



Committee on Earth Observation Satellites

WGCapD & WGDisasters Distance Education Course: Webinar Series on Remote Sensing Technology for Disaster Management

Webinar 1 – Part 1

Overview of CEOS / WGCapD &
WGDisasters

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The Committee on Earth Observation Satellites was established in 1984.

Mission Statement

CEOS ensures international coordination of civil space-based Earth observation programs and promotes exchange of data to optimize societal benefit and inform decision making for securing a prosperous and sustainable future for humankind.

Satellite Earth Observations to Serve Science & Society

CEOS is committed to coordinating their satellite Earth observation programs and sharing data for a more sustainable and prosperous future.

CEOS organizations currently operate **133 satellites** whose observations are critical for:

- **Environmental monitoring;**
- **Meteorology;**
- **Disaster response;**
- **Agriculture and many other applications.**

These satellites and their related systems operate simultaneously and serve both interdisciplinary and international activities; therefore, international discussion and cooperation are critical to their success.

CEOS mission is accomplished by:

- ✓ Exchanging technical information
- ✓ Increasing data usefulness and cost effectiveness
- ✓ Presenting plans for emerging technologies and programs
- ✓ Addressing current developments and future opportunities
- ✓ Raising awareness in and having discussions with user communities

Coordinating our Earth observation satellite missions in response to needs expressed by:

- United Nations Framework Convention on Climate Change (**UNFCCC**)
- UN Office for Disaster Risk Reduction (**UNISDR** - International Strategy for Disaster Reduction)
- UN Conventions on Biodiversity and Desertification
- **The Intergovernmental Group on Earth Observations (GEO)**
- The Global Climate Observing System (**GCOS**)
- World Meteorological Organization (**WMO**) Programmes
- The Group of 20 (**G20**)
- The Food and Agriculture Organization (**FAO**) and other stakeholders...



At the Working Level...

For detailed information see: <http://ceos.org/about-ceos/organization/>

Virtual Constellations		Working Groups	Ad Hoc Teams
AC-VC - NASA - ESA	OST-VC - CNES - EUMETSAT	WGCV - Chair: DLR - Vice-Chair: NASA	SDCG for GFOI - NSC - ESA - USGS
LSI-VC - Vacant	P-VC - NASA - JAXA	WGCapD - Chair: USGS - Vice-Chair: SANSa	GEOGLAM - CSIRO - NASA
OCR-VC - ESA - NASA - NOAA	SST-VC - ESA - NOAA	WG Climate - Chair: NOAA - Vice-Chair: ESA	WSIST
OSVW-VC - NOAA - EUMETSAT - ISRO		WG Disasters - Chair: ESA - Vice-Chair: CSA	
		WGISS - Chair: CNES - Vice-Chair: NASA	

VCs

- Atmospheric Composition (ACC)
- Land Surface Imaging (LSI)
- Ocean Colour Radiometry (OCR)
- Ocean Surface Topography (OST)
- Ocean Surface Vector Wind (OSVW)
- Precipitation (P-VC)
- Sea Surface Temperature (SST)

WGs

- **Capacity Building & Data Democracy**
- Joint CEOS-CGMS Working Group on Climate
- Calibration & Validation
- **Disasters**
- Information Systems & Services

Ad Hoc Teams

- GEO Global Agricultural Monitoring Initiative Land Surface Imaging (LSI)
- Space Data Coordination Group for the Global Forest Observations Initiative
- The Water Strategy Implementation Study Team

CEOS Agencies



55 Agencies

31 Members (in green when there are more than 3 in the country)

34 Associate Members



CEOS is a GEO Participating Organization

As the space component (“space arm”) of the Global Earth Observation System of Systems (GEOSS), CEOS is implementing high priority actions in support **GEO Global Initiatives and Tasks**:

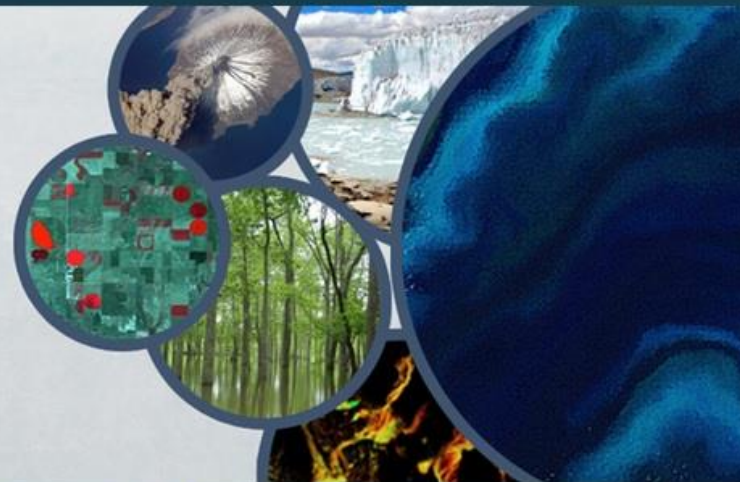
- ✓ Space-based system to support **climate change information and adaptation**.
- ✓ Support the Space Data Component of the GEO Global Forest Observations Initiative (GFOI).
- ✓ Develop and implement a data acquisition strategy to provide satellite observations that will facilitate **the monitoring of agricultural production** in support of the GEO Global Agricultural Monitoring (GEOGLAM) initiative.
- ✓ Continue management and coordination of GEO Disaster Task and Components
- ✓ Continue to support the development and operationalization of the GEOSS Common Infrastructure (GCI) and its CEOS-related elements.
- ✓ Support the implementation of the GEO Blue Planet Task and develop an action plan for GEO Blue Planet Components delivered



