

AmeriGEOSS: A GEO Regional Initiative for the Americas

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The International Earth Science Community

Implementing GEOSS in the Americas
 Implementando GEOSS en América
 Implementando GEOSS na América
 Mise en œuvre du GEOSS en Amérique

CEOS

Committee on Earth Observation Satellites



59

Agencies

103

GEO

Group on Earth Observations

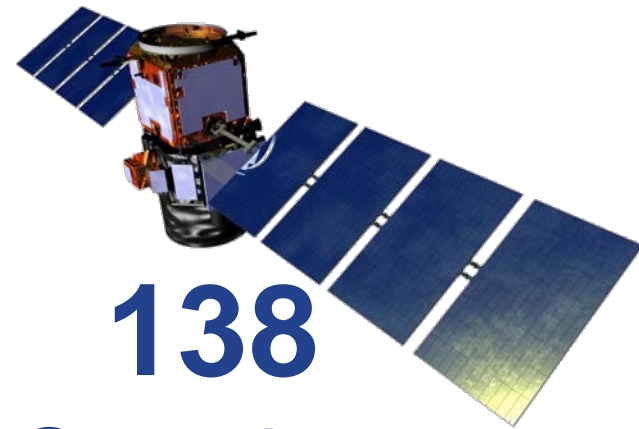


Participating Organizations

103



Nations & European Commission



138

Satellites

8

Societal Benefit Areas



Biodiversity & Ecosystem Sustainability



Disaster Resilience



Energy & Mineral Resources Management



Water Resources Management



Food Security & Sustainable Agriculture



Infrastructure & Transportation Management



Public Health Surveillance



Sustainable Urban Development

AmeriGEOSS Initiative

Born in October 2014, launched in November 2015

Is a cooperative effort that:

- Reflects local, national, and regional interests of the GEO country-members for short and long-term planning, development, and implementation aligned with GEO activities.
- Is enabled by the institutional and technical capabilities of its country members and the resources of other global initiatives available for the benefit of the region.
- Seeks to increase institutional and personal capacity and engage experts, stakeholders, and decision makers in the process of decision making.

AmeriGEOSS Initiative

- 16 Americas Caucus Member countries:

- Argentina
- Bahamas
- Belize
- Brazil
- Canada
- Chile
- Colombia
- Costa Rica
- Ecuador
- Honduras
- Mexico
- Panama
- Paraguay
- Peru
- United States
- Uruguay



- Observers:

- Bolivia and Guatemala

AmeriGEOSS Initiative

Priority Areas



• **Food security and sustainable agriculture** - Agriculture, associated with climate variability, climate change, and food security.



• **Disaster resilience** - Disaster risk reduction, particularly for data exchange associated with early warnings, and for the generation of regional products of early warnings.



• **Water resource management** - Associated with the management approach of water resources and data management and services.



• **Biodiversity and ecosystem sustainability** - In the context of capacity building for better monitoring, management, and maintenance of ecosystems and biodiversity they support; and to predict future changes.



• **Foundational activities** – Data systems infrastructure and capacity building.



Food Security & Sustainable Agriculture *Working Group Activities*

- Support of the Sustainable Development Goal (SDG) 2: End hunger, achieve food security and improve nutrition, and promote sustainable agriculture.
- Support the development of a Latin American Regional GEO Global Agricultural Monitoring (GEOGLAM).
- Increase collaboration between US and Canada on GEOGLAM activities.
- Enhance current GEOGLAM monitoring activities to better encompass the priorities of Latin America (e.g. regionally important crops).
 - Early Warning Crop Monitor (for countries-at-risk)
 - *(eventually) Rangeland & Pasture Productivity (RAPP) Monitor*
 - *(eventually) full GEOGLAM Crop Monitor (all crops of national/regional importance)*
- Continue to develop GEOGLAM's Rangeland & Pasture Productivity (RAPP) sub-initiative
 - Australian leadership; large focus on South America.
 - Further grow Community of Practice.
- Seek participation of aquaculture and fisheries.



Disaster Resilience *Working Group Activities*

- Support Sendai Framework: Sendai Framework for Disaster Risk Reduction as a first priority of understanding disaster risks, including floods, landslides, earthquakes, tsunamis, and volcanoes.
- Prioritize disaster risks based on regional vulnerability assessment.
- Assess and engage ongoing GEO activities for application to regional risks, e.g. the Geohazard Supersites and Natural Laboratories (GSNL) initiative.



Water Resource Management *Working Group Activities*

- Support for SDG 6: ensure availability and sustainable management of water and sanitation for all.
- Provide regional response to the challenging issue of water services as well as the management perspective of the resource.
- These activities will be framed under the GEO Global Water Sustainability (GEOGLOWS) Initiative.
- Water activities will support the GEO Biodiversity Observation Network (GEO BON) goals of conserving existing biodiversity and ecosystem services.



