

A Roadmap for the GHCP

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*A Roadmap for the
Geohazards Community of Practice of the
Group on Earth Observations*

Starting Point:

GEOSS STRATEGIC TARGET OF THE DISASTER SBA:

Enable the global coordination of observing and information systems to support all phases of the risk management cycle associated with hazards (mitigation and preparedness, early warning, response, and recovery).

This will be achieved through:

- more timely dissemination of information from globally-coordinated systems for monitoring, predicting, risk assessment, early warning, mitigating, and responding to hazards at local, national, regional, and global levels;
- development of multi-hazard and/or end-to-end approaches, as appropriate to meet the needs for disaster risk reduction, preparedness and response in relevant hazard environments;
- supporting the implementation of the priorities for action identified in the Hyogo Framework for Action 2005-2015: Building the resilience of nations and communities to disasters (HFA).

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Strategic Target of the GHCP:

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 through:

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 capacity building, and inform policy and decision making in the region.

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Contents:

Preamble (GHCP, membership and responsibilities, the Roadmap goals, audience, scope remains geohazards, but GHCP can be used as a pilot for other hazards in the Disasters SBA, describe links to other hazards, making the point that the roadmap structure is generic...)

Origin of the Roadmap (Workshop, iteration, ...)

Introduction

- Natural Disasters.
- Why focus on Geohazards?
- Where do we want to go? (the goals).
- Where do we stand?
- What is needed in order to get from here to there?

The Way Forward (The Map)

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Contents:

- The Map based on the four phases of the risk management cycle:

The Way Forward (The Map)

Activity 1: Mitigation and preparedness

Activity 2: Early warning

Activity 3: Response

Activity 4: Recovery

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The Way Forward (The Map)

Issues to keep in mind:

- Keep cross cutting issues clear
 - Observation system/sensors/ information system development.
 - Capacity Building (CBC) and Outreach (all GEO Committees?).
 - Science advances, inc. promotion of evidence based policy-making.
 - Reaching/connecting scientists/research and/to end-users/operations.
 - Resources – human and financial, for the network and its activities.
 - IPR and data access issues.
 - EO–In-situ integration and ground truthing.
- Interface with mandated advisory bodies and existing chains of command.
- Resilience is a cross-cutting issue – before, during and after.
- Awareness.

The Way Forward (The Map)

Activity 1: Mitigation and preparedness

Sub-activities:

- 1.1 Identifying the stakeholders (*identification of the 'right' end users, data providers, value adders; gaps in GHCP membership, who should be in the GHCP?*).
- 1.2 Understanding geohazards and mitigation measures (*identification of science and technology challenges, overview of adaptation and mitigation approaches, inc. mapping, measuring, modelling and monitoring hazards*).
- 1.3 Informing policy and decision makers and society (*provide information products about geohazards, inc. but not limited to mapping and assessment of (i) Hazard; (ii) Exposure; (iii) Vulnerability; and hence (iv) Risk*).
- 1.4 Creating awareness (*deliver the 'right' information to the 'right' people and the public; ensure education; engage in public education*).

Goals and objectives to be kept in mind in detailing the sub-activities:

- The overarching goal is mitigation and disaster reduction.
- Activities contribute to building resilience before hazard occurrence
- A focus of the GHCP is on decision support and information of society

The Way Forward (The Map)

Activity 2: Early Warning

Sub-activities:

2.1 Improving models and forecasts/predictions (*foster/facilitate model developments and forecasting/prediction algorithms where needed*).

2.2 Monitoring and detecting hazards (*identify areas to be monitored, understand the requirements, ensure the networks/infrastructure, identify indicators/precursors/thresholds, ...*).

2.3 Informing (early) warning systems (*consider products for warning systems, link to warning authorities, consider synergies between observing and warning infrastructure, work with ADC on demonstration, e.g., hazard data delivery via GeoNetCast*).

2.4 Integrating geohazards into public environmental information systems (*consider how information on geohazards can be integrated in public information provision on forecasts, c.f. weather forecasts; discuss role of GEO Portal for dissemination as it matures; clarify information and warning mandates, both at the GHCP level and promote this debate at GEO level*).

The Way Forward (The Map)

Activity 2: Early Warning

Goals and Objectives to be kept in mind while detailing the sub-activities

- GHCP fosters connections between the data/product providers and the end users; and takes an end to end approach, whilst respecting existing mandates.
- The activities contribute to building resilience before and during an event.
- The goal is to inform and support decisions on different levels, including decisions made by the public and individuals, through appropriate and timely information; while issuing public warnings is outside the mandate of the GHCP and GEO.

The Way Forward (The Map)

Activity 3: Response

Sub-activities:

3.1 Characterizing the event/Assessing the disaster (*full characterization of the event, including type of event, magnitude, extent, mechanism, ...; damage assessment; secondary hazards*).

3.2 Providing an EO clearinghouse for major international disasters (*including potential members of (science) response teams, useful EO infrastructure*)

Goals and objectives to be kept in mind while detailing the sub-activities:

- The GHCP can develop links and connections to the Charter.
- We should take an end to end and multi-hazard approach.
- The activities contribute to building resilience during and after events.
- The activities provide decision support and contribute to capacity building.

The Way Forward (The Map)

Activity 4: Recovery

Sub-activities:

4.1 Informing the Recovery Phase (*assessing the lessons learned; assessing safety of areas, access, infrastructure; provision of revised hazard assessment; feedback to activities 1 and 2*).

Goals and objectives to be kept in mind while detailing the sub-activities:

- We should take an end to end and multi-hazard approach.
- The activities contribute to building resilience after events.
- The activities provide decision support and contribute to capacity building.

Implementation

- Pilot implementation for a global network of a few “Regional Pillars” to be denoted as core sites;
- Core sites will comprise the so-called supersites;
- At least one core site per continent.

Goal: Build (a few) strong regional centers:

- based on the supersite initiative, the sites should have comprehensive monitoring and free access to all data;
- end-to-end approach and all phases of the risk management cycle;
- provide a testbed for capacity building in the region (monitoring, processing, science, application ...);
- should be determined through a Call for Proposals to all GEO Member Countries for the regional core sites through GEO.

Implementation

Establish and extend the networking of the global community, i.e. the GHCP.

Core funding for the GHCP:

- COST Action: global coordination around nucleus in Europe;
- Preproposal due in March.

Regional Offices:

- Should take the lead in organizing the regional core sites;
- Should provide support for regional CoPs;
- Should maintain a link to the global GHCP.