

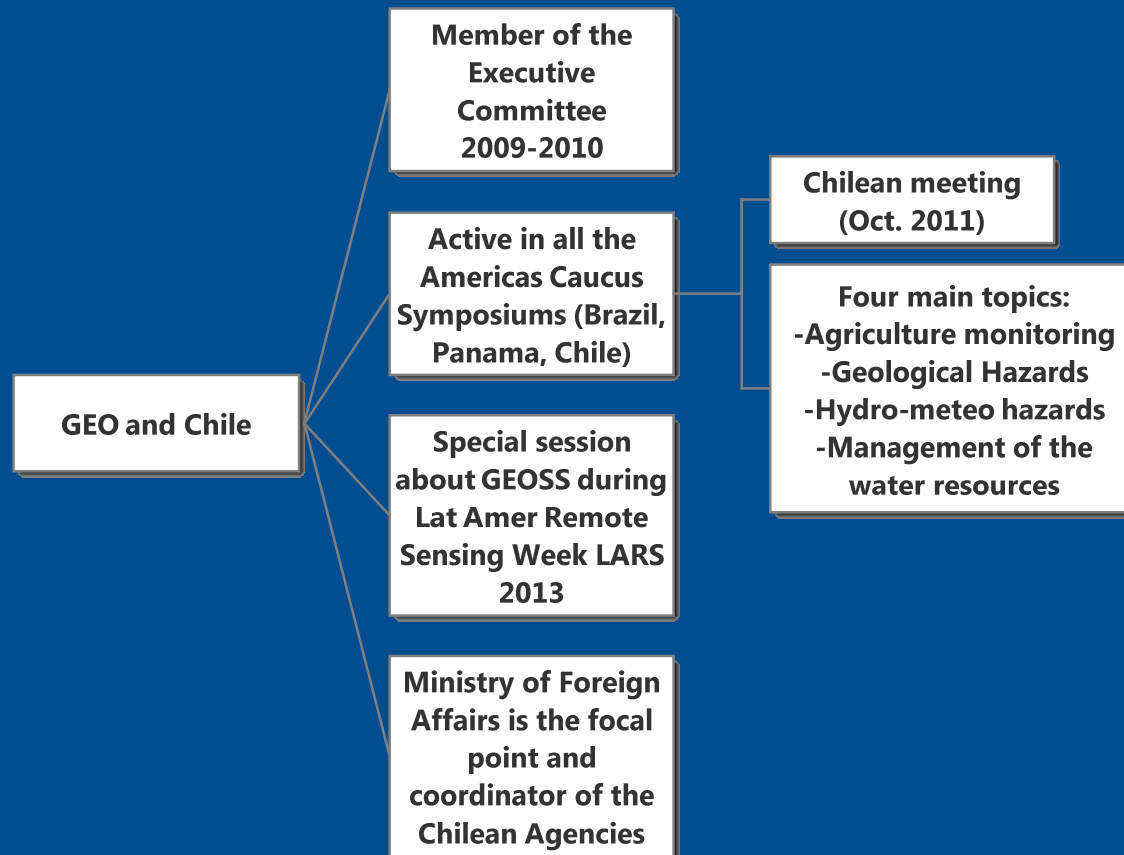
Chile and GEO

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**Gobierno
de Chile**

LATIN AMERICA GEOSPATIAL FORUM - GEOSS IN THE
AMERICAS - INITIATIVES





GEOSS ARCHITECTURE IMPLEMENTATION PILOT - AIP PROJECT

- It focuses on disasters (earthquakes, tsunami, and volcanic eruptions).
- Main international partners:
 - GEO : Ms. Lucia Lovison, Director, Afriterra Foundation
 - NASA: Mr. Stuart Frye, NASA Goddard Space Flight Center, U.S.A.
 - CNR-Italy: Mr. Stefano Nativi and Mr. Mattia Santoro.
- National participating entities:
 - National System for Territorial Information Coordination /Geospacial Data Infrastructure (SNIT-IDE Chile)
 - Aero-photogrammetric Service of the Chilean Air Force (SAF)
 - Hydrographic and Oceanographic Service of the Chilean Navy (SHOA)
 - National Seismological Center
 - National Geological Service (SERNAGEOMIN)
 - National Emergency Office of the Ministry of the Interior – (ONEMI)
 - Ministry of Foreign Affairs of Chile (MINREL)

