

# EUMIS - an open portal framework for interoperable marine environmental services

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PML

Plymouth Marine  
Laboratory

Ifremer



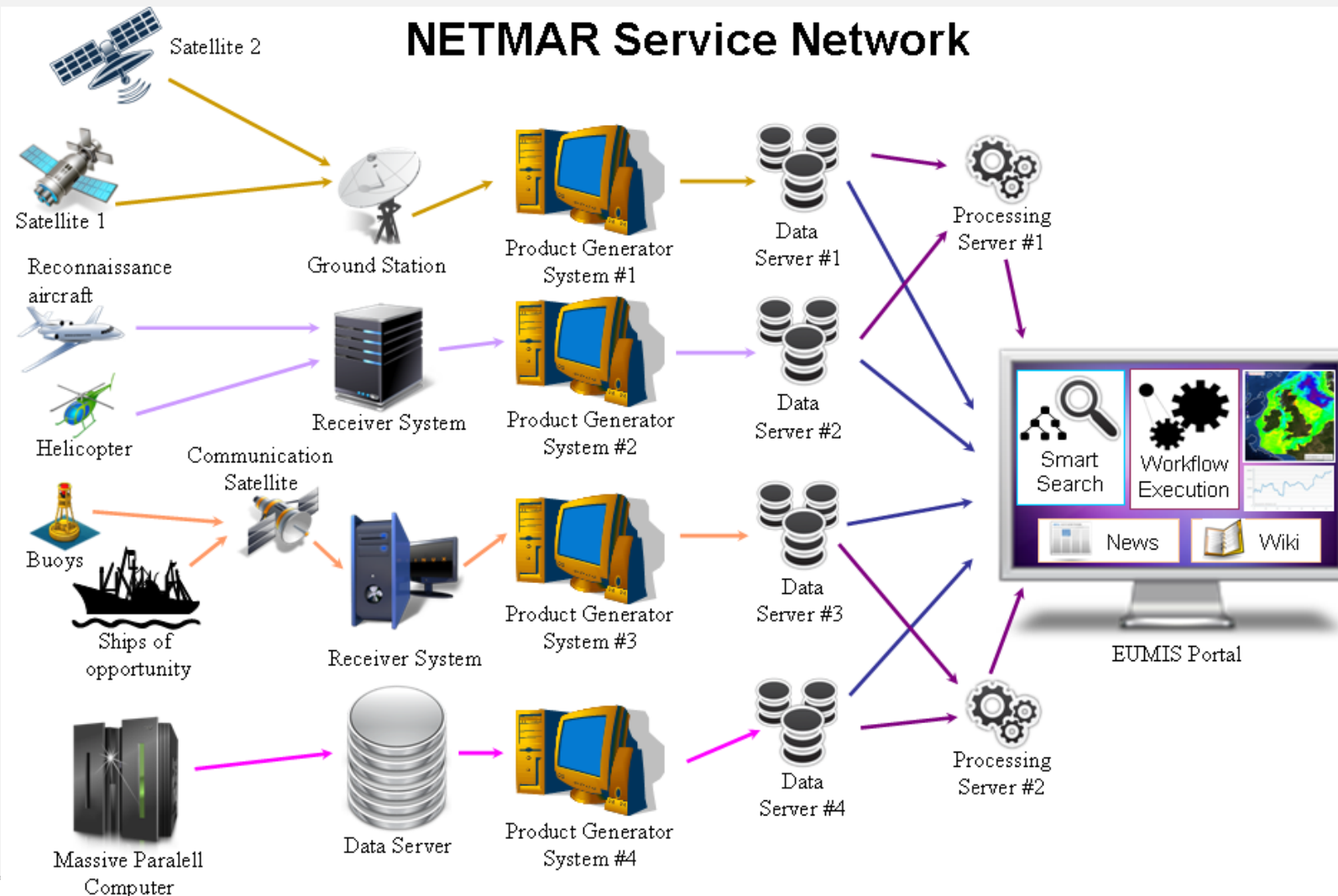
# Outline

- Objectives and concepts
- Pilots
- Ontologies and semantic framework
- EUMIS portal and components
  - GIS Viewer
  - Discovery Client
  - Service Chaining Editor
- Conclusion

