

**GEOSS Common Infrastructure (GCI) Enhancement**

The GEOPortal provides an entry point to access remote sensing, geospatial static and in-situ data, information and services.

The GEOPortal provides the following GEOSS resources:

1. **Free Text** - Entering terms into the search field in the title bar
2. **Browsing via Societal Benefit Areas** - Filtering resources in the left side menu according to the GEOSS Societal Benefit Areas
3. **Location** - Selecting a location on the interactive globe (click to activate) also displaying latest GEO related items

Click to browse resources by location

**I Petiteville (ESA)**

SIT-26, ESRIN, Frascati, 24-25 May 2011

In Dalbandin, several people were injured when the roofs of their houses collapsed, provincial Transport Minister Amanullah Notizai told Reuters, but [Read the full story](#)

Water  
Climate  
Disasters

zoom - Change Surface Texture Find a place Key

## Plan

- **Current GCI status**
- **Short-term GCI enhancement – Sprint to Plenary**

### LIVE DEMO

- **After Plenary – Long-term GCI enhancement**
- **CEOS Support to GCI Enhancement**

# Current GCI

The GCI allows users to discover (and use) GEOSS resources with no a priori knowledge of GEO.

## Current GCI includes:

- a web portal [ESA]
- a clearinghouse (connected to EO products catalogs) [USGS/FGDC]
- several registries (one contains the list of registered GEOSS resources e.g. community portals, datasets, ...) [USGS/FGDC and IEEE]



## GCI Main Weaknesses (1/2)

- **Only data and information discovery: no data access**
- **Limited remote catalogs search by Clearinghouse**
  - results to queries come from clearinghouse local database, limited in size. **Only “small” catalogs are currently harvested. No real-time access to “large” catalogs !!**
- **Current clearinghouse interfaces incompatible with an heterogeneous world of EO information systems**
  - **low number** of catalog query protocols and **low number** of metadata formats

5

## GCI Main Weaknesses (2/2)

- **Low number of resources found by Clearinghouse**
  - **partly due to low number of resources registered by GEO Members and POs** (GEO Members and POs' responsibility)
- **Lack of categorization of information results,**
  - **results completely mixed without any order (e.g. by relevance)**

6

More than 100.000 records without any relevance order !!!

Results grouped by "Resources categories"

Results presented in a flat list – no "Resources categories"

Results presented in two separate windows/portlets:  
 1 – Local search  
 2 – CH search

## Steps towards Plenary 2011 (1/2)

- 15<sup>th</sup> GEO ADC (INPE, Brazil, March 2011) decided to enhance significantly the GCI.
  - Demo at next GEO Plenary: **Sprint to Plenary**
- Some specific features to be implemented:
  - Involve the User Community
  - Evolve from EO data discovery to **access to multiple types of EO data** (satellite, in-situ, various formats & protocols ...)
  - **Simplify registration** of GEOSS resources
  - Add **information** on **data quality** and **data access conditions**



## Steps towards F

- Initial focus on less than 100 Observational Parameters datasets

– **Data-CORE** and **other**

Observation Parameter	Agriculture	Climate	Disasters	Ecosystems	Energy	Health	Water	Weather	# SBAs
Surface Air Temperature	X	X	X	X	X	X	X	X	8
Precipitation	X	X	X	X	X	X	X	X	8
Soil Moisture	X	X	X	X	X	X	X	X	8
Surface Humidity	X		X	X	X	X	X	X	7
Surface Wind Speed	X		X	X	X	X	X	X	7
Surface Atmospheric Pressure	X	X	X	X			X	X	6
Surface Wind Direction	X		X	X		X	X	X	6
Land Cover	X	X		X	X	X	X		6
Upper Level Humidity	X	X	X	X				X	5
Urbanization	X				X	X	X		5
Snow Cover Extent		X	X	X			X	X	5
Elevation			X	X	X	X	X		5
Land Surface Temperature	X		X		X		X	X	5
Leaf Area Index	X			X		X	X	X	5
Normalized Difference Vegetation Index (NDVI)	X			X	X	X	X		5
Vegetation Cover	X					X	X	X	5
Vegetation Type	X			X		X	X	X	5
Sea Surface Temperature (SST)		X	X	X		X		X	5

