

GOS and ESIP Communities

ESIP and Geospatial One-Stop are both building on a concept of communities for bringing together data, products and expertise that are related to a particular set of environmental problems. It is important to note that both groups are trying to get beyond traditional disciplinary or organizational frameworks for data discovery. This shared goal is an important step forward. The two community concepts are similar, but there are differences that we need to understand in order to forge a path forward. This document explores of these differences in order to provide a framework for further discussion.

Option 1: The Current State

The Table of Contents on the ESIP Communities home page provides a reasonable mechanism for presenting and exploring some different options. At present, that table of contents has four primary divisions (Hurricanes, Special Interest, Data Categories, and Geography) and two levels. Two of these are illustrated in Table 1.

Table 1. Current GOS TOC Structure

Special Interest					
	Earth Information Exchange --->	Air Quality	Coastal Management	Disaster Management	...
	GIS for the Nation				
	Fire Mapping				
	...				
	Data Categories				
	Administrative and Political				
	Agriculture and Farming				
	Atmosphere and Climate				
	Biology and Ecology				
	...				
...					

The Earth Information Exchange is presently one of the Special Interest Communities. Access to the ESIP Cluster pages is through a box on the EIE Community Home Page (indicated on the right in Table 1). This approach allows ESIP to change the EIE page and content without interacting with the ESIP home page. This is a good thing.

Unfortunately, there are some problems with the current implementation. In the GOS model, the community in this case is the Earth Information Exchange. It is a single unit that has a single manager, a single set of Key Resources, a single set of collaboration tools, a single set of members, etc. This is not what ESIP really has in mind. In the ESIP model, each cluster has autonomy. Each has its own Steward, its own Key Resources and, presumably, its own discussions, calendar, and other collaboration tools.

Option 2: Migrate Earth Information Exchange to First Hierarchy Level

One approach to addressing the difference in community definition would be to move the Earth Information Exchange to the first hierarchy level making it equivalent to the Special Interest or Data Categories items (see Table 2).

Table 2. EIE at the first level

Earth Information Exchange	
	Air Quality
	Coastal Management
	Disaster Management
	...
Data Categories	
	Administrative and Political
	Agriculture and Farming
	Atmosphere and Climate
	Biology and Ecology
	...
...	

I expect that this approach would be good from ESIP’s point of view, but it may raise a number of issues from the GOS point of view. These may be related to future decisions about the GOS TOC: what criteria are used to decide on first level hierarchy items. Could NOAA get one? NASA? ... This would also raise questions about the differences between the EIE categories and the ISO Data Categories already in the TOC. For example, what is the difference between the EIE Coastal Management Community and the existing Oceans and Coasts community, or between the EIE Public Health Community and the existing Human Health and Disease community? Having multiple communities for the same topic area would probably not be a good thing.

Option 3: The GEOSS Hierarchy

The GEOSS Societal Benefit Areas were an important element of the original discussion between ESIP and GOS. The idea was that ESIP would help organize GOS communities that were related to these areas. Perhaps GEOSS would be a reasonable first level item with the societal benefit areas as communities under the GEOSS item (see Table 3).

Table 3. GEOSS at the first level

Global Earth Observing System of Systems	
	Improve Weather Forecasting
	Reduce Loss of Life and Property from Disasters
	Protect and Monitor Our Ocean Resource
	Understand, Assess, Predict, Mitigate and Adapt to Climate Variability and Change
	Support Sustainable Agriculture and Forestry and Combat Land Degradation
	Understand the Effect of Environmental Factors on Human Health and Well-Being
	Develop the Capacity to Make Ecological Forecasts
	Protect and Monitor Water Resources
	Monitor and Manage Energy Resources
Data Categories	
	Administrative and Political
	Agriculture and Farming

	Atmosphere and Climate
	Biology and Ecology
	...

This approach makes sense from a big picture point of view, but the “Earth Information Exchange” does not appear in the TOC. It has been replaced by GEOSS. This arrangement still has the community overlap questions: what is the difference between the “Support Sustainable Agriculture and Forestry and Combat Land Degradation” and “Agriculture and Farming” communities.

