

Geo Chile Disasters Capacity Building Working Group

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Afriterrra Foundation
Sat-Drones**

Santiago, 3rd April 2017



**Gobierno
de Chile**

gob.cl

GEO Chile Disasters Capacity Building WG participants:



GEO Chile Disasters Capacity Building WG



Data & metadata are registered to GCI, data can be searched, accessed, discovered, integrated. Data from different sources and formats are converted through interoperable interface thanks standards such as OGC, ISO TC211, W3C and others (Service Oriented Architecture or SOA). Capacity Building WG: addresses technical with (skills/knowledge) humans issues.

Societal Benefit Areas



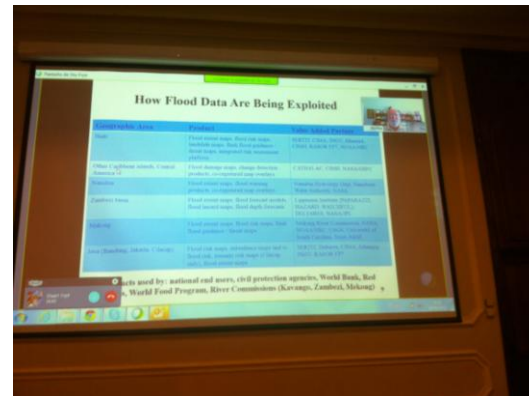
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- People are interoperable.
- We support an holistic approach.
- We adopted SOA and DAB design.
- We focused on disasters.
- We focused on building capacity & resilience to disasters.



Geo XIII, Saint Petersburg, Russia, November 2016

GEO XII, in Mexico City, 9-13 November, 2015



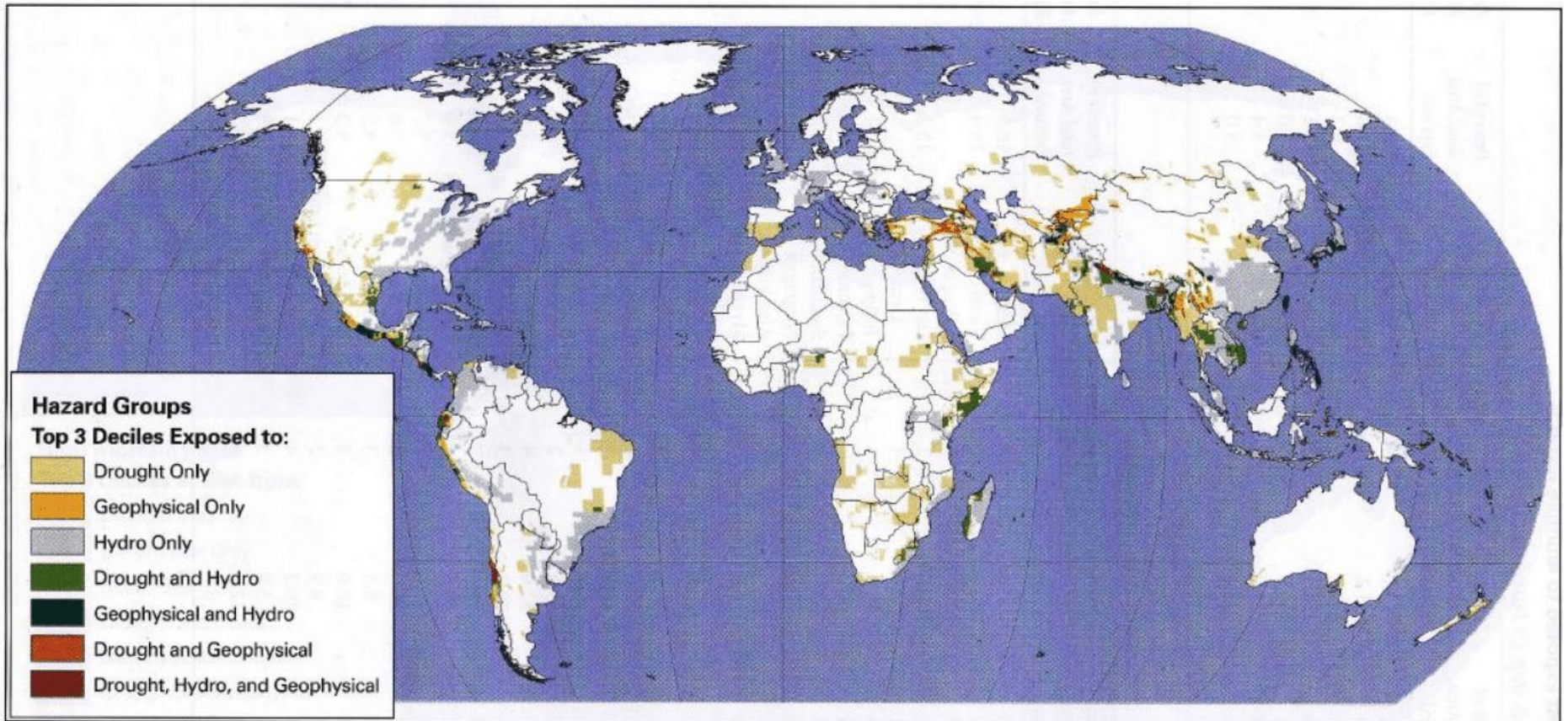
GEO Workshop in Santiago, Chile, 8-9 September 2015



