation

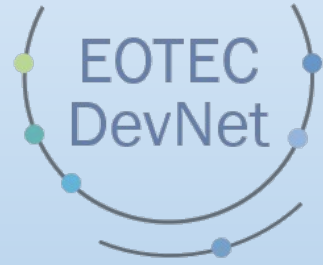
P5: CD actions to build trust and enhance cooperation, equity and inclusion

P6: Result-based CD actions

- Case studies and other info available at: <https://community.wmo.int/en/governance/executive-council/executive-council/capacity-development-panel>
- Case study template here: <https://filecloud.wmo.int/share/s/z9PRreJaQseA4YO7zBjpgQ>
- Framework approved by Congress-19 in June 2023
- Currently being translated to all UN languages

# Establishment of Drought Working Groups

# Lots of progress on formation of drought working groups



Webinar with UNCCD and GWP



Planning for Drought +10



Reminder: Review/add resources to the drought tools matrix [Link here](#)

IDMP Annual Meeting June 25-26

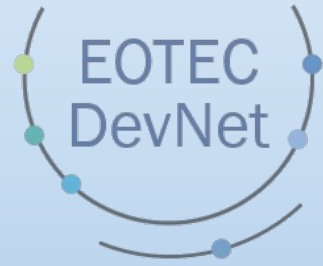


**INTEGRATED DROUGHT MANAGEMENT PROGRAMME**

Tool Name	Provider Organization	POC	Email	Input by (Name, Affiliation)	URL or Other Source	Drought Management Stage	Drought Type
MODIS Terra Vegetation Indices	CEOS			Sydney Neugebauer, NASA	<a href="https://webapi.usgs.gov/products/mv1334000/">https://webapi.usgs.gov/products/mv1334000/</a>	Monitoring and Early Warning	Agricultural
NASA Drought GIS Web App	NASA			Contra Hall, NASA	<a href="https://webapi.usgs.gov/products/mv1334000/">https://webapi.usgs.gov/products/mv1334000/</a>	Monitoring and Early Warning	All
North American Drought Monitor	NOAA, AAF, SWIN, NDMC			Richard Heim, NOAA	<a href="https://www.noaa.gov/temp-and-precip/drought/naom/">https://www.noaa.gov/temp-and-precip/drought/naom/</a>	Monitoring and Early Warning	All
Global Drought Information System	GEOS			Richard Heim, NOAA	<a href="https://data.noaa.gov/arcgis/">https://data.noaa.gov/arcgis/</a>	Monitoring and Early Warning	All
Mekong Drought and Crop Watch	ADPC			Susanna Javasinghe, ADPC	<a href="https://mekongwatch.adpc.org/">https://mekongwatch.adpc.org/</a>	Monitoring and Early Warning	All
UN-SPIDER Recommended Practice: Drought monitoring using the Standard Vegetation Index (SVI)	Juan Carlos Villagran de Leon, UN-SPIDER	juan-carlos.villagran@un-spider.org		Juan Carlos Villagran de Leon, UN-SPIDER	<a href="https://www.un-spider.org/library/publications/un-spider-recommended-practice-drought-monitoring-using-the-standard-vegetation-index-svi">https://www.un-spider.org/library/publications/un-spider-recommended-practice-drought-monitoring-using-the-standard-vegetation-index-svi</a>	Monitoring and Early Warning	Agricultural