Biodiversity and Ecosystem Sustainability *Working Group Activities*

- **Goals:**
 - Promote development of interoperable national and regional observation networks that underpin effective conservation and sustainable development
 - Support national/global mandates, e.g. the Convention on Biological Diversity and United Nations' Reducing Emissions from Deforestation in Developing Countries (REDD) and conservation and enhancement of forest carbon stocks (REDD+)
 - Support the development of a Regional Marine BON (MBON) Program in the Americas under GEO BON.
 - Map Americas-wide terrestrial and pole-to-pole ecosystems.
 - Build regional capacity and tools through the Global Forest Observation Initiative (GFOI).



Foundational Activities

Working Group Activities

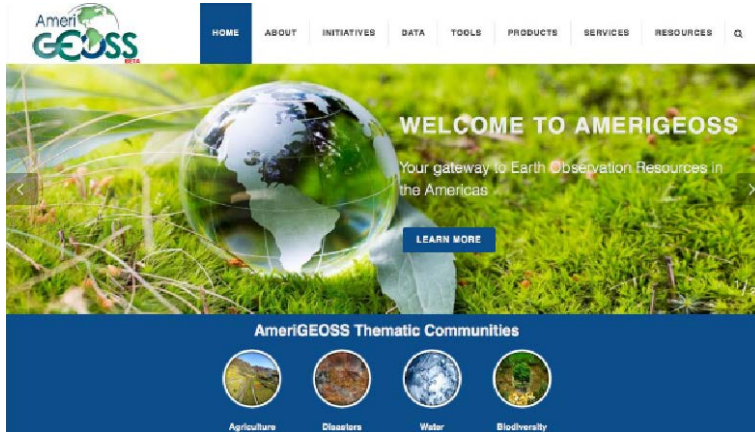
Objective:

To coordinate and leverage existing and planned national, regional, and international activities to address data access and sharing, interoperability, infrastructure and capacity building needs in the Americas.

Initial set of activities:

- Increase use of GEONETCast-Americas.
- Develop the AmeriGEOSS portal.
- Build capacity in coordination with GEO and CEOS Working Group for Capacity Building and Data Democracy (WGCapD), and through Community of Hydrologic and Spatial Information for Latin America and the Caribbean (CIEHLYC).

AmeriGEOSS Progress



AmeriGEOSS portal in development



Americas Caucus leadership meeting



Multiple workshops in Latin America

- GEOGLAM
- International Disaster Charter
- MBON

CIEHLYC webinars built awareness of AmeriGEOSS activities

AmeriGEOSS Week-2016



Training sessions organized by GEO-Colombia and CIEHLYC, and hosted by the Universidad Nacional de Colombia

- **Americas Caucus Meeting – June 7-8, 2016**
 - Participants: Colombia, United States, Canada, Belize, Argentina, Chile, Brazil, Ecuador, and GEO Secretariat
- **Four concurrent training sessions focused on capacity building and bringing GEO global initiatives to the region – June 7-10, 2016**
 - GEOGLAM
 - GEONETCast and Introduction to Geostationary Observational Environmental Satellite – R Sercies (GOES-R)
 - GEOGLOWS
 - Disaster Risk Reduction and Synthetic Aperture Radar (SAR) Applications
 - **~170 participants in total**

AmeriGEOSS Plans for 2017 – 2019

GEO Work Programme

Agriculture

- Expand GEOGLAM Crop Monitor activities to encompass more countries and more crops- including those regionally significant in Latin America.
- Complete prototyping of RAPP Monitor
- Develop Latin American GEOGLAM

Disasters

- Establish working group, identify needs, and define priorities

Water

- Develop Integrated Water Prediction (IWP) Version 2.0 – Ongoing U.S. activity
- IWP in the Great Lakes Region. NOAA held a **workshop on the development of binational data for hydrological modeling applications across Great Lakes** basin on June 14-16, 2016 in Ann Arbor, Michigan.
- Offer Capacity Building activities organized by CIEHLYC in coordination with the Water WG.
- European Commission Joint Research Centre pilot project - Use of hydrological in-situ data in global forecasts.
- Improve curation process and development towards in-situ water data standardization

AmeriGEOSS Plans for 2017 – 2019

GEO Work Programme

Ecosystems/Biodiversity

- Continue to progress on developing Pole to Pole – MBON
- Develop Marine BON in a Box

Foundational Activities

- Develop pilot/prototype - "AmeriGEOSS community site on the GeoPlatform"
- Continue expansion of GEONETCast (GNC-A)
- Conduct end-user needs-driven NASA-DEVELOP projects, NASA-Applied Remote Sensing Training (ARSET) trainings, CIEHLYC webinars, and CEOS WGCapD activities

AmeriGEOSS

- Brings the information gained from 138 Earth science satellites to the Americas to address pressing issues
- Addresses AmeriGEOSS priority Areas : Water, Disaster, Agriculture, and Ecosystem/Biodiversity
- Harnesses GEO progress at the global level for the Americas region
- Brings Americas regional needs to GEO global activities
- Interactions among national, regional, and international activities will strengthen abilities to:
 - Understand the Earth as a system
 - Make data-driven environmental management decisions for sustainable management