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Objectives:

Increase resilience to disasters by increasing capacity in the society according the Sendai Framework, and by Earth monitoring for disasters occurrences.

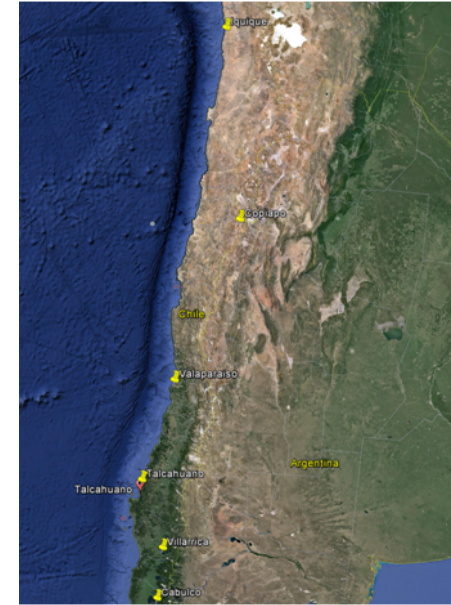


Note: Geophysical hazards include earthquakes and volcanoes; hydrological hazards include floods, cyclones, and landslides. [Claudia González-Muzzio](#), 2010

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Case studies – Chile Testing regions:

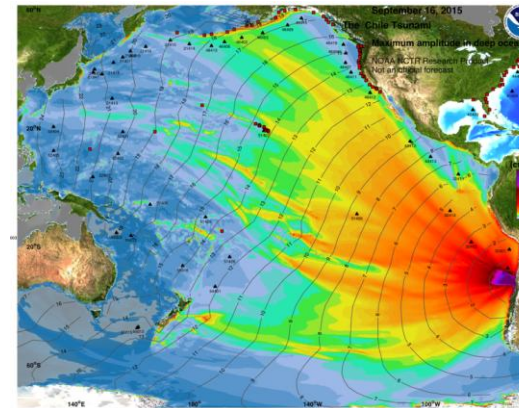
Seven regions were selected, three with volcanic hazards (Copahue, Villarrica, and Calbuco); three with earthquakes and tsunamis vulnerability (Talcahuano, Iquique, and Illapel) as well as wild fires risk (Valparaiso). Later on, it will be discussed wildfires, floods, landslides occurrences.