Option 4: My Communities

There are presently two types of communities supported by GOS. The items in the “Data Categories” group are different than those in the other groups. These categories were determined by the ISO 19115 Metadata Standard. The category names are actually in the metadata records as theme keywords from the ISO 19115 Topic Category Codes. A GOS data category search is essentially a search for the appropriate ISO Topic Category Keyword. The other communities, i.e. the “Special Interest” communities, have no fixed text in the metadata records that indicates that the dataset is in that community. In those cases, there is no way to search for records in that specific community.

I suspect that ESIP would like users to be able to search for data/products/services that are related to ESIP communities that are defined using several classification schemes (GEOSS Societal Benefit Areas, NASA National Priorities, ...). If this is the case, we might be better off following the ISO Topic Category model. ESIP metadata records would need to have Theme Keyword Thesauri for each classification scheme. Those sections of the metadata would look like:

```
<keywords>
  <theme>
    <themekt>GEOSS Societal Benefit Areas</themekt>
      <themekey>Improve Weather Forecasting</themekey>
      <themekey>Develop the Capacity to Make Ecological Forecasts </themekey>
    </theme>
  <theme>
    <themekt>NASA National Priorities</themekt>
      <themekey> Weather Forecasting</themekey>
      <themekey> Ecological Forecasting</themekey>
    </theme>
</keywords>
```

These additions to the metadata would be supported by a search interface that allowed users to specify the theme keyword thesaurus that they wanted to use for their searches. Three obvious possibilities would be 1) ISO Topic Categories (the current choice), 2) GEOSS Societal Benefit Areas, and 3) NASA National Priorities. Users would then be able to set their keyword preference(s) as part of their profile. Possible GOS interfaces for these three different classification schemes are shown below. Of course, metadata records could have keywords from multiple thesauri (as in the example above) and other groups could make their thesauri available to their users using GOS as well.

Current ISO Data Categories

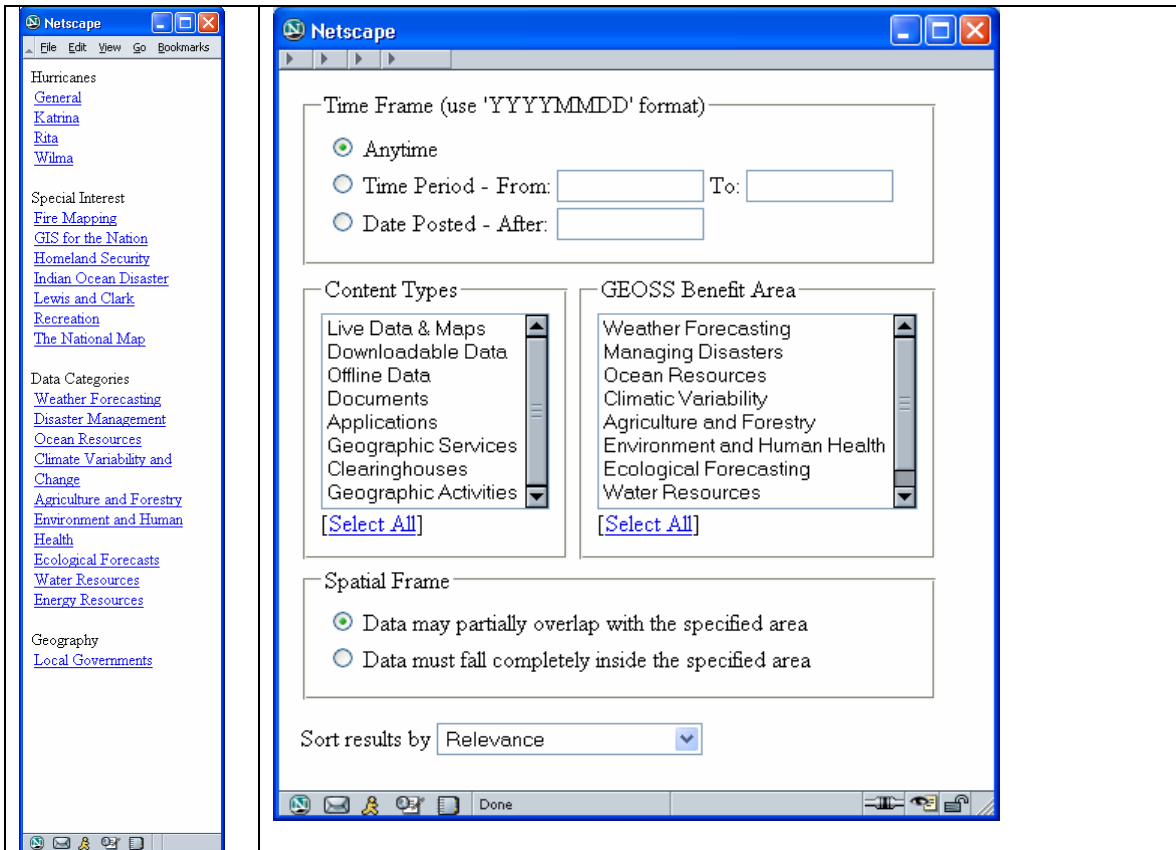
The screenshot shows a Netscape browser window with a search interface. On the left is a sidebar with a list of categories. The main window contains several filter sections:

- Time Frame (use 'YYYYMMDD' format):**
 - Anytime
 - Time Period - From: To:
 - Date Posted - After:
- Content Types:**
 - Live Data & Maps
 - Downloadable Data
 - Offline Data
 - Documents
 - Applications
 - Geographic Services
 - Clearinghouses
 - Geographic Activities
 - [\[Select All\]](#)
- Data Category:**
 - Agriculture and Farming
 - Biology and Ecology
 - Administrative and Political Boundaries
 - Atmospheric and Climatic
 - Business and Economic
 - Elevation and Derived Products
 - Environment and Conservation
 - Geological and Geophysical
 - [\[Select All\]](#)
- Spatial Frame:**
 - Data may partially overlap with the specified area
 - Data must fall completely inside the specified area
- Sort results by:** Relevance

The sidebar on the left lists the following categories:

- Hurricanes
 - [General](#)
 - [Katrina](#)
 - [Rita](#)
 - [Wilma](#)
- Special Interest
 - [Fire Mapping](#)
 - [GIS for the Nation](#)
 - [Homeland Security](#)
 - [Indian Ocean Disaster](#)
 - [Lewis and Clark](#)
 - [Recreation](#)
 - [The National Map](#)
- Data Categories
 - [Administrative Boundaries](#)
 - [Agriculture](#)
 - [Atmosphere](#)
 - [Biology](#)
 - [Business](#)
 - [Cadastral](#)
 - [Demographic](#)
 - [Elevation](#)
 - [Environment](#)
 - [Facilities](#)
 - [Geology](#)
 - [Health](#)
 - [Imagery and Basemaps](#)
 - [Inland Water](#)
 - [Locations](#)
 - [Oceans](#)
 - [Transportation](#)
 - [Utilities](#)
- Geography
 - [Local Governments](#)

GEOSS Societal Benefit Areas



NASA National Priorities

Netscape

File Edit View Go Bookmarks

Hurricanes
[General](#)
[Katrina](#)
[Rita](#)
[Wilma](#)

Special Interest
[Fire Mapping](#)
[GIS for the Nation](#)
[Homeland Security](#)
[Indian Ocean Disaster](#)
[Lewis and Clark](#)
[Recreation](#)
[The National Map](#)

Data Categories
[Agricultural Efficiency](#)
[Air Quality](#)
[Aviation](#)
[Carbon Management](#)
[Coastal Management](#)
[Disaster Management](#)
[Ecological Forecasting](#)
[Energy Management](#)
[Homeland Security](#)
[Invasive Species](#)
[Public Health](#)
[Water Management](#)

Geography
[Local Governments](#)

Netscape

Time Frame (use 'YYYYMMDD' format)

Anytime
 Time Period - From: To:
 Date Posted - After:

Content Types

Live Data & Maps
Downloadable Data
Offline Data
Documents
Applications
Geographic Services
Clearinghouses
Geographic Activities
[\[Select All\]](#)

NASA National Priorities

Agricultural Efficiency
Air Quality
Aviation
Carbon Management
Coastal Management
Disaster Management
Ecological Forecasting
Energy Management
[\[Select All\]](#)

Spatial Frame

Data may partially overlap with the specified area
 Data must fall completely inside the specified area

Sort results by

Done