



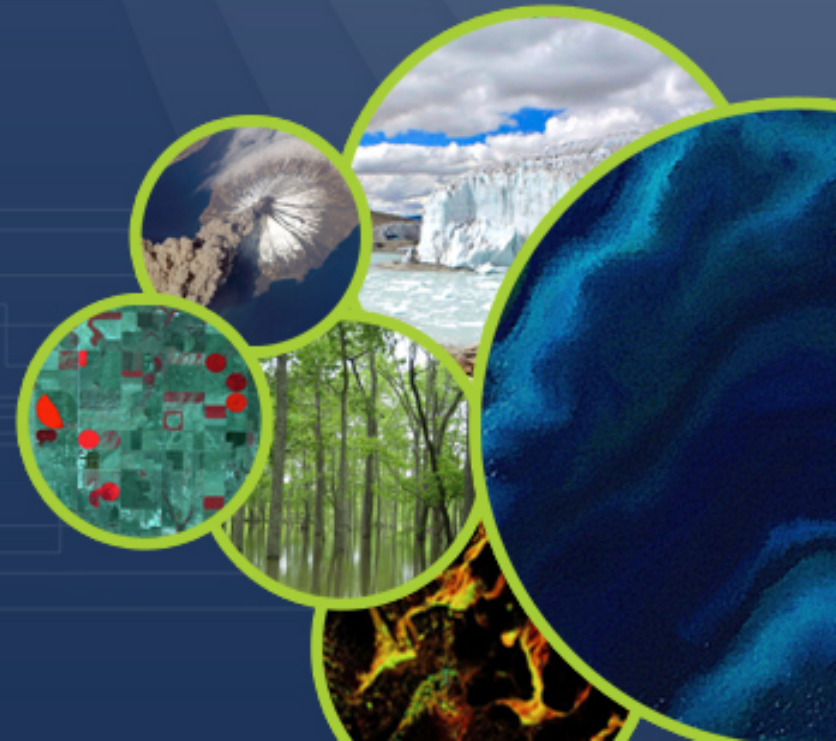
Committee on Earth Observation Satellites

GEO-DARMA Update and Status

WG Disasters 17

15 March 2022

Ivan Petiteville, Chair, GEO-DARMA SC
Andrew Eddy, Secretary, GEO-DARMA SC
Ricardo Quirogas, NASA

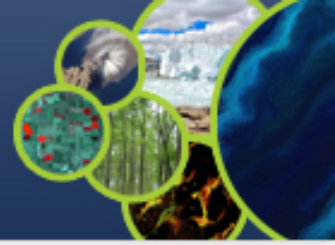




- **Experience has shown that GEO-DARMA needs to be more opportunistic to identify funding opportunities, given lack of dedicated budget;**
- **Universities can provide low-level but stable funding and contribute significantly towards both achieving Sendai Framework objectives and building regional capacity relating to EO;**



- **Recent effort has been put into developing proposals in Latin America and Asia**
 - CEPREDENAC is coordinating a consultation across SICA countries on the need for EO to reduce risk, which may lead to a GEODARMA proposal, but not directly relating to RO experience as initially planned – no request planned at this time;
 - NASA has led the establishment of a network of Latin American universities interested in DRM and issued a successful call for GEODARMA proposals, currently under review (more in the next slides) – request expected in April 2022;
 - GEO facilitated contacts with the Manila Observatory, which will implement a project entitled: **Optimizing the Microsoft Planetary Computer for Emergency Observation and Mapping in the Philippines**. This funded project will integrate EO data for improved disaster response. GEODARMA contribution currently being analysed – request expected Q2 2022.



- **Aims to develop an emergency mapping response application for the Philippines, integrating EO data, resulting in workflow outputs for real users involved in disaster response.**
- **Automate and optimize current emergency mapping tasks undertaken by the Geomatics for Environment and Development Laboratory of the Manila Observatory to deliver timely outputs and high-quality maps that may be used by local stakeholders and the general public.**
- **Deepen understanding of disaster risk attributed to the increased frequency of extreme weather events.**
- **Implement existing emergency mapping response workflows in the Microsoft Planetary Computer, using available satellite imagery and auxiliary data sets from the data catalog and the Earth observation data acquired through the Sentinel Asia initiative.**
- **Project recently funded under the GEO-Microsoft Planetary Computer Credits Programme**

CEOS

AmeriGO LABS Network

For Disaster Risk Reduction and Resilience

Red LABOT

17 Universities
14 Countries





AmeriGEO –Labs Network

Creating solutions to real problems

Confirmed participation of laboratories:

1. Universidad Pedro Landívar - Guatemala
2. Agencia Espacial del Paraguay – Paraguay
3. Universidad Autónoma de Nicaragua - Nicaragua
4. Bluefields Indian & Caribbean University -Nicaragua
5. Universidad Distrital Francisco José de Caldas - Colombia
6. Universidad Tecnológica de Panamá - Panamá
7. Universidad de Panamá - Panamá
8. Universidad de Costa Rica – Costa Rica
9. Universidad del Estado de Río de Janeiro (UERJ - Brasil)
10. Universidad de Chile – Chile
11. Centro de investigación en gestión integral de riesgos – Venezuela
12. GFZ German Research Center for Geosciences - Colombia
13. Universidad de Bogotá Jorge Tadeo Lozano - Colombia
14. UNIGIS América Latina – Colombia
15. Sociedad Futura



... Collaborating around common interests and initiatives



Objectives

- Strengthen vulnerability scanning capabilities
- Promote open data for the implementation and strengthening of regional early warning systems and for society
- Build capabilities in the use of geospatial technology
- Building resilience in the countries of the Americas
- Achieve the integration of the capacities and specialization of the members
- Promote the integration of data products that group satellite observations in relevant areas of Disaster Risk Reduction



Theme - Our Human Footprint

It's Creating a Lot of Changes. . .

Drought

Sea Level Rise

Disasters

Wildfires

Floods

Landslides

Earthquake

Volcanoes

Lave and Volcanic ash

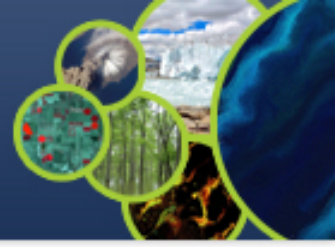
Tsunami





1. Climate Change Adaptation. Carbon Cycle Monitoring in the Bosawás Nature Reserve in Nicaragua.
2. Assessing land degradation at the subnational level in Venezuela using satellite Earth Observation time-series data to support. Venezuela
3. Design of an early warning system (SAT) for floods with the hydrological and hydraulic application” Managua.
4. Analysis of seismic exposure data of buildings using remote sensing techniques in Cundinamarca, Colombia.
5. Application of satellite images for the evaluation and management of urban transport routes in Managua, in the face of evacuation for disasters.
6. Analysis of Drought and fires Risk in River Basins in Chile and Paraguay

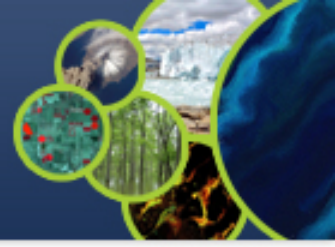




1. Refine the proposals.

- **AMERIGEO Labs reviewing proposals received from universities**
 - **Collection of areas of interest and imaging requirements**
 - **Assessment of benefit of proposals**
 - **Reiteration of some proposals to address requirements**
 - **Recommendation from AMERIGEO to GEODARMA**
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- **Expectation is completed GEODARMA request in April 2022**





Thank you!

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