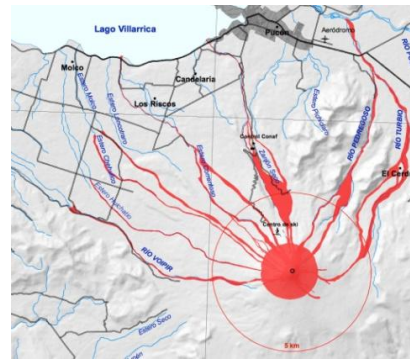
Illapel, 16 September 2015, tsunami and quake



Villarrica, March 2015



Iquique 8.2 Earthquake, 1 April 2014



Calbuco, April 2015





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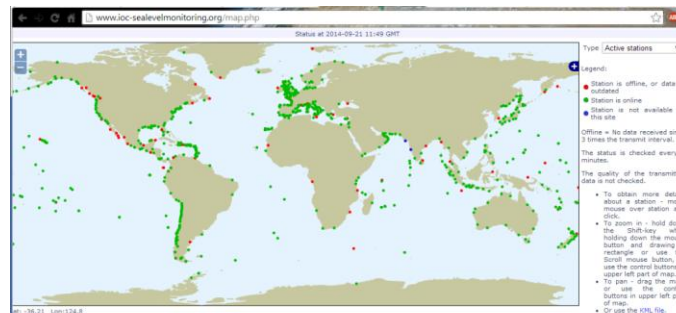
Meteo Chile, 2016

Case studies – Chile Testing regions--:

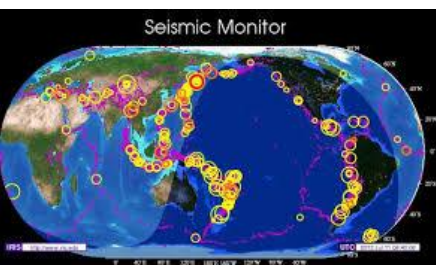
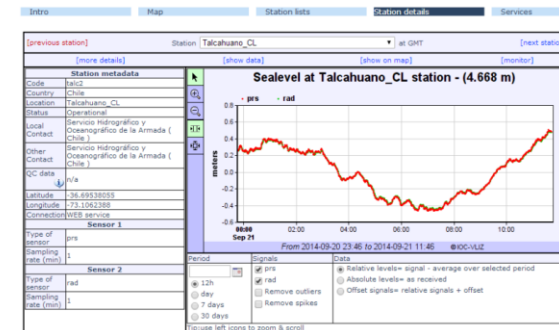
In the seven regions, instruments, data and metadata, often related to a certain event, were accessed, made interoperable through standard interfaces (such as OGC, W3C, ISO and others) through the new GEOSS geoportal.

Critical is the support of the Chilean administration at any time, across different organizations, and communities.

Important is also to let every organization manage their own data and models, while allowing one organization, here IDE-SNIT – access to their metadata that they enter in the Chilean CSW.