- Reuse of relevant existing projects (e.g. EC FP7).
  - Cost and time optimization.
  - 2 potential candidates for integration into GCI identified and demoed recently (May 3, 2011):

**GENESI** and **EuroGEOSS**

9

## “Sprint to Plenary” action plan

### Creation of small StP Integration Team (StP IT) (May, 2011)

- Co-lead by ESA, USGS and EC with experts from GCI component providers and EC-funded projects (EuroGEOSS and GENESI).
- **Main activities up to Plenary:**
  - Define user scenarii for Plenary demo
  - Identify & implement selected features of GENESI and EuroGEOSS to support the demo scenarii (May 15 – Sept 30, 2011)
  - Identify & implement additional GCI upgrades (e.g. Data Sharing Action Plan, improve GEO Web Portal ergonomic ) (May 15 – Sept 30, 2011)
- **Demonstration and usability testing for Plenary (October–November 2011).**

10

## GENESI demo

11

## GENESI Overview

- GENESI allows the **real time** discovery, access, and use (visualize, process...) of data located in distributed repositories/catalogues worldwide

- Re
- Sir
- ca

**LIVE DEMO ...**

- GENESI respects the data providers' data policy
  - User authorization performed only once by data providers
  - Automatic user identification for subsequent data access by GENESI service

12

## After Plenary

13

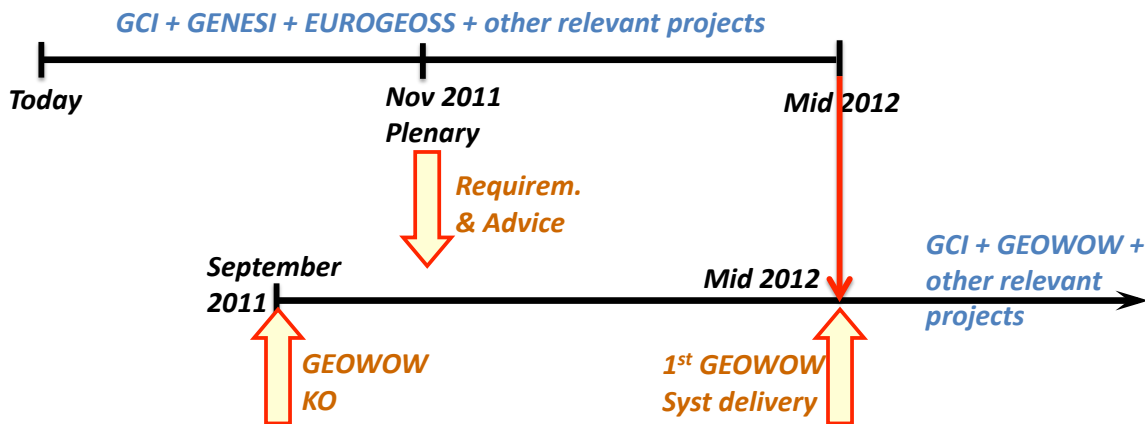
## Transition to Consolidated GCI

- at GEO Plenary, upgraded GCI still hybrid
- New EC FP7 project GEOWOW to consolidate future GCI
  - Lead by ESA
  - Follow-on of both EuroGEOSS & GENESI
  - start in Sep. 2011, first outcomes in H1 2012



14

## Steps towards Plenary 2011 & later



*GEOWOW and other EC FP7 projects have secured additional resources to ensure timely GCI enhancements and operations beyond next Plenary (First GEOWOW integration to GCI in mid 2012)*

## CEOS Support to GCI Enhancement

- **Demo to the GEO Plenary will be successful if data, metadata and products catalogs and repositories from the Data Providers (incl. CEOS agencies) are made accessible.**
- CEOS Agencies are requested to support the following:
  1. Most relevant EO datasets to be registered in the GCI
    - in addition, datasets meeting Data-CORE criteria to be added to the list of Data-CORE dataset to be presented Executive Committee meeting ( mid-July)
  2. Corresponding catalogs to be interfaced to the GCI (one-stop-shop for data discovery)
  3. Corresponding on-line repositories to allow access to authorized users following data discovery





**Thank you !!**

Clearinghouse

Standard Registry

Component and Service Registry

Best Practices Wiki

GEOSS COMMON  
INFRASTRUCTURES