UN-SPIDER Recommended Practice: Drought monitoring using the Vegetation Condition Index (VCI)	Juan Carlos Villagran de Leon, UN-SPIDER	juan-carlos.villagran@un-spider.org		Juan Carlos Villagran de Leon, UN-SPIDER	<a href="https://www.un-spider.org/library/publications/un-spider-recommended-practice-drought-monitoring-using-the-vegetation-condition-index-vci">https://www.un-spider.org/library/publications/un-spider-recommended-practice-drought-monitoring-using-the-vegetation-condition-index-vci</a>	Monitoring and Early Warning	Agricultural
UN-SPIDER Recommended Practice: Drought monitoring using the Standardized Precipitation Index (SPI)	Juan Carlos Villagran de Leon, UN-SPIDER	juan-carlos.villagran@un-spider.org		Juan Carlos Villagran de Leon, UN-SPIDER	<a href="https://www.un-spider.org/library/publications/un-spider-recommended-practice-drought-monitoring-using-the-standardized-precipitation-index-spi">https://www.un-spider.org/library/publications/un-spider-recommended-practice-drought-monitoring-using-the-standardized-precipitation-index-spi</a>	Monitoring and Early Warning	Meteorological
South Asia Drought Monitoring System (SADMS)	IWMI	Girraj Anamath, IWMI	g.ira@cgiar.org	Girraj Anamath, IWMI	<a href="https://sadmsonline.org/">https://sadmsonline.org/</a>	Monitoring and Early Warning	All
Regional Drought Monitoring and Outlook System (RDMOS)					<a href="https://www.rdmos.org/">https://www.rdmos.org/</a>	Monitoring and Early Warning	All
VICMOD 1	Barth Thiele, ICRP			Kiran Shivashankar, ICRP	<a href="https://www.vicmod.org/">https://www.vicmod.org/</a>	Monitoring and Early Warning	All
Africa Flood and Drought Monitor (WASA Secure Africa Initiatives)	IWMI	Girraj Anamath, IWMI	g.ira@cgiar.org	Girraj Anamath, IWMI	<a href="https://www.wasa-secure.org/">https://www.wasa-secure.org/</a>	Monitoring and Early Warning	All
ClimateSERV	SEVIR			Sara Miller, NASA SERVIR	<a href="https://climate.servir.org/">https://climate.servir.org/</a>	Monitoring and Early Warning	All
North America Drought Indices and Indicators Assessment	SEVIR			Richard Heim, NOAA	<a href="https://www.ncep.noaa.gov/naom/">https://www.ncep.noaa.gov/naom/</a>	Vulnerability and Impact Assessment	All
Drought Toolbox by UNCCD International Drought Resilience Alliance	UNCCD	Secretariat	secretariat@unccd.org	Maryna Stepanczuk-Górka, EOTEC DevNet	<a href="https://www.unccd.org/naom/">https://www.unccd.org/naom/</a>	All Stages	All
Global and regional (Europe, Central and South America, Africa) Drought Observatory	EC			Dario Masante, EOTEC DevNet	<a href="https://www.ec.europa.eu/euro-observatory/">https://www.ec.europa.eu/euro-observatory/</a>	Monitoring and Early Warning	All