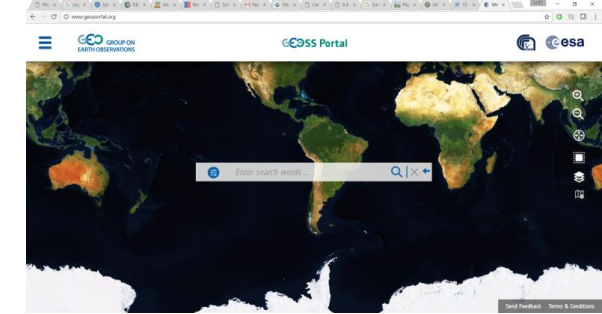


<http://www.shoa.cl>



<http://www.Iris.edu>

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2017 activities

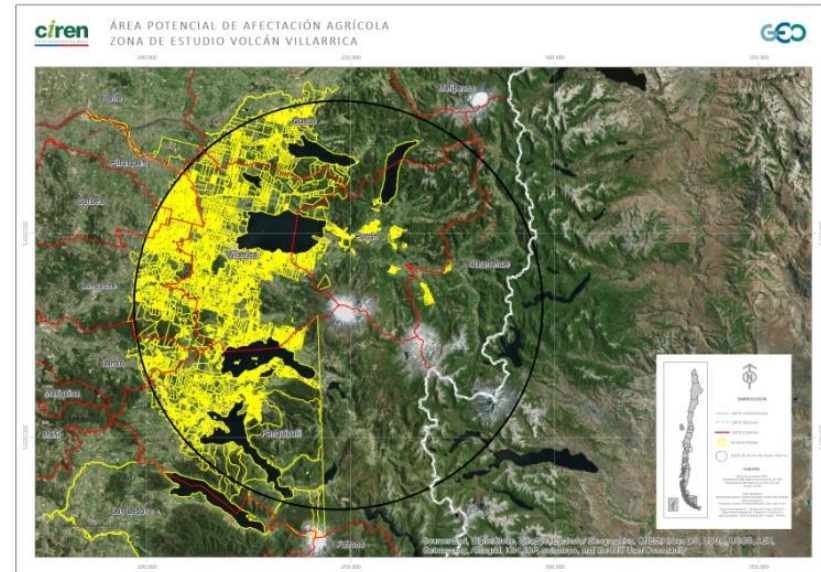
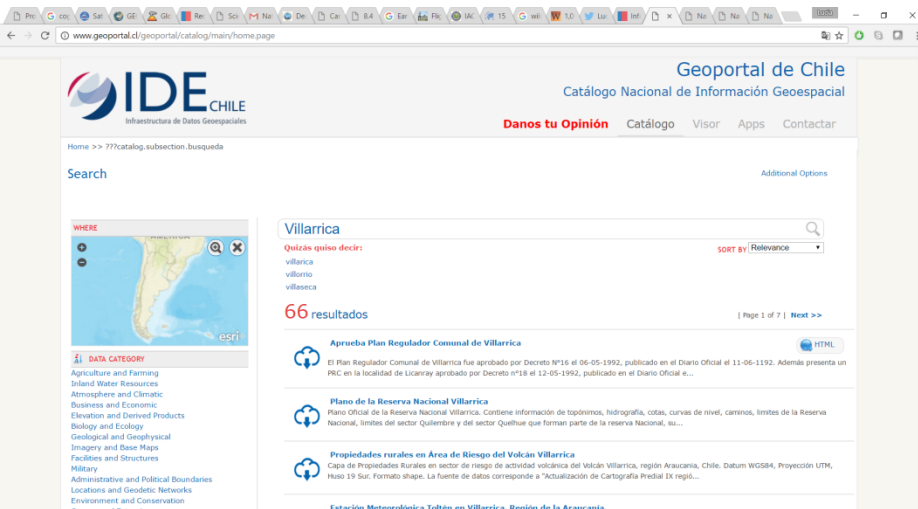
- 1- Organized, instructed and coordinated experts, to do a demo on disasters, of the new geoportal developed by ESA within the disasters activities to the participants of the Working Group (January 2017).
- 2- Assisted in the wildfires that have ravaged Chile and South America.
- 3- Assisted in the mudslides that also have ravaged Chile and South America.
- 4- Assisted Sernageomin (Chile equivalent of USGS) to write a proposal for becoming a GEO Supersite and Natural Laboratory.



NASA satellite photo showing smoke from the wildfires in Chile January 26, 2017.

2017 activities (*continue*)

5- Supporting IDE-SNIT and CIREN to develop metadata and data products related to the land use of the seven testing areas selected in Chile.



IDE-SNIT and CIREN, New Data and Metadata, Villarrica, 2017

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2017 activities (continue)

6- Capacity Building: to develop Best Practices related to disasters & organizing with GEO assistance a Disaster Workshop within ICC 2017 and others.