# Objectives and concepts

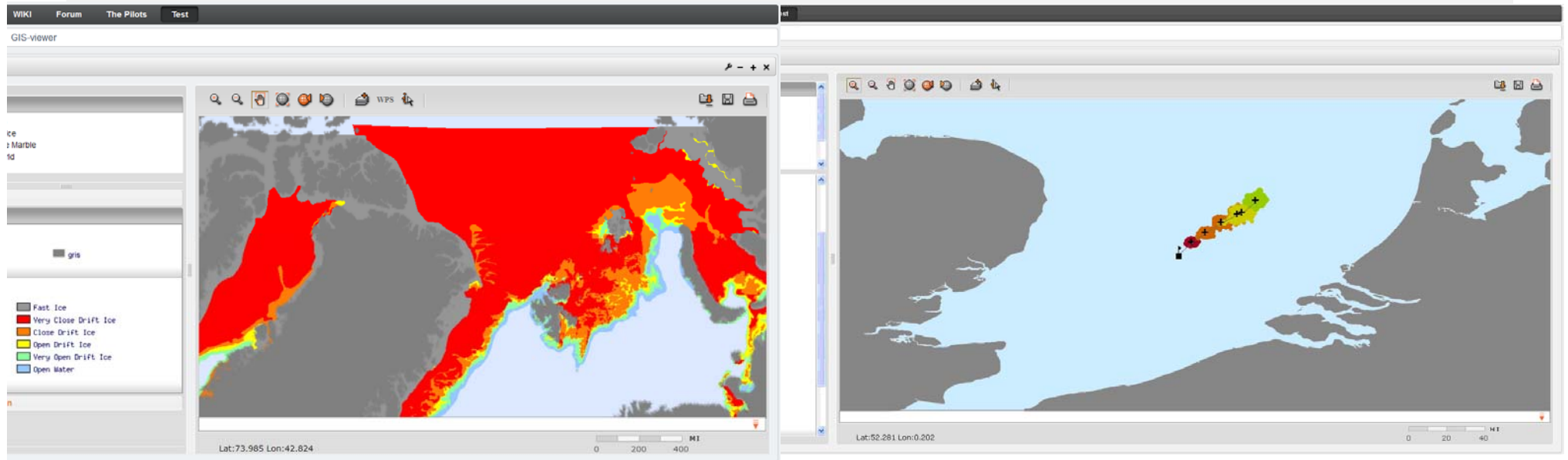
- NETMAR aims to develop a ***pilot European Marine Information System (EUMIS)*** for searching, downloading and integrating satellite, in situ and model data from ocean and coastal areas. It will be a user-configurable system offering ***flexible service discovery, access and chaining facilities*** using OGC, OPeNDAP and W3C standards. It will use a ***semantic framework coupled with ontologies*** for identifying and accessing distributed data, such as near-real time, forecast and historical data. EUMIS will also enable further processing of such data to generate ***composite products and statistics*** suitable for decision-making in different marine application domains.

