The GeoHazards Community of Practice (GHCP): Recent Progress and Plans

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1) Nevada Bureau of Mines and Geology, University of Nevada, Reno
2) British Geological Survey (BGS), U.K.
- Recent Activities
- COST Proposal
- Contributions to Beijing Exhibition
Recent Activities

January 18-21, 2010: 1st GHCP Workshop, UNESCO, Paris
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Main Outputs:
- Workshop Report
- Draft GHCP Roadmap
- Strategic Target

Key activity in Roadmap:
- Implement core sites
Recent Activities

February-March 2010: Disaster SBA Review for STC:
- Results presented to STC-13 (available on web page)
- Issues with a few sub-tasks identified; subsequently resolved;

- Common issues:
  - Integration of different techniques
  - Integration of observations and models
  - Extraction of relevant information from observations
  - Real-time/low latency networks
  - Products and information relevant for end users

How to address these issues?
  Workshops on
  - Integration of different techniques
  - Integration of observations and models
  - Extraction of relevant information from observations
  Coordination efforts for enhanced real-time/low latency networks
Presentation of GHCP in GEOSS Session at ISPRS Commission VIII meeting, Kyoto, Japan, August 2010

Recent Activities

SUPPORTING RISK MANAGEMENT AND DISASTER REDUCTION: THE GEOHAZARDS COMMUNITY OF PRACTICE AND THE SUPERSITE INITIATIVE

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ABSTRACT:
Increased exposure to natural hazards in combination with limited preparedness and risk reduction leads to a rapidly growing number of adverse events and loss of property and human lives. The concept of the risk management cycle with the four phases of prevention, preparedness, early warning, response, and recovery captures the necessary steps to reduce the number and scale of disasters (UNISDR, 2005). Comprehensive information about natural hazards is a prerequisite for a successful implementation of this concept. This information alone is not sufficient. First, this information needs to be easily available to policy and decision makers to ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation. (2) Identify and monitor disaster risks and early warning systems, (3) Use knowledge, innovation, and technology to build a culture of safety and resilience at all levels, (4) Reduce the underlying risk factors, and (5) Strengthen disaster preparedness for effective response at all levels.

In order to achieve improved risk management and disaster prevention, a focus needs to be on creating a shared sense of awareness of the hazards and the options for adaptation to these hazards and the mitigation of the risks. Awareness of the hazards and risks and willingness to adapt and act is critical to reduce the scale of disasters, response, and recovery, and ultimately become resilient. Integrating adaptation and recovery considerations into planning and development of settlements and infrastructure long before the occurrence of a specific hazard-related event is a prerequisite for resilience. Improved data access, better availability and use of information, improved understanding and safety in the implementation of best practices, and their potential impacts are necessary building blocks for efficient risk management. The goal of the "Disaster" Sectoral Benefit Area (SBA) of Earth Observations addressed by the Group on Earth Observations (GEO) is "enabling management of risks and preparedness of societies and human and natural hazards" (GEO, 2005). The Strategy of GEO for the "Disaster" SBA (see Box 1) recognizes the importance of observations and information of the GeoC and the Global Earth Observation System of Systems (GOSS) on coordination of observing and information systems.

Many of the disasters caused by natural hazards originate from geohazards, such as earthquakes, volcanic eruptions, tsunamis, floods, landslides, and tsunamis. The GeoHazards Theme Team (GHCTT), in many regions, geohazards are among the major, if not the major, natural hazards. In many cases, large urban areas are at risk.
Recent Activities

Web page extended with additional information

The GeoHazard Community of Practice (GHCP)

The Geohazards Community of Practice for GEO

Over the past few years, initial steps have been taken by members of the former IGOS Geohazards Theme Team to make progress towards a Geohazards Community of Practice (GHCP) for GEO. This has been seen in successful initiatives like Super Sites and through a number of GEO tasks, in the Disasters SBA, in other SBAs and in cross-cutting tasks like the Global Datasets Task. In order to support and build on this progress, a comprehensive review of the current situation and the development of strategies for the next five years is timely. Therefore, together with GEO and UNESCO, the GHCP organized its 1st Workshop on January 18-21, 2010 in Paris (see Workshop Page ...). This Workshop was of interest to the entire GEO and wider geohazards community; space agencies, geological surveys, and users such as civil protection agencies, the key observing systems (geodetic, seismic, magnetic) and the international networks for the major hazards addressed by the GHCP.

Our Strategic Target

By 2020 put in place all building blocks for comprehensive monitoring of geohazards and the provision of timely information on spatio-temporal characteristics, risks, and occurrence of geohazards, in support of all phases of the risk management cycle (mitigation and preparedness, early warning, response, and recovery), and as a basis for increased resilience and disaster reduction.

This will be achieved by developing a global network of very few carefully selected core sites. These core sites will provide focal points for a large geographical region, where all building blocks of a value chain from observations to end users can be linked together and applied to the phases of the risk management cycle relevant for this region. Thus, these core sites will demonstrate the concept, enable scientific studies and technological developments, provide for
Welcome to the Supersite Website

The Supersites have data for the study of natural hazards in geologically active regions, including information from Synthetic Aperture Radar (SAR), GPS crustal deformation measurements, and earthquakes. The data are provided in the spirit of GEO, ESA, NASA and the National Science Foundation (NSF), that easy access to Earth science data will promote their use and advance scientific research, ultimately leading to reduced loss of life from natural hazards.

Click on a site in the map below, or see the regions listed below in Phase 1 and Phase 2 Supersites.

This website is a prototype created by UNAVCO and Wuhan on behalf of the Group on Earth Observations (GEO) and the European Space Agency (ESA). The website will attain an official design and move to a permanent home once a host is selected.
Recent Activities

Supersites Initiative:
Draft White Paper open for comments; available on Supersites web page

Question/issues:
- Consistency with GEO data sharing rules?
- Interoperability of web page?
- QA of material on web page
- New structural element in GEO?
Recent Activities

COST Proposal in preparation:
Reducing Geohazards-Induced Disasters Through Risk Management Informed by Earth Observations
COST Proposal

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Goal: Implementation of the GHCP Road Map
Deadline for Pre-proposal: 24 September 2010
Support, if successful: order EUR 100K/year for coordination
Participation: Global (with restrictions)

Status: Draft proposal available
Schedule:
- September 6, 2010: Proposal meeting, London
- September 7-20: Finalization of proposal and completion of partnership
- September 24: Submission
COST Proposal

Working Groups
WG1: Capabilities and gaps
WG2: Standards, protocols, data exchange, and services
WG3: Core sites: end-to-end approach to risk management
WG4: Supersites: serving disaster reduction research with earth observations
WG5: Disaster clearinghouse in support of response to major disasters
WG6: Demonstration pilots: Implementing Tandem
Contributions to Exhibition

GHCP Material for GEO Exhibition, November 1-5, 2010 Beijing, China

Specifically produced for exhibition:
- GHCP Poster, focused on the Road Map
- Two-page handout
- Slide show/video
- Access to GHCP web page

Additionally:
- Road Map (50 copies)
- ISPRS paper (50 copies)