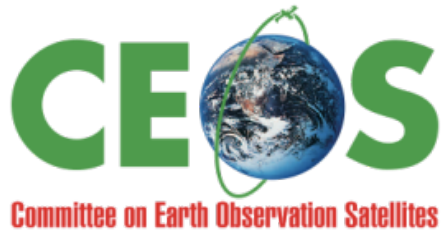
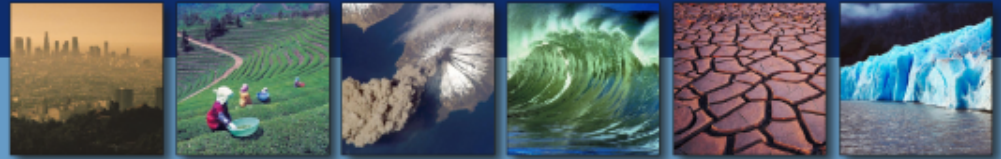


# 2012 CEOS Plenary Outcomes and 2013 CEOS Work Plan

Kerry Ann Sawyer  
CEOS Executive Officer  
WGCapD-3 Meeting  
ESA/ESRIN, Frascati, Italy  
4 March 2013





**CEOS Agencies will continue and enhance their cooperation to support more effective societal decision-making in the areas of climate change, forest monitoring, sustainable development, food and water security, and disaster risk management.**

- **Development and provision of climate data records, in support of climate monitoring and research**
- **Coordinated observations to support the effective monitoring and management of the worlds' forested regions**
- **Development of a strategy for observing and assessing the global carbon cycle**
- **The application of space-based Earth observations to support research in agricultural productivity and an improved understanding of the global water cycle**
- **Development of a more integrated approach in the application of Earth observations for the purposes of disaster risk management**
- **Close collaboration with all countries, especially developing countries, to share new sources of EO satellite data and enhance their governments' capacity to apply these data for societal benefit**



### Bangalore Statement

26 October 2012

We, the assembled participants of the 26th Plenary meeting of the Committee on Earth Observation Satellites (CEOS), taking place in Bangalore, India, on 25-26 October 2012:

**Building** upon our collective commitments to coordinate our Earth observation satellite missions in response to needs expressed by the United Nations Commission on Sustainable Development (UNCSD), the UN Framework Convention on Climate Change (UNFCCC), the inter-governmental Group on Earth Observations (GEO) and the Group of 20 Industrialised Nations (G20):

**Confirming** our commitments to advance the use of space-based Earth observations to advance scientific knowledge, economic and social development, and environmental protection of all societies; and:

**Recognizing** the major investments made by CEOS agencies in developing the space-based components of the Global Earth Observation System of Systems, and global observing systems operated under the auspices of the United Nations:

**Declare that:**

CEOS Agencies will continue and enhance their cooperation to support more effective societal decision-making in the areas of climate change, forest monitoring, sustainable development, food and water security, and disaster risk management. This cooperation will be expressed through a number of global-level initiatives and projects, including:

- Development and provision of climate data records, in support of climate monitoring and research
- Coordinated observations to support the effective monitoring and management of the worlds' forested regions
- Development of a strategy for observing and assessing the global carbon cycle
- The application of space-based Earth observations to support research in agricultural productivity and an improved understanding of the global water cycle;
- Development of a more integrated approach in the application of Earth observations for the purposes of disaster risk management; and,
- Close collaboration with all countries, especially developing countries, to share new sources of EO satellite data and enhance their governments' capacity to apply these data for societal benefit.

CEOS will accomplish these activities through its Virtual Constellations of satellite missions focused on seven thematic areas: atmospheric composition, land surface imaging, ocean colour, ocean surface topography, ocean surface wind, precipitation, and sea surface temperature. Specialized Working Groups will continue to address user needs for data quality, data discovery and access, climate applications, and capacity building.

*CEOS plays a vital role in ensuring coordination of Earth observations to enable decisions for securing a prosperous and sustainable future for humankind.*

<http://www.ceos.org>





## 2013 CEOS Work Plan 2 February 2013

### Introduction

The 2013 CEOS Work Plan has been developed by the CEOS Executive Officer (CEO) under the guidance of the CEOS Chair (CSA), in consultation with the CEOS Strategic Implementation Team Chair (NASA), CEOS Secretariat, CEOS Working Groups, Virtual Constellations, the CEOS membership at large, and CEOS's external stakeholders. The purpose of the document is to set the priorities and outline the activities of CEOS during the 2013 calendar year. Given the anticipated implementation of recommendations from the CEOS Self Study (CSS), the expressed priorities and outlined activities of this Work Plan are expected to remain consistent over a three-year time frame. Therefore, this Work Plan is likely to need only minor revisions on an annual basis.