# Objectives and concepts

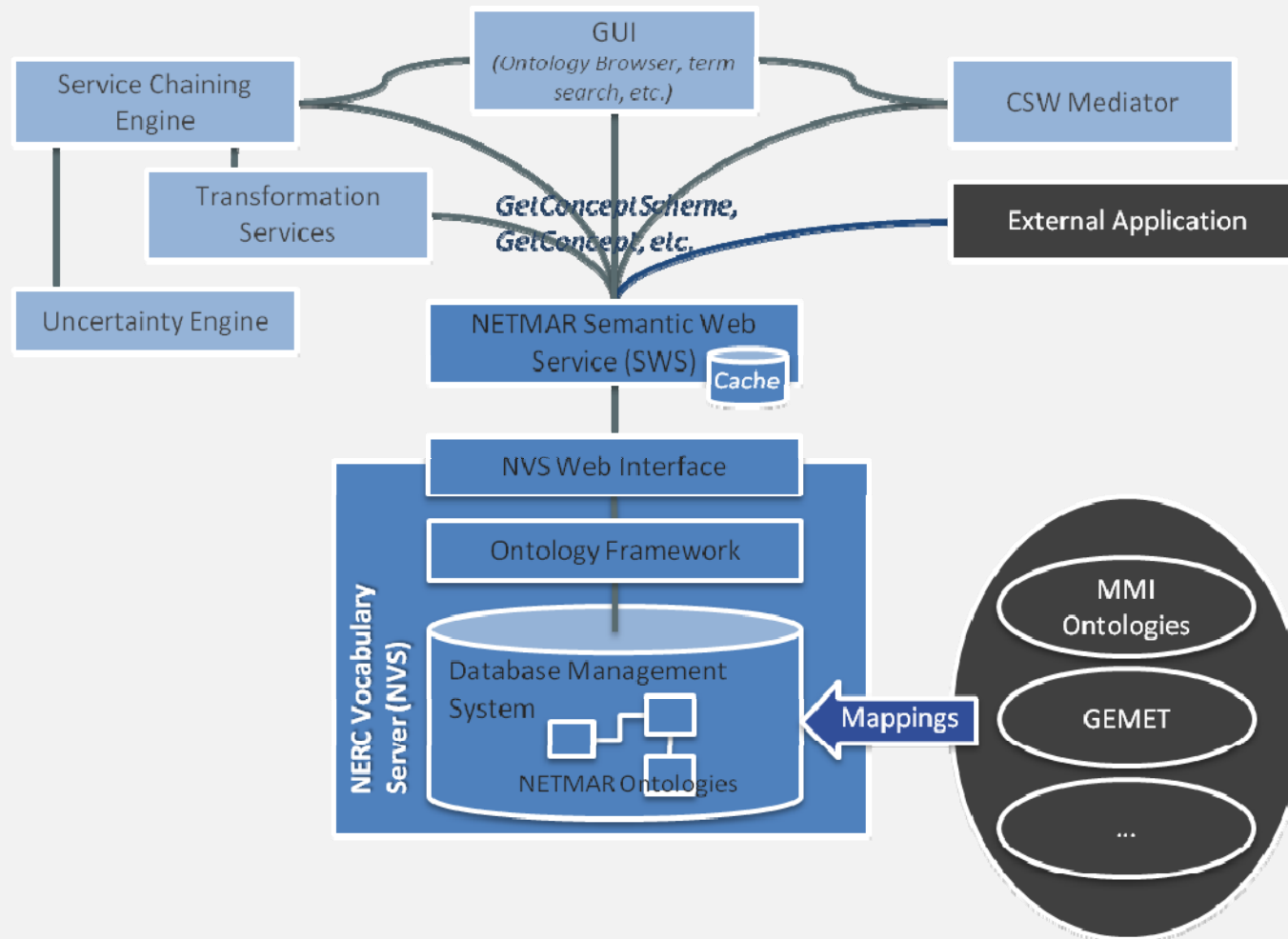


# Pilots

- Pilots in NETMAR
  1. Arctic Sea Ice monitoring and forecasting
  2. Oil spill forecasting and shoreline cleanup
  3. Ecosystem monitoring and modelling
  4. ICAN (International Coastal Atlas Network)