TSUNAMI and EARTHQUAKES

- Chile – in the first 20 most damaging historical tsunamis worldwide:
 - 5th place (Northern Chile, in 1868; death toll ca. 25,674)
 - 20th place (in 1570; death toll ca. 2,000).

(www.pac.dfo.gc.ca/science/oceans/tsunamis/documents/tsustats.pdf)
- In 27 February 2010, earthquake with magnitude 8.8 and tsunami in coastal region of Talcahuano.

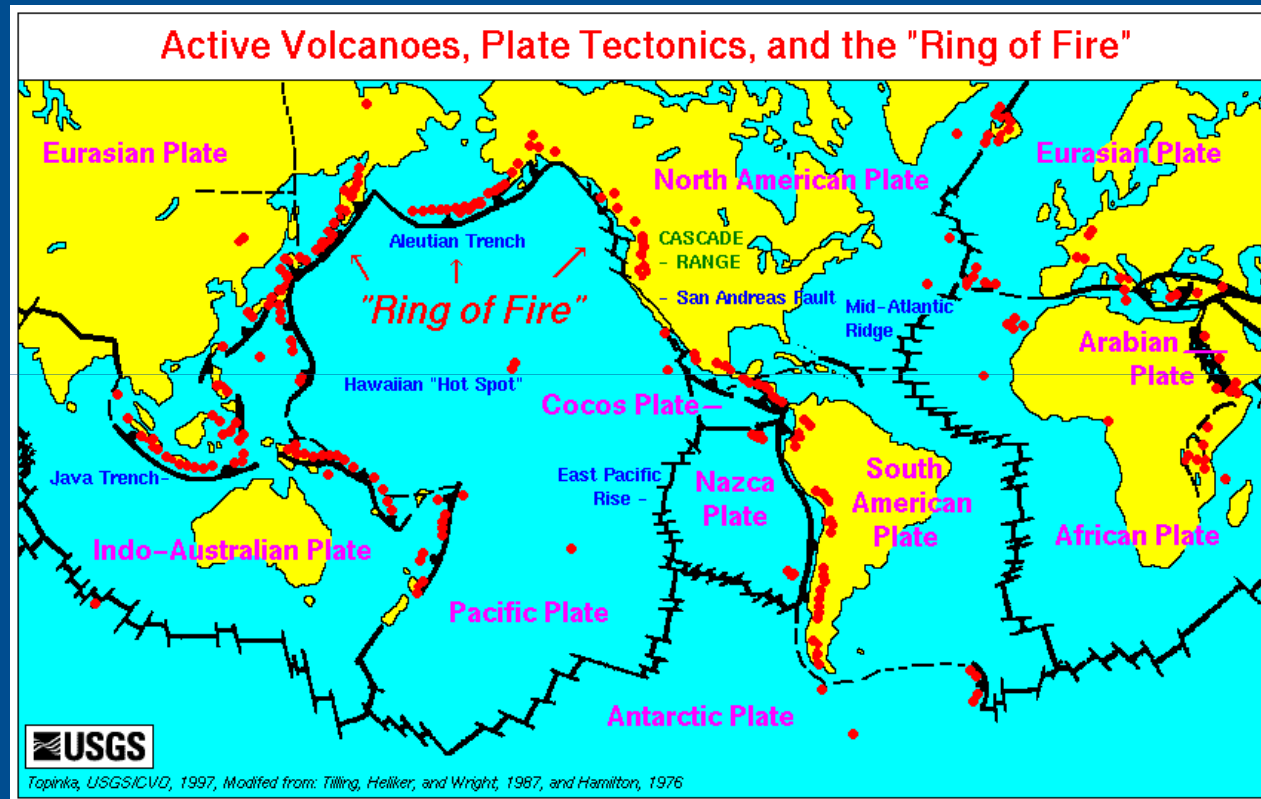


- **US\$30,000 millions** 17% of GDP.
- **Affected population:** 12.880.000 (75% país).
- **525 fatal victims, 54 missing.**

