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| 4th GEOSS Science and Technology Stakeholder Workshop  *CONCEPTS, TECHNOLOGIES, SYSTEMS AND*  *USERS OF THE NEXT GEOSS*  March 24-26, 2015, Norfolk, VA, USA |  |

**Breakout Session 2.1: Global and Regional Observation Networks Sustainability and Capacity Building**

**Co-Chairs: *Senay Habtezion, Bob Chen*; Rapporteur: *Wolfgang Grabs***

Presentation:

**Chilean Web Services and AIP- Capacity Building activity related to Societal Benefit Areas**

*Lucia Lovison-Golob, AIP - Capacity Building Leader, Geospatial Director Afriterra Foundation*

Description of the ***capacity building effort of technical experts within GEO-Chile and GEO*** program and the capacity building effort of the AIP- Working Group. It is shown ***how people and agencies collaborate within Chile and internationally, while supporting the GEOSS Common Infrastructure (GCI). As examples, the multi-year Architecture Implementation Pilot (AIP) project for disasters management in Chile is described.*** ***The goals of this project are both to exchange data and services through interoperable interfaces***, and to ***make suggestions during an emergency event.*** Geospatial standards are adopted such as the Catalog Service of the Web (CSW) by IDE-SNIT (Chile), and the GEO Discovery and Access Broker (GEODAB) by CNR (Italy) as well as collaboration are supported between Servicio Aerofotogramétrico de la Fuerza Aera de Chile (SAF) and National Aeronautics and Space Administration (NASA). F**ive case studies related to tsunamis, earthquakes and volcanoes are discussed**. The presentation focuses on the **capacity building** effort within the architecture implementation project past and future.

***Key messages***

* Development of Chilean web services; testing, recommendations, use in DRR.
* DRR agency is using social media to reach people.
* AIP-8 Capacity building WG
* Dissemination of AIP results through Best Practices
* Disseminating code through web hosting service
* CP in AIP Need further support from other countries (including arctic/antarctic regions)
* At present, few emerging countries, need more participation taking them on board.
* Request AIP documentation, disseminate better their knowledge
* Develop, document, promote sustainable models for GEOSS (economic, legal, safety…)
* Get acceptance from governmental observation network operators….
* There are Reservations on open data policies, rather on meta-data.

**Case Studies on the Role of EOs in Environmental Policy Support — A Synthesis**

*Senay Habtezion Global change System for Analysis, Research and Training (START)*

As part of the [GOFC-GOLD](http://start.org/programs/gofc-gold) project partnership effort to promote use of earth observations in advancing scientific knowledge, START has been leading an effort to explore ***priority knowledge and capacity needs related to the utilization of EOs in environmental policy and governance support in Africa.*** 6 case studies from 5 countries in Africa are described and future potential of EOs in advancing ecological and socioeconomic policy in the region and beyond are discussed. The case studies highlight data, knowledge and capacity gaps associated with EOs and assess the current and potential role of geospatial technology and knowhow in supporting livelihoods and ecological systems in the region. The ***need for enhancing the collection, preservation, sharing and dissemination of in-situ data highlighted including the development of research and technical and institutional capacity and geospatial infrastructure across countries in the region as well as the need for assessing the state of enabling factors on data sharing and the various applications of EOs across the policy cycle feature prominently in*** ***these case studies.***

***Key messages:***

* 2-3 weeks trainings (capacity building) focusing on the utilization of data, access data etc.
* 11 GOFC-GOLD networks: strengthening activities (training, exposure to thr international scene..)

Important context:

* EO and policy interface
* In situ and space based observations and models
* EOs and policy continuum to be proven through case studies
* Limited application of EOs use in environmental policy especially in Africa (Awareness, capacity…)

***Insights from case studies:***

* Internet access is a severe limitation of use of EO information
* EOs to be used across a policy cycle
* Enhance observations and management of data (including data rescue)
* Capacity development in research technical capabilities
* Training on data assimilation, analysis, product development
* Enabling factors on data access and sharing
* *GEO role: assessments? Advocacy? Awareness?*

***Andiswa Mlisa*: The role of capacity building in developing countries in GEO, changed into: “Developing institutional and individual capacity”**

The presentation focused on the following elements:

* The GEO capacity building strategy, developed in 2006, focuses on Individual, Institutional and Infrastructure capacity development;
* In the **current decade of GEO a number of successes have been made through various capacity building activities, programmes and initiatives  such as development of open source software, development of the capacity building resource facility, GEOCAB Portal;**
* With the successes there has been **challenges as well such as limited resources; limited coordination of activities, lack of systematic response to user requirements** such as those from GEO SBAs and loss of capacity building 'governance' in GEO;
* The 2016 - 2025 Strategic Plan of GEO envisages Capacity Building for developing Members’ competencies to use Earth observations efficiently for responding to societal challenges and addressing sustainable development. How the GEO community organizes itself to meet this objective needs to be articulated;
* **The presentation proposes the establishment of a focus group on CB that will undertake tasks such as organize networking and information dissemination workshops, periodic review of user requirements and available resources, match making needs to available resources and determination of indicators for impact assessment**;
* It is further suggested that **CB be a Foundational Task of GEO,** with **resources provided from the GEO Trust Fund**. Clarity needs to be given to what exactly these resources will cover, minimum to support the work of the focus group;

In order to develop a work programme for capacity building post 2015, a **Workshop on capacity building and developing countries in GEO, will be held on 4 May 2015 in Geneva**.

**Key messages:**

* Capacity building a foundation task of GEO
* Improve coordinate observation systems
* Make progress on open data policies
* Improve access to data and information
* Improve capacity to actually make use of the data and information gathered

Capacity building strategy of GEO as an important guidance to shape capacity building: get inputs and ownership and propagate

Prioritize CB

Note the challenges:

* Data access, knowledge, skills, infrastructure (IT and observations); coordination of activities, availability and management of resources
* Impressive list of workshop achievements in many SBAs
* Some items registered in the GEOSS Common Infrastructure (GCI)
* 590 registered capacity building resources (11.2014)

Outline of CB in the upcoming new GEO Strategy Plan

**Reflections and considerations..**

* Solutions fit for purpose?
* Indicators for assessing impact of CB ?
* Effective arrangement structure for effective CP in GEO?

Voluntary nature of GEO has its difficulties to add value to GEO activities!

***Discussion:***

* Big issue for GEOSS : Community Self Organization!!
* Note different communities in GEOSS: providers, users, political,….. be more specific of naming communities… Capacities, user engagements….
* Improve communication with traditional development partners in CB (including CapNet) and the academia for tailored CB progams).
* **Raise institutional awareness to improve the SPIRIT of providing best practices in service delivery to the public!)**

***Resume:***

***Noting significant success stories, there is an overall Under-commitment in terms of resources and financing to build capacity which puts in question the sustainability of observation networks,***

***No real plans for EO and the utilization of indicators to monitor the state of the earth and its residents***

* How should a network of network be governed to ensure sustained observation and processing infrastructure for the next GEOSS?

🡪 improve community organization; but still requires a governing framework under the custodianship of representatives of national governments.

GEOSS to provide more than the discovery and access functionalities; but also the use of information and service building

Governance: European network of EO networks, including the governance structure…. (example: geodetic services and common governance structure)

A major step would be to achieve a higher and more active participation of GEO principles and national GEO “committees” to act along identified fields of expertise and serve as national ambassadors to advocate participation in GEO and federate public and private organizations in support of GEO to achieve tangible country benefits that translate in the global implementation of GEO strategic objectives and inline with its implementation plan.