

Sextant



French Spatial Data Infrastructure for Marine Environments

IMDIS 2013

Session 3 – Data Services in ocean science

Lucca (Italia), September 23-25, 2013

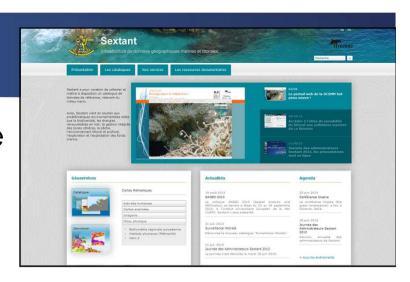
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Sextant Web portal

- Sextant web portal interface
 - http://www.ifremer.fr/sextant



Objectives

- Manage and share geographical marine information data sets, in order to support marine studies and decision making
- Make available vector and raster spatial data produced by Ifremer and its partners
- Web GIS providing discovery, viewing and download online services
- Designed according to the European INSPIRE directive for interoperability and according to the OGC and ISO TC 211 standards





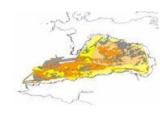


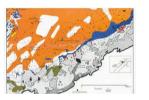
Multi thematic data holdings



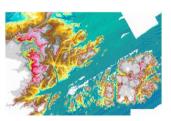
- Agregated and finalised data products
- Environment
 - Water quality (coastal networks)
 - Marine habitats
 - Aquaculture
- Halieutics
 - Fishing activities
 - Resources
 - Economical aspects
- Geoscience
 - Bathymetry
 - Sedimentology
 - Acoustic imagery (sonar)
- Ocean physics
 - Hydrodynamics (temperature, salinity, currents)
- Historic data
 - Archive photos and historic habitats maps

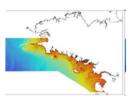




















Sextant: the web services functions

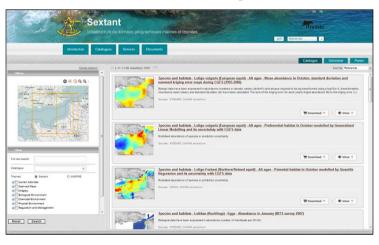


From the editorial page, you can access the main functions of Sextant

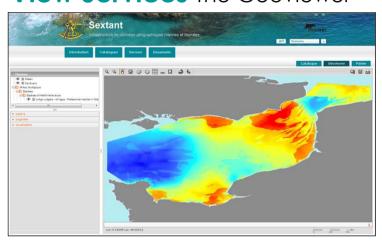


Discovery Services

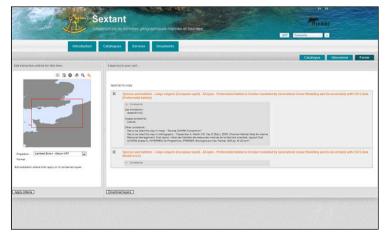
The Metadata Catalogue



View Services The Geoviewer



Download Services The Basket











- Sextant is organised into thematic catalogues:
 - They bring together data sets related to scientist departments, or projects, or geographical areas
 - One metadata can be associated to many catalogues
 - Each catalogue can have its own CSW address
- The thematic catalogues warrant:
 - > A users rights management associated to the data
 - > A secured distribution of the information
 - And give the choice of a website to present the associated project