New feature on [www.eotecdev.net](http://www.eotecdev.net)

# Photo of the week: Share your imagery!

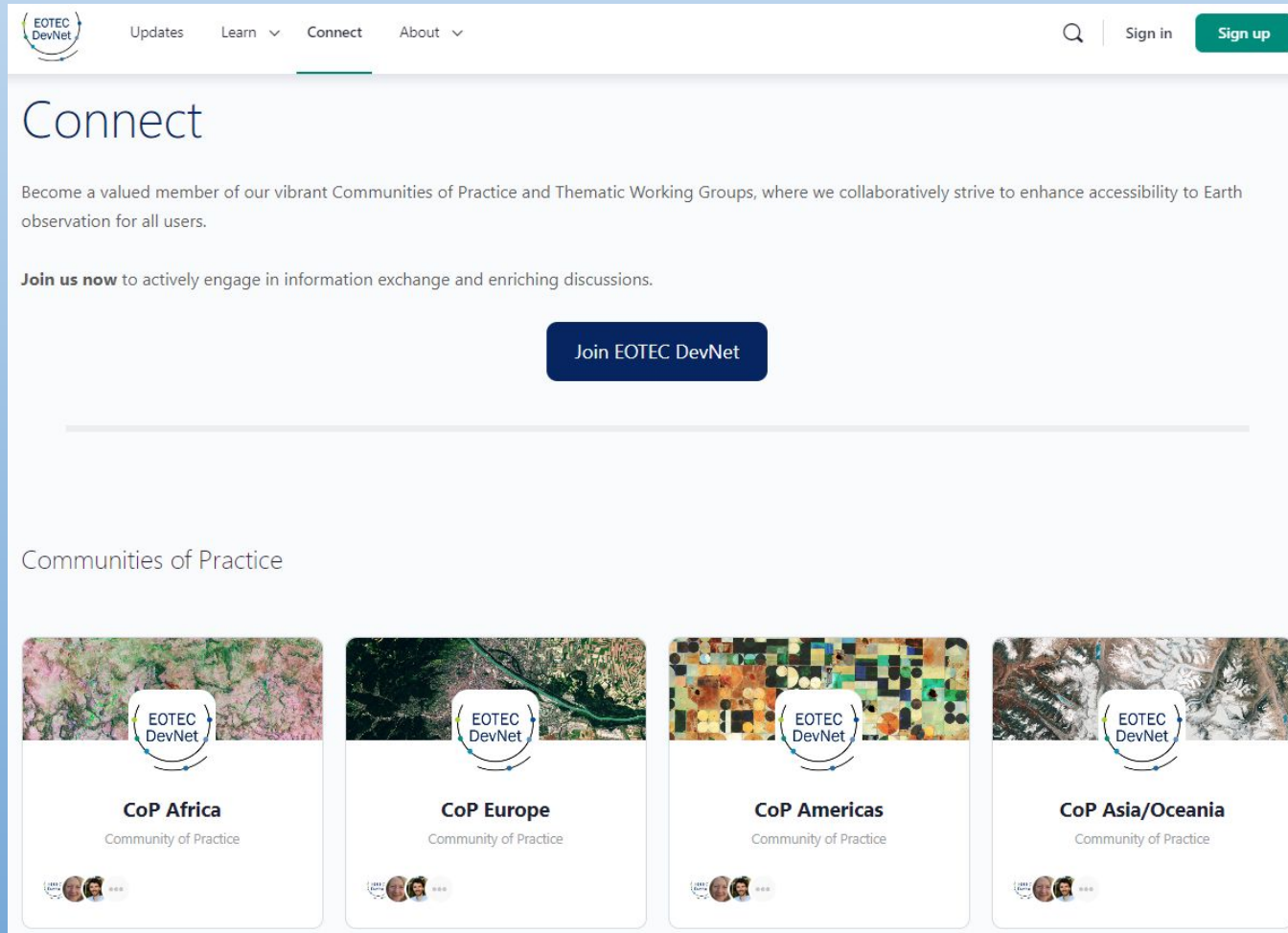
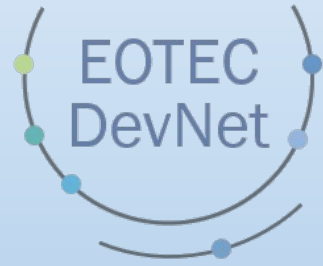


A screenshot of the EOTEC DevNet website. The header includes the EOTEC DevNet logo, navigation links for "Updates", "Learn", "Connect", and "About", a search icon, and "Sign in" and "Sign up" buttons. The main content area features a large aerial photograph of a mountain range with a white text box overlay. The text box contains the title "Image of the week Carving a Path" and a paragraph: "What looks like highways going through a metropolitan area are actually a series of glaciers carving their way through the Karakoram mountain range north of the Himalayas. This photograph was taken from the International Space Station as it orbited 263 miles above." Below the text is a "view image" button. At the bottom of the page, there are two sections: "Network Updates" and "Upcoming Event", with a red circle highlighting a small dot in the navigation area between them.

**\*\*Upload your image to this form\*\***

<https://forms.gle/vBfSfN46wP7ND3936>

# Website and member platform at [www.eotecdev.net](http://www.eotecdev.net) 230+ online members and growing!



## HOW TO JOIN

1. Sign up for an account - prompts in the top right corner of home page
2. Watch for an email to confirm your membership.
3. Visit the **Connect** page to sign up for an online EOTEC task team or working group (or both!)
4. Post a question, comment, or link in any of the groups or your own member feed

SEE YOU ONLINE!