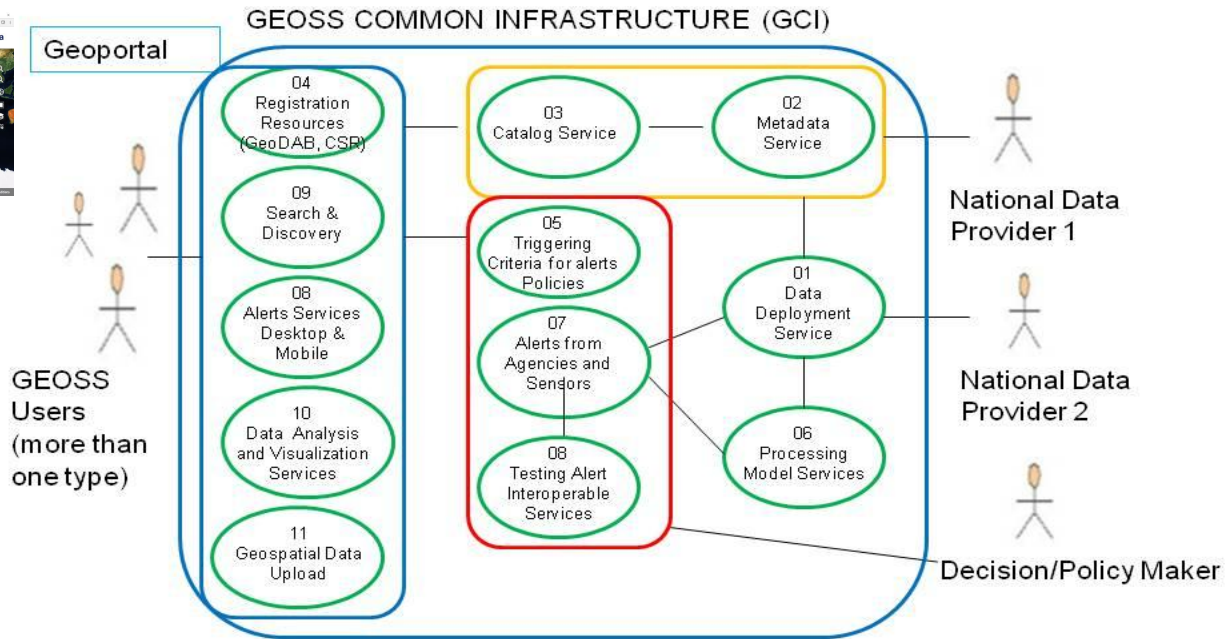
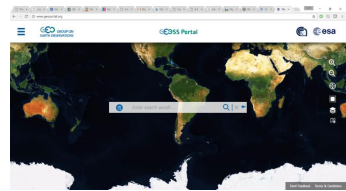


7- Organizing , coordinating and assisting Chilean agencies to identify the research/testing areas for Satellite-Drones data and metadata collection in relation to develop products that we'll benefit all the communities for disasters (the research site chosen is Villarrica, with ONEMI, Sernageomin, UTFSM, CIREN, IDE-SNIT, SAF, Meteo Chile, Pucon Municipality and NASA , Sat-Drones, and others are and will be involved).