### Overview

The mission of CEOS is to:

- Optimize benefits of spaceborne Earth observations (EO) through cooperation of its Members in mission planning and in development of compatible data products, formats, services, applications and policies;
- To serve as a focal point for international coordination of space-related EO activities; and,
- To exchange policy and technical information to encourage complementarity and compatibility of observation and data exchange systems.

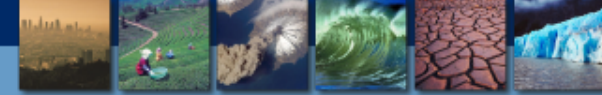
These three elements of the CEOS mission have significant dimensions of internal, interagency coordination, and external consultation and coordination of outputs in response to the needs of key stakeholders. These stakeholders consist of national governments, including their participation in the Group of Eight (G8) and the Group of 20 (G20) Industrialized Nations, the intergovernmental Group on Earth Observations (GEO), and treaties and global programs affiliated with the United Nations.<sup>1</sup> CEOS works closely with these stakeholders and their constituent organizations to achieve common objectives.

### CEOS Priority Objectives for 2013

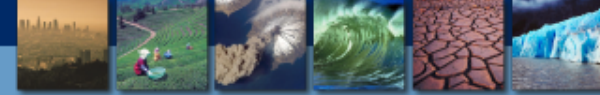
As decided at the 2012 CEOS Plenary meeting in Bangalore, India, CEOS Agencies will continue to enhance their cooperation to support more effective societal decision-making in the areas of climate monitoring and research, carbon observations, including observations to support the effective monitoring and management of the world's forested regions, food security, disaster risk management, capacity building, and data availability and access. CEOS Working Groups and Virtual Constellations will expand their technical and scientific coordination to support these objectives, and improve the overall level of complementarity and compatibility of their

<sup>1</sup> These treaties, international organizations, and international programs include the UN Framework Convention on Climate Change (UNFCCC), the UN Commission on Sustainable Development (UNCSD), the UN Office for Disaster Risk Reduction (UNISDR), and the UN Convention on Biodiversity (UNCBD), among others.

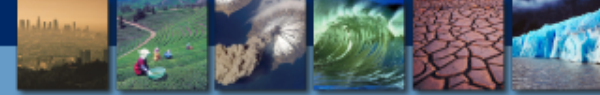
**Purpose: to set the priorities and outline the activities of CEOS during the 2013 calendar year**



- **CEOS Agencies will continue to enhance their cooperation to support more effective societal decision-making in the areas of climate monitoring and research, carbon observations, including observations to support the effective monitoring and management of the world's forested regions, food security, disaster risk management, **capacity building**, and data availability and access.**
- **CEOS Working Groups** and Virtual Constellations will expand their technical and scientific coordination to support these objectives, and improve the overall level of complementarity and compatibility of their Earth observation and data management systems for societal benefit.
- CEOS will consider other requests from external stakeholders and determine what, if any, support is possible and appropriate. CEOS will also continue its **outreach and communications efforts**.
- CEOS will continue its consideration of 2011 CEOS Self-Study recommendations, with near-term (e.g., 1-3 years) decisions anticipated on its organization, structure, decision-making processes, and stakeholder relations.



1. Climate Monitoring and Research
2. Carbon Observations, including Observations to Support the Effective Monitoring and Management of the World's Forested Regions
3. Food Security
4. Disaster Risk Management
5. Capacity Building and Data Availability and Access
6. CEOS Support to Further Key Stakeholder Initiatives
7. Continued and Enhanced CEOS Outreach to Key Stakeholders: GEO, UNFCCC, UN ISDR, UN CBD, G8/G20, and Others
8. Adoption of Recommendations from the 2011 CEOS Self-Study