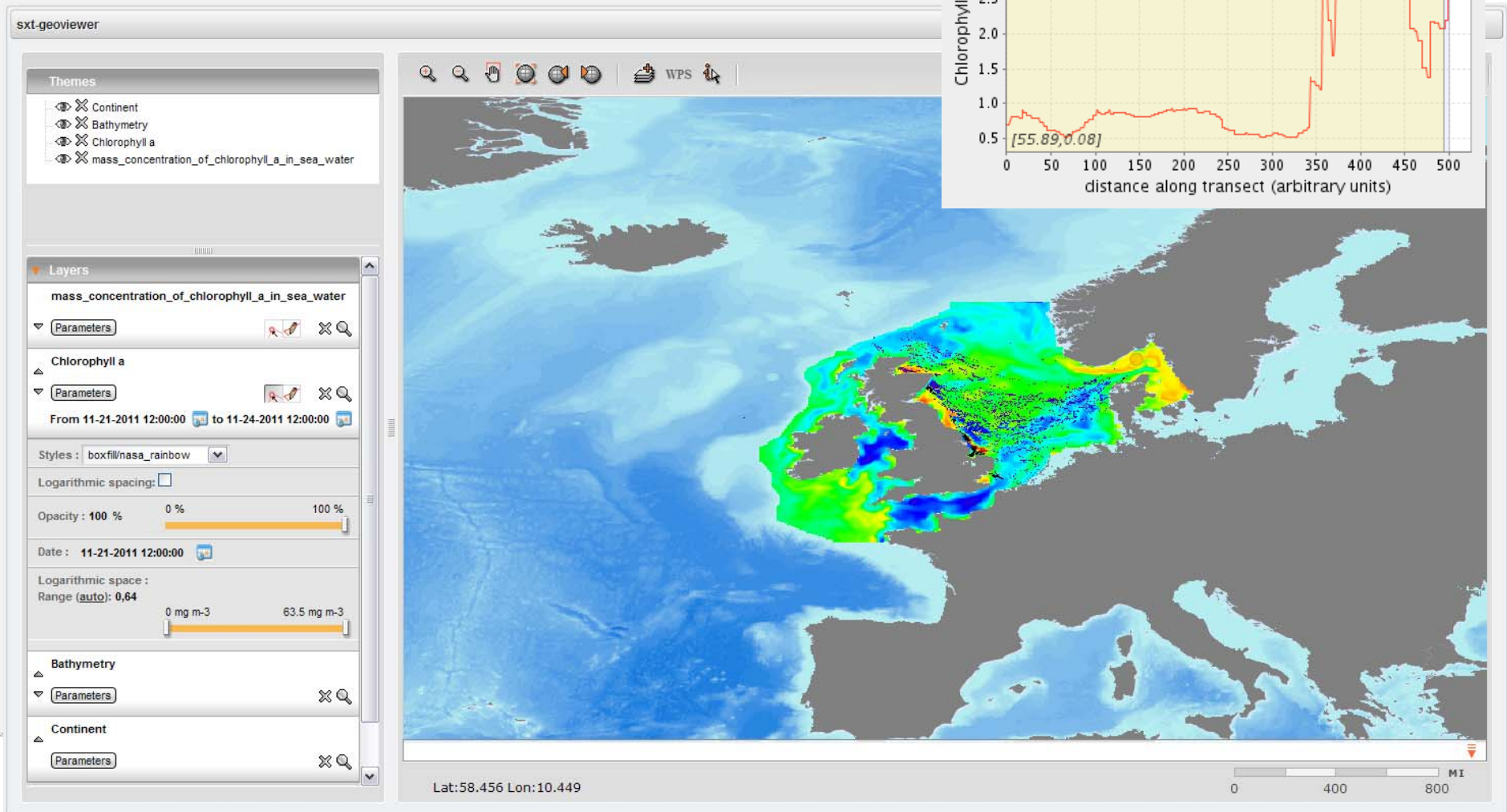


# Ontologies and semantic framework



# EUMIS portal and components

- GIS Viewer



# EUMIS portal and components

- GIS Viewer

Welcome WIKI Forum The Pilots **Test**

EUMIS Test GIS-viewer

sxt-geoviewer

Themes

- Met.No
  - Ice
  - Blue Marble
  - World

Layers

Legends

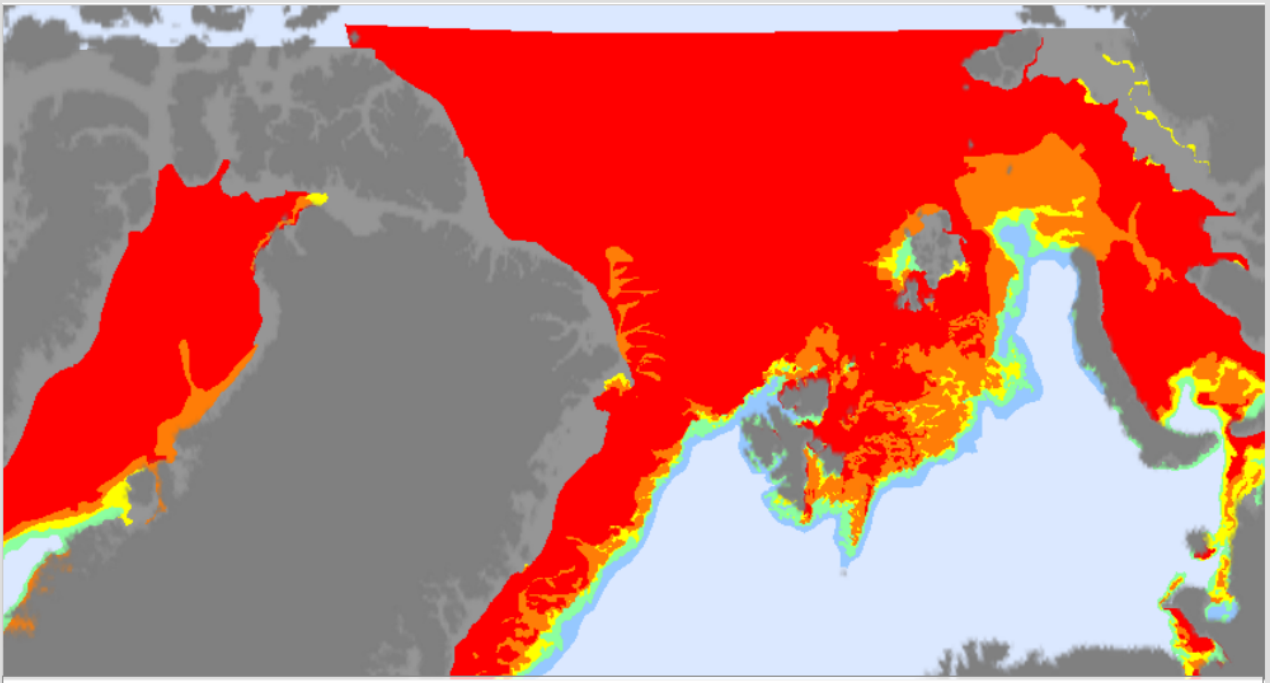
World

- gris

Ice

- Fast Ice
- Very Close Drift Ice
- Close Drift Ice
- Open Drift Ice
- Very Open Drift Ice
- Open Water

Localization



Lat:73.985 Lon:42.824

0 200 400 MI




# EUMIS portal and components

- Discovery Client

The screenshot displays the Semantic Discovery web application interface, which is used for searching and exploring data. The interface is organized into several sections:

- Header:** The top header includes the "Semantic Discovery" logo on the left, the text "Developed by CMRC" on the right, and a "Display Language: English" dropdown menu.
- Navigation:** A vertical sidebar on the left contains icons for "Thesaurus", "Search D...", and "Metadata".
- Search Interface:** The main search area features a "Thesaurus" dropdown menu set to "Parameter" and a "Find Data" button. Below this is a list of search results, with "Ice edge" highlighted.
- Search Results:** The right side of the interface displays details for the selected "Ice edge" term, including a URL (<http://vocab.nerc.ac.uk/collection/P25/current/ICEEDGE/>) and a section for "Related Terms" with associated icons and labels like "Instrument" and "Platform Class".
- Search Criteria:** A section below the main results shows the search criteria used: "25/current/ICEEDGE/" in "English".
- Search Results Table:** A table below the search criteria shows the source and resource information for the search results.

Source	Resource
	<b>OSI SAF Ice edge for the Northern Hemisphere</b> <b>Abstract:</b> The sea ice edge product from the EUMETSAT OSI SAF. Ice classes are assigned from atmospherically...

