



Promoting Cooperative Solutions for Space Sustainability



Workshops on the Use of Space Science and Technology for the Prevention of , and Response to, Disasters in Mesoamerica

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Situation to address:

- A. Mesoamerican countries are often subject to major earthquakes, volcanic activity, tropical storms, hurricanes, flooding, drought
- A. Major disasters have set back development achievements by a up to a decade
- A. Highly-specialized human and financial resources are limited

Workshop One





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Workshop One

Objectives:

- To build Mesoamerican capacity to use satellite and in-situ data to respond effectively to major and minor natural disasters
- To provide information on access to free or low-cost data and analytic software suitable for reducing the risk of damage to life and property
- To build a Mesoamerican network of analysts and disaster management personnel

Workshop Agenda Included

- **On-going work and resources** made available by the Global Earth Observation System of Systems (GEOSS) and capacity building under the EOPOWER project of the European Commission.
- **Presentations on:** Disaster cases, acquisition and use of open-source software, use of meteorological data by indigenous communities, CEOS Disaster Risk Management Team's pilot projects and achievements of the CEOS WGCapD, activities of CATHALAC, the SERVIR Mesoamerican program, the EOPOWER project of the European Commission and international data policies and needs for national data policies and legislation.
- **Practical exercises** on the use of satellite data and cartographic information in geographic information systems (GIS) and an operational open-source system to generate warnings of environmental risks.



Workshop Conclusions

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- More awareness and capacity building is necessary both for the disaster management and scientific and technical communities
- **Mesoamerica lacks an organized network of GIS professionals who work on disaster mitigation and response.**
- Need to develop presentations and tools devoid of technical language that speak specifically to the needs of disaster mitigation and response professionals.
- Need to reach out to local communities to introduce them to the range of relatively simple tools that can assist them survive natural disasters with fewer injuries and structural damage.
- Need to develop methods to help disaster managers understand better how to introduce new geospatial tools into their workflow.
- **Participants want training in free, open-source software.**



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Followup Actions

- CRECTEALC offered to coordinate the development of an email list server
- CRECTEALC is also building a web portal to facilitate the development of a geo-referenced network of activities, expertise and interest in disaster mitigation and response.
- CRECTEALC is developing a web-based e-learning platform for extending geomatics training throughout Latin America.
- Representatives of CRECTEALC (Puebla, Mexico), CATIE (Costa Rica), CATHALAC (Panama) and MCTP (Tuxtla Gutierrez, Mexico) all offered to host a follow-up workshop in 2014.



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Workshop Two

Objectives:

1. Introduce disaster prevention, mitigation and civil protection managers to the assistance to be gained from using free or low cost EO data and analytic tools in their work.
1. Train analysts and disaster management personnel in the use of the free, open-source software, Q-GIS and TerraMA², and
1. Build a Mesoamerican network of analysts and disaster management personnel

Participants

- Representatives of Mesoamerican disaster prevention and civil protection authorities
- Remote sensing and geographical information system experts from national and regional space science and technology institutions.

Countries represented:

- Brazil
- Colombia
- Costa Rica
- Dominican Republic
- Guatemala
- Honduras
- Mexico
- Panama
- United States



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Presentations made:

- GEO and GEOSS, opportunities for Latin America
- GEONETCast Americas
- CEOS DRM Flood Pilot
- CEOS COVE tools for data acquisition
- FEWS NET
- WMO-CGMS Virtual Laboratory
- EOPOWER contributions
- UNSPIDER -Institutionalizing the use of space-based information in disaster management
- SERVIR Disaster Assistance
- CATIE – GIS and Remote Sensing Risk Management Applications Haiti and Costa Rica
- Dominican Republic - Inter-institutional Group for Decision-making in Risk Management
- Dynamic Civil Protection Model for the State of Tabasco
- Data and Information Access Policies and Laws
- CONRED – Use of GIS in the prevention and response to flooding in Guatemala



Software Training

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- Q-GIS: Developed by hundreds of software experts around the world; Specialized modules available, including a disaster planning module.
 - Very powerful GIS
 - Lots of free on-line training available
- TerraMA²: Software developed by software engineers at INPE, the Brazilian Space Agency.
 - Risk analysis software suitable for most any risk geospatially-linked situation

MESOAMERICAN OPEN SOURCE DISASTER ACTIVITIES

(MOSDA)



[OPORTUNIDADES, RETOS Y
ACCIONES PRACTICAS]