## 1. Climate Monitoring and Research

- **Development of Climate Data Records (CDRs) and related datasets addressing Essential Climate Variables established by the Global Climate Observing System (GCOS);**
- **Continued cooperation with GEO, GCOS, the World Meteorological Organization (WMO), and the Coordination Group for Meteorological Satellites (CGMS) in the development of a space-based system to support climate information and adaptation; and,**
- **Further alignment of the Virtual Constellations objectives as building blocks of the space-based climate information strategy and as contributions to facilitating the observation of ECVs, as defined in the *CEOS Response to the Satellite Supplement of the 2010 GCOS IP*.**



## 2. Carbon Observations, including Observations to Support the Effective Monitoring and Management of the World's Forested Regions

- CEOS leadership within and support to GEO Global Forest Observation Initiative (GFOI); and
- Publication of the *CEOS Strategy for Carbon Observations from Space*.

## 3. Food Security

- Continued support to the Joint Experiments on Crop Assessment and Monitoring (JECAM) initiative.

## 4. Disaster Risk Management

- Enhanced support for Disaster Risk Management (DRM); and
- Continued support to the Geohazards Supersites and Natural Laboratories initiative





## 5. Capacity Building and Data Availability and Access

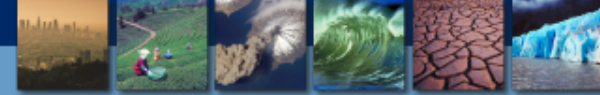
- **5.1 Advancement of CEOS Data Democracy activities;**
- **5.2 Continued support to the development and operationalization of the GEOSS Common Infrastructure (GCI) and its CEOS-related elements; and,**
- **5.3 Continued CEOS leadership of, and support to, the Quality Assurance for Earth Observations (QA4EO) initiative.**



## 5.1 Advancement of CEOS Data Democracy activities



In accordance with GEO's three-year (2012-2015) Work Plan, the Working Group for Capacity Building and Data Democracy (WGCapD) will work closely with GEO to **enhance access to and application of space-based EO data**. This will include **WGCapD-coordinated access to and training for the use of high-resolution Digital Elevation Models (DEMs) on a country-by-country basis**, beginning with selected African countries (South Sudan and Somalia) in 2013. WGCapD members will also launch a **180-hour e-learning course to teach university professors the benefits of incorporating space-based EO into their classes**, with an initial focus on Nigeria, Kenya, and South Africa.

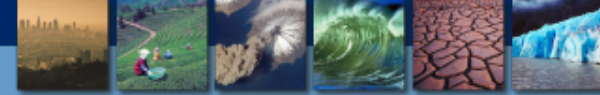


## 6. CEOS Support to Further Key Stakeholder Initiatives

- Decision on whether and how CEOS Agencies may provide coordinated data acquisition support to the GEO Global Agricultural Monitoring (GEOGLAM) initiative;
- Continued dialogue on potential CEOS contributions to Integrated Water Cycle products and services;
- Continued dialogue on potential CEOS contributions to the GEO Biodiversity Observation Network (GEO BON);
- Dialogue on potential enhanced CEOS-level coordination to support improved research and monitoring of the Earth's polar regions; and,
- Determine the level and scope of engagement of the four ocean-related Virtual Constellations in the GEO Blue Planet Task



The CEOS Water SBA Coordinator will work with CEOS Agencies to develop and coordinate Members' input on a draft GEO Water Cycle Strategy Report. CEOS will engage with GEO to identify specific ways in which CEOS can support improved water cycle products and services, including the Water Cycle Integrator (WCI), and through data portals (including CEOS Water Portal) and satellite data provision, validation, and **capacity development for regional initiatives in Asia, Africa and Latin America.**



## 7. Continued and Enhanced CEOS Outreach to Key Stakeholders: GEO, UNFCCC, UN ISDR, UN CBD, G8/G20, and Others

- Engagement, attendance, and where appropriate, strategic involvement , reporting on CEOS achievements, and presentations at key meetings
- Maintenance to CEOS online services such as the CEOS website and Missions, Instruments and Measurements (MIM) database
- Publication of the CEOS Newsletter

## 8. Adoption of Recommendations from the 2011 CEOS Self-Study

- Development of strategic guidance documents, stemming from participative analysis and options proposed by the CEOS Self-Study Implementation Initiative (CSSII) Topical Teams
- Plenary review and adoption of CSSII proposed options for refinement