<http://ceos.org>

Viewing Earth Serving Society

Learn More >



Viewing Earth
Serving Society

Satellite Earth Observations to
Serve Science & Society



Faces of CEOS: NASA's Brian
Killough Talks CEOS Tools



Successful Launch for Soil
Moisture Observatory: SMAP

New 2015
Publication

Satellite Earth Observations for
Disaster Risk Reduction



Successful Launch: KOMPSAT-3A

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<http://ceos.org/ourwork/workinggroups/wgcapd/>

The Working Group on Capacity Building and Data Democracy

undertakes a variety of activities based on the **four pillars** of the Data Democracy Initiative Mission and aims to unify CEOS efforts toward:

- ✓ Providing wider and easier **access to Earth Observation data**
- ✓ Increasing the sharing of **software tools** such as the use of open source software and open systems interfaces
- ✓ Increasing **data dissemination capabilities** and transferring relevant technologies to end users
- ✓ Providing intensive **capacity building, education, and training** (including awareness and outreach) for enabling end users to gather the information they need and for increasing communication on achieved results

✓ Distance Education Courses

- The International e-learning course on Introduction to Remote Sensing Technology (2013)
- Distance Education Course in Disasters Management (2015)

✓ Shuttle Radar Topography Mission 2 (SRTM-2) Digital Elevation Model (DEM) Development Project

- Workshops: incorporating 30m SRTM data into existing processes and projects

✓ Practical EO Education for Students and Teachers Project

- Practical education in Earth Observation technology, data analysis, and application is an essential tool for increasing global awareness about the usefulness of Earth Observation data at the school level.
- Provide secondary school students and teachers with information, tools, and methodologies that help them use and understand the benefits of Earth observation and remote sensing technologies.

<http://www.geocab.org/>

- Provide information that helps decision makers, policy makers, EO professionals and scientists to **become more familiar with EO applications and opportunities**
- Make information **freely accessible** through a web resource facility

Incentives

1. Make your resources visible and useful to others.
2. Be aware of what other organizations are doing in terms of Capacity Building.
3. Coordination of existing initiatives and future planning.



How to participate

1. Ask an account to the GEO secretariat (amlisa@geosec.org) or the administrator of the portal (Jean-Christophe.Desconnets@ird.fr)
2. Add a new resource using the user guideline

Useful links:

GEOCAB FAQ: <http://geocab.alwaysdata.net/geocab/faq.php?lng=en>

GEOCAB User Guide & presentations:

<http://geocab.alwaysdata.net/geocab/download.php?lng=en&tconfig=0>



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The Working Group on Disasters Overarching Goals

- Increase and strengthen satellite Earth observation contributions to the various Disaster Risk Management (DRM) phases
- Educate politicians, decision-makers, and major stakeholders on the benefits of using satellite Earth Observations in each of those phases.

Improve the coordination of Earth Observations satellites, improve satellite Earth Observation data distribution, and foster the use of satellite data by DRM users.

Objectives

1. Define a global satellite observation strategy for DRM (including a detailed assessment of needs, gaps, and satellite Earth observation requirements and the development of a strategy)
2. Ensure the appropriate inclusion of satellite Earth observations in the 2015 post-Hyogo Framework of Actions
3. Continue other supporting actions, including:
 - DRM Outreach & Evaluation of CEOS DRM Actions
 - Satellite Earth observation capacity building for DRM
 - Satellite Earth observation DRM Projects Database



The Disaster Risk Management (DRM) Observation Strategy

The [CEOS DRM Observation Strategy](#) is a response to a collection of observation requirements from the user community to enable the delivery of three coordinated pilot studies to be implemented in 2014-2016 in **three thematic areas: Floods, Seismic Risks and Volcanoes.**

Showcase for the international DRM community:

- ✓ The added value and uniqueness of increased CEOS coordination in this area;
- ✓ The benefits of closer ties to users and ease of access to data;
- ✓ The potential for the increased roles of space agencies in DRM beyond the current Hyogo Framework for Action for the following 10-year period starting in 2015.

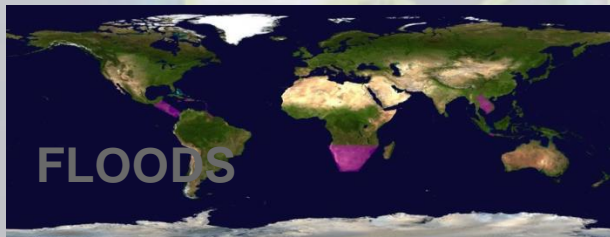


Three Thematic Pilots will:

- ✓ Acquire data
- ✓ Gather in situ data if relevant
- ✓ Supply data to Thematic value adders (VA) and/or Users
- ✓ Supply Thematic value-adding products to Users
- ✓ Gather feedback, validation report, exploitation report
- ✓ Assess performance and define service roll out



SEISMIC RISKS



FLOODS



VOLCANOES



Thank you

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More information about WGDIsasters

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