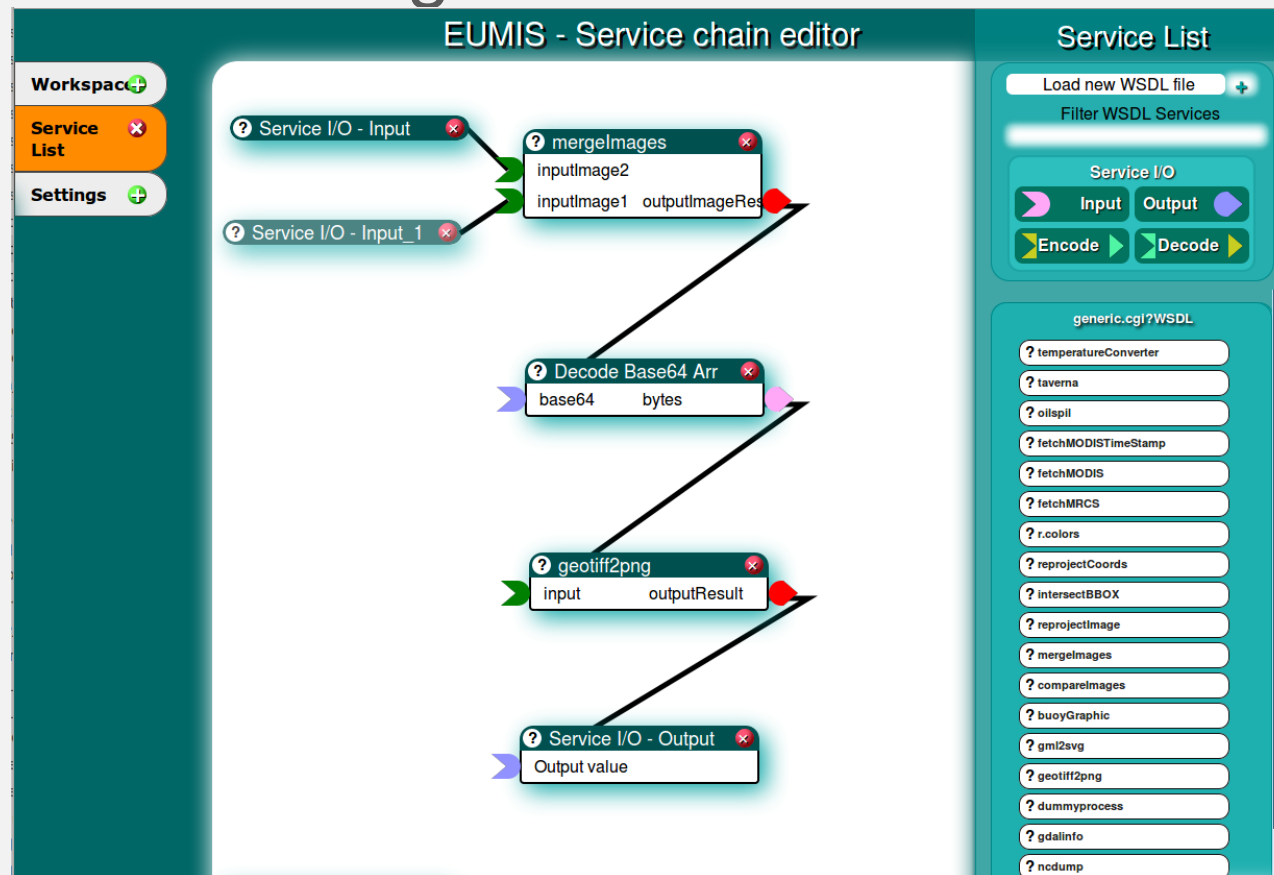
# EUMIS portal and components

- Discovery Client

The screenshot displays the Semantic Discovery portal interface. At the top, it says "Semantic Discovery" and "Developed by CMRC". Below this, there are tabs for "Search Criteria" and "Search Results". The search bar contains the text "25/current/ICEEDGE/" and is set to "English". There are also "Options" and "ESRI Oceans" dropdown menus. On the left side, there are three icons: "Thesaurus", "Search Data", and "Metadata". The main content area is titled "Geographic Area of Interest" and includes instructions: "Draw a bounding box in the map area or select a geographic area from the hierarchy below." Below this, there is a hierarchical list of geographic areas: Arctic Ocean, Northeast Atlantic Ocean (40W) (expanded), Bay of Biscay, Bristol Channel, Celtic Sea, English Channel, Gulf of Guinea, Inner Seas off the West Coast of Scotlan, Irish Sea, North Sea (highlighted), Skagerrak, and St. Magnus Bay. To the right of the list is a map of the North Atlantic region, showing the North Sea, Norwegian Sea, and surrounding countries like Norway, Sweden, Finland, and the United Kingdom. A red bounding box is drawn around the North Sea area on the map.

# EUMIS portal and components

- Service Chaining Editor



# Conclusion

- We have implemented the EUMIS portal with a set of components
  - GIS Viewer
  - Discovery Client
  - Service Chaining Editor
  - Wiki, Forum, RSS feeds

using multiple programming languages, and deployed them within the Liferay platform.

- The second version of EUMIS is now available for testing. Your feedback is welcome!

# Thank you!

NETMAR web site: <http://netmar.nersc.no>

EUMIS portal: <http://eumis.nersc.no/>

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