*Villarrica volcano and Pucon visit
2 April, 2017*

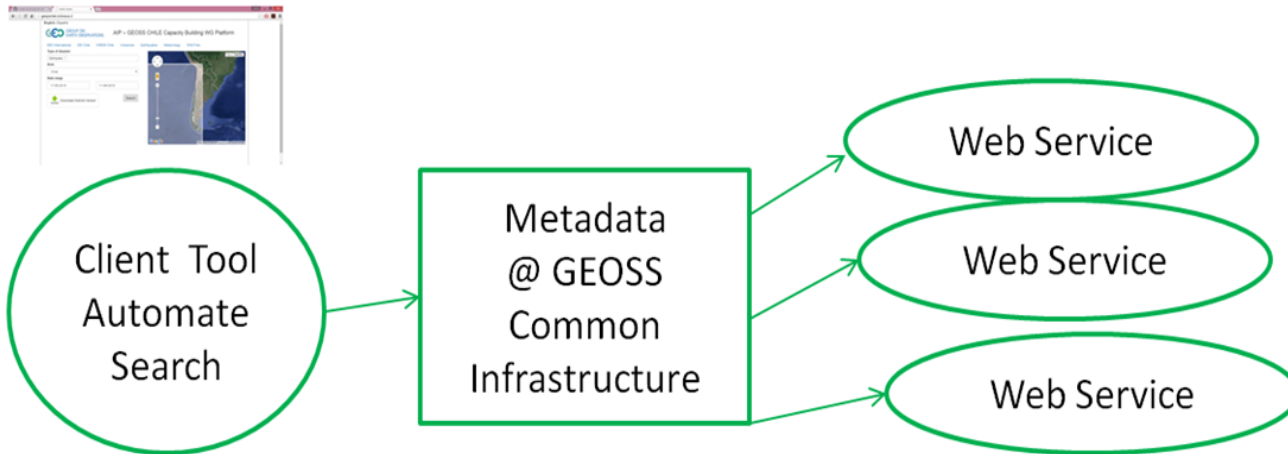


Architecture Implementation Pilot - Chile Capacity Building

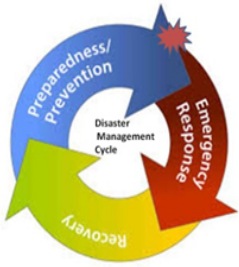


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- In 2016, the Client App Tool web mapping service will be loaded to the GUI apps as layers for visualization of the disaster events.



<http://www.earthobservations.org>



Conclusions I

While holding on the Data Management Principles, and the Sendai Framework for disasters in mind, the GEO Chile Disasters CB WG will continue to operate:

Training of people –at local, regional, international level – as first-responders and as data collectors and analysis.

More work needs to be done at local and regional levels, by bringing metadata and data to IDE-SNIT, such as geodetic and Land Cover data, as well as other geospatial data and metadata of Chile from drones, other robotics and sensors for disasters.

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Conclusions II

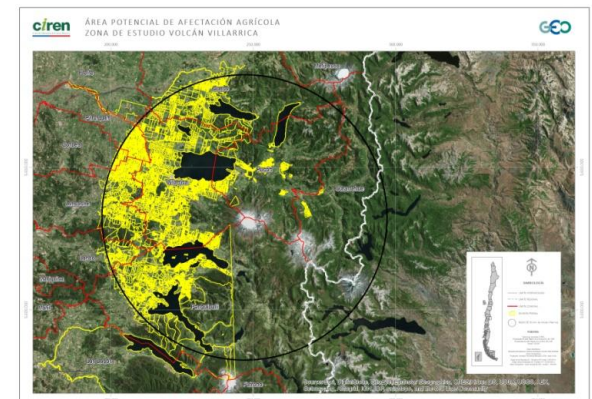
For the 2017, WG plans a new version of the GEO Chile Client API.

We'll focus on developing an interoperable application that can work on most devices, both in Spanish, in English and other languages.

We use a collaborative space in GitHub to provide transparency and collaboration.

We'll continue to work with IRIS web services and the CSN to develop new data and metadata to be registered at IDE-SNIT and GCI.

CIREN, New Data and Metadata, Villarrica, 2017



Conclusion III

Conclusions III

GEO Chile Disasters Capacity Building WG also plans to include in the GEO Chile Disaster Client application, a scenario that will consider the social aspect when a disaster occurs. Later on, another scenario will include the space-time integration, especially for earthquakes and tsunamis.

Thank you. Qs?

Gracias.

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**Seminario información
geoespacial para el
desarrollo social,
ambiental y económico
de los países de las
Américas y el Caribe**



*GEO Chile CB Workshop, Chile,
September 2015*