http://www.youtube.com/watch?v=rbYSyJLW3eM&feature=player_detailpage

http://www.youtube.com/watch?v=A0Esiu66d90&feature=player_detailpage

Chile: 2000 volcanoes - > 100 active



Earthquakes, Tsunami , Volcanoes



AIP PILOT PROJECT – LEARNING CURVE

- Service oriented
- Grouping of experts and institution
- Test GEOSS Client side & GEOSS Data provider

Tests of connectivity & search ability, registration processes (directly or broker service)

Integration of Chilean resources and with GEOSS Infrastructure

Development of applications based on the integration of national and international data & services:

- Portraying spacial data through WMS, WFS, WCS, WPS;
- alert systems (automatized, mobile, desktop) - OGC and ISO standards;
- specialized product, including outputs of field based model knowledge

AIP PILOT PROJECT –

KEY CONSIDERATIONS:

MULTI YEAR PROCESS & SUSTENTABILITY

Technical and institutional knowledge is progressive – takes time

Implementation of the project must coincide with the objectives of participating agencies

Participation is always limited to the available human resources and the time of experts

Policies in place, capabilities, data silos, challenges, limitations and opportunities.

To identify future requirements in both human and technical resources.

To complement and enhance current policies and programs – value added

To identify synergies in house and globally

Need to examine potential models for multi-year budgetary sustainability - to move to testing and validation of applications

Global Network for Observations and Information in Mountain Environments (GEO-GNOME)

Leader: Dr. Antonello Provenzale, CNR Italy

Component 3 of GEO Task EC-01: Global Ecosystem Monitoring

Chilean Participants:

- Dr. Ricardo Jaña, Scientist of Antarctic Institute of Chile (INACH)
- Dr. Ingrid Hebel, Researcher of the University of Magallanes, Chile

GEO - GNOME

Mountains environments and ecosystems :

- Are rich in endemic and even endangered species, especially in biodiversity hotspot.
- Are directly linked to downstream regions and affect costal areas.
- Provide essential water reservoirs.
- Affect surrounding clima & are sensitive to climate change.

We need to study the individual peculiarities of various mountain regions, collecting and exchanging information.

Chile is a natural laboratory: 4,000 kms of the Andes, all its glaciers and its Anctartic region.

(natural laboratories are key pilot areas)



GEO Webinars related to the water cycle

These monthly events are organized by GEO and “Comunidad para la Información Espacial e Hidrográfica para América Latina y el Caribe”(CIEHLYC).

The purpose is to share studies and explore potential applications among scientists and decision makers.

GEO Webinars related to the water cycle

Chilean participation:

- Forecast of water availability from snow precipitations and the need of a snow monitoring network in the Andes
Project DEVELOP (NASA) and CIREN (Chile).
Jun 18, 2014
Sergio Maldonado (CIREN) y Steve Padgett-Vasquez (NASA/DEVELOP)
- Carbonate production in benthic ecosystems influenced by discharge of rivers and coastal upwelling.
NEXT. Oct. 16, 2014
Nelson A. Lagos, Ph.D.
Universidad de Concepción, Chile

MCD: Mutual
learning (national,
int'l, communities
of practice)

Contribution to
the enhancement
of the GEOSS
Common
Infrastructure
(GCI)

International
partnerships
through GEO –
scientific
knowledge &
research

Development of
applications

- Sustainable use of
resources and
production
- Prevention and
management of
disasters



Muchas Gracias & Thank You

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