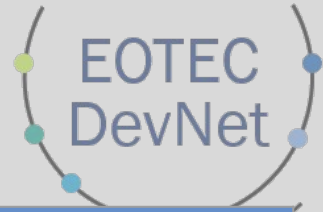
# Upcoming opportunities



## SAMPLE OF TRAINING AND CONFERENCES

<p><a href="#"><u>COSPAR 2024</u></a> Scientific Assembly, 13-21 July, Busan, South Korea, in-person.</p>	<p><a href="#"><u>Asia-Pacific Ministerial Conference on Disaster Risk Reduction (APMCDRR)</u></a>, 14 - 17 October 2024 Manila, Philippines (in-person).</p> <p><a href="#"><u>Climate Responsive Land Governance and Disaster Resilience: Safeguarding Land Rights</u></a>, NICS Conference, 14-16 November, in-person Kathmandu, Nepal.</p>
<p><a href="#"><u>ISPRS Student Consortium Summer School Theme: AI for Geospatial Applications</u></a>, August 9 to 13, University of the Philippines, Diliman, Quezon City, Philippines (<b>registration deadline July 31</b>).</p>	<p><a href="#"><u>Satellite Remote Sensing Data Acquisition &amp; Processing</u></a>, UN CSSTEAP, 18-29 November, in-person, Hyderabad, India.</p>
<p><a href="#"><u>16th AOGEO Symposium</u></a>, 3-5 September, Tokyo, Japan, in-person (<b>registration open</b>).</p>	<p><a href="#"><u>International Emergency Management Society</u></a>, Pune, India, 26-29 November, in-person and hybrid</p>
<p><a href="#"><u>GEO Symposium and Odok Workshop 2024</u></a>, 23-26 September in-person, China.</p>	<p><a href="#"><u>IEEE InGARSS 2024</u></a>, 2-5 December, Goa, India (<b>paper submission deadline July 25</b>).</p>
<p><a href="#"><u>Hands-on Training on Greenhouse Gas Measurements</u></a>, sponsored by WMO, BMKG and the Global Atmospheric Watch (GAW), 30 Sept-4 October, in-person, Indonesia.</p>	<p><a href="#"><u>World Space Forum</u></a>, 3-5 December, Bonn, Germany.; in-person. <b>Deadline for funding applications: September 1.</b></p>
<p><a href="#"><u>2024 EUMETSAT Meteorological Satellite Conference</u></a>, 30 Sept-4 Oct, in-person, Germany (<b>registration open</b>).</p>	<p><a href="#"><u>AGU24</u></a>, 9-13 December, Washington, D.C., USA (hybrid; <b>abstract submission deadline 31 July</b>).</p>

# Opportunities and resources



## PLACES TO FIND TRAINING

IIRS Website: <https://elearning.iirs.gov.in/> **Upcoming course:** [Basics of Remote Sensing GIS & GNSS and its Applications](#)

**\*\*New\*\* World Climate Research Programme catalog:**  
[wcrp-academy.org/catalog](http://wcrp-academy.org/catalog)

**International Society of Photogrammetry and Remote Sensing calendar of training events:** <https://www.isprs.org/calendar/2024.aspx>

**CEOS Training Calendar:** [training.ceos.org](http://training.ceos.org)

**NASA ARSET:** [bit.ly/3Fh7ERe](http://bit.ly/3Fh7ERe)

**New resource: CEOS Earth Observation Handbook 2023:**  
[ceos.org/news/eohb-2023/](http://ceos.org/news/eohb-2023/)

**Upcoming course:** [Drought Monitoring, Prediction, and Projection using NASA Earth System Data](#) (23 July - 1 August)

**UN-SPIDER Events Calendar:** [bit.ly/3LjKHk0](http://bit.ly/3LjKHk0)

**ESA:** [eo4society.esa.int/training-education/](http://eo4society.esa.int/training-education/)

**GEO Events Calendar:** <https://earthobservations.org/events>

**EO College:** [eo-college.org](http://eo-college.org) **New MOOCs:** [Cubes and Clouds and Towards Zero Hunger – Hands-on: Crop-Specific Time Series Analysis for Growth Monitoring](#)

**EUMETSAT training catalogue:** [catalog.trainhub.eumetsat.int](http://catalog.trainhub.eumetsat.int)  
**Upcoming course:** [6th Joint Training Course in Atmospheric Composition](#)

**UN CC: e-Learn:** <https://unccelearn.org/>

**WMO Global Campus:** [learningevents.wmo.int/#/](http://learningevents.wmo.int/#/)

**WMO-CGMS VLab:** [wmo-sat.info/vlab/vlab-training-calendar/](http://wmo-sat.info/vlab/vlab-training-calendar/)  
**Upcoming event:** [Training course on EUMETSAT Data Access Services for Middle Eastern Users](#)



# Summary and next steps

- *CoP Task Team meeting: September 19, 04:00 UTC*
- *Next Floods Working Group meeting: October 17, 04:00 UTC*

*Thank you for being part of the EOTEC community of practice.  
See you online!*



[eotecdev.net](http://eotecdev.net)



[@EOTEC DevNet](https://www.linkedin.com/company/eotec-devnet)



[#EOTECDevNet](https://twitter.com/EOTECDevNet)