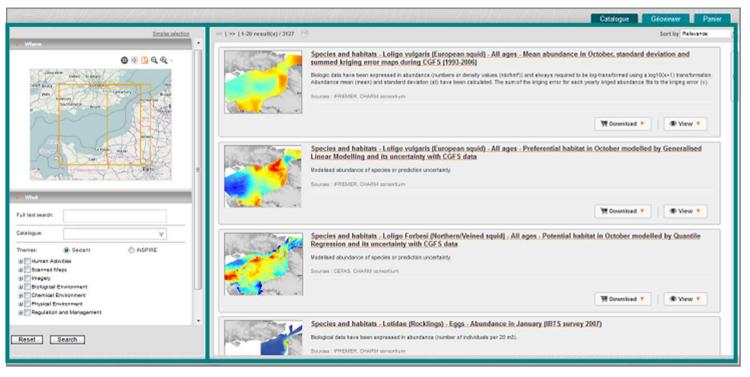








Catalogue user's interface



Criteria of search

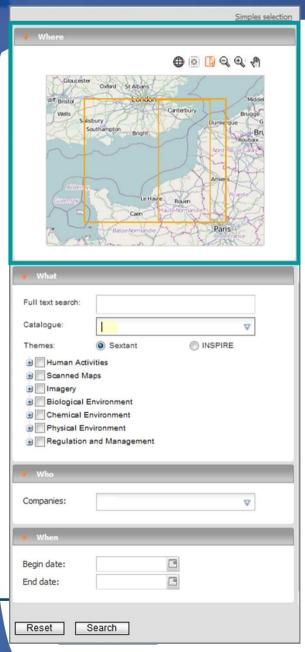
Results page

More than 3000 public metadata on-line describing more than 5000 geographical information layers









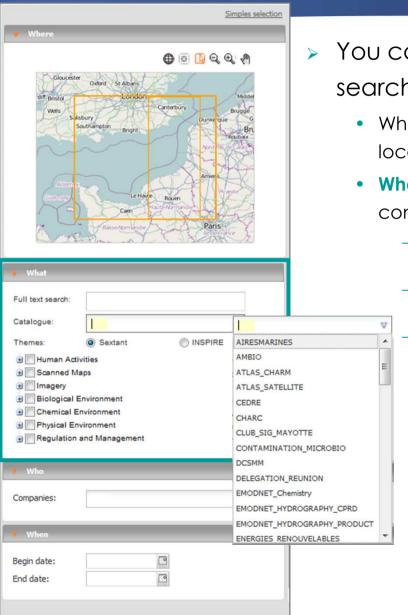
- You can choose many different criteria to search a metadata
 - Where: to search a metadata according to its localization



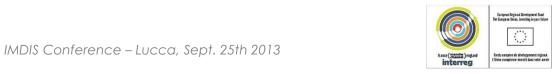
Reset

Search

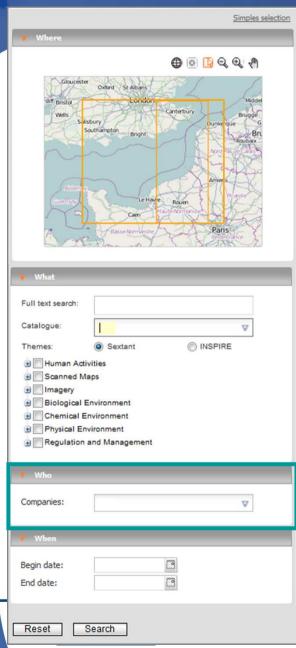




- You can choose many different criteria to search a metadata
 - Where: to search a metadata according to its localization
 - What: to search a metadata according to its content
 - Full-text search
 - ✓ All the words in the metadata are taking into account
 - Catalogue
 - ✓ You can choose one or more thematic catalogue
 - Themes
 - ✓ You can select one ore more themes in the checkboxes



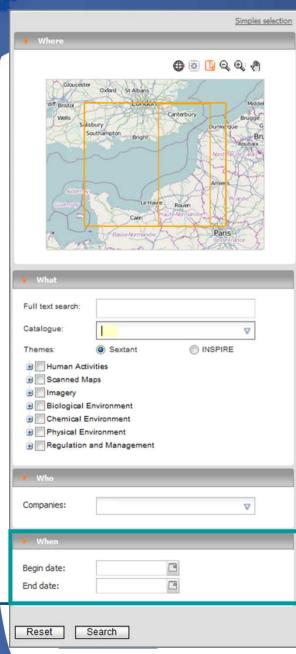




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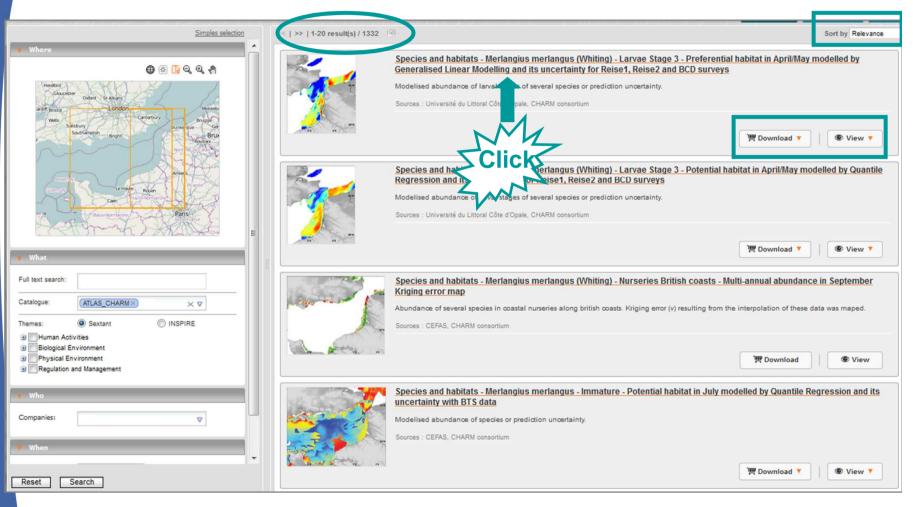


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 - When: to search a metadata according to its date





Search results



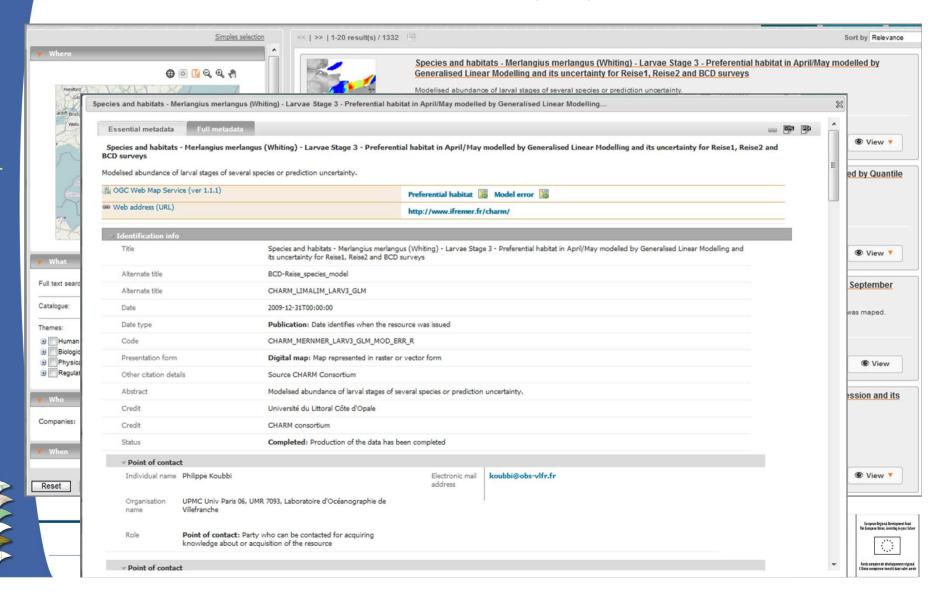








Search results : metadata display



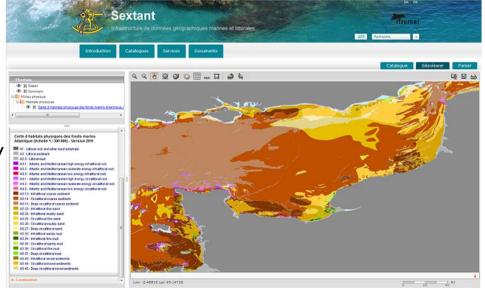
Sextant: the Geoviewer







- The Web GIS interface allows end-users
 - to create maps including several layers from internal and external sources
 - the portal access to local and remote OGC services
 - to consult and explore data
 - Navigation, zoom tools
 - Query a layer
 - Print the map in PDF file
 - to manage layer display
 - Layer order
 - Transparency
 - Symbology (grid data)



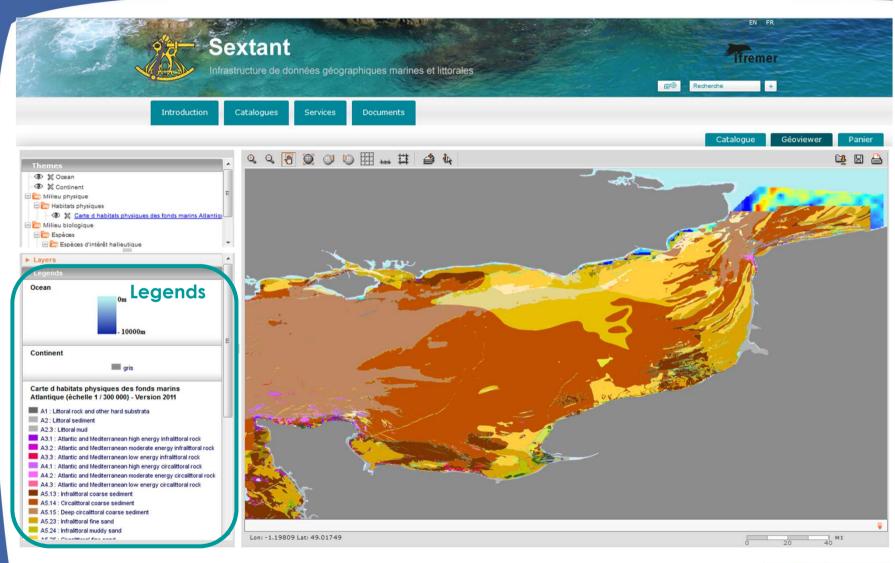






Sextant: the Geoviewer







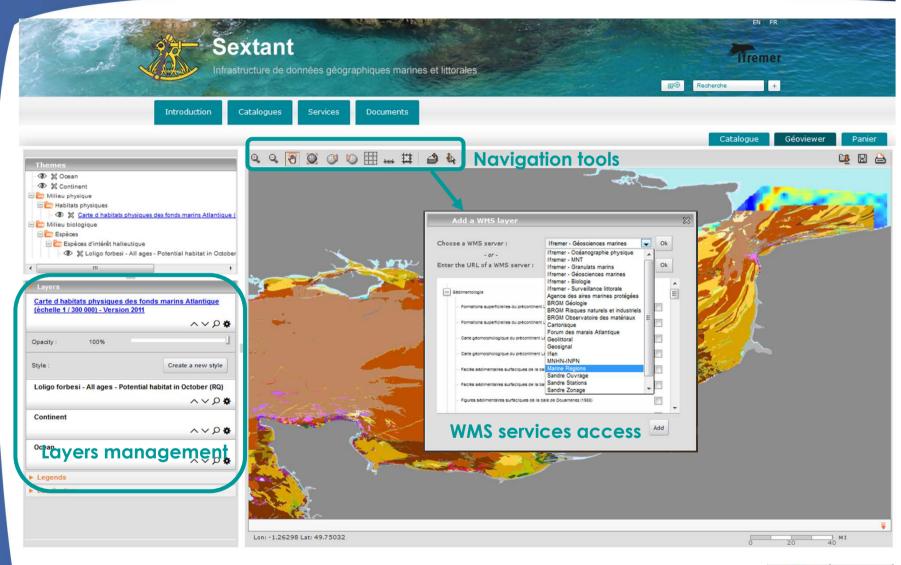






Sextant: the Geoviewer











Sextant Web portal – The Basket



- Choose the extraction parameters
 - **Formats**
 - Vector (Shapefile, MapInfo, MIF/MID, GML/ KML)
 - Raster (Ecw, GeoTiff, Jpeg)
 - Coordinate system (WGS84, ETRS89...)
 - Geographical extraction extent

Read and agree the usage rules

Reception of an email indicating that your extraction zip is ready to be downloaded









Interoperability and Inspire



- Metadata normalized
 - ▶ ISO 19115 and ISO 19139 standards compliant



- OGC standard Catalogue Services Web (CSW 2.0.2)
 - http://www.ifremer.fr/geonetwork/srv/fre/csw?SERVICE=CSW&REQUEST=GetCapabilities &VERSION=2.0.2
- Viewing data
 - OGC standard Web Map Service (WMS)
 - http://www.ifremer.fr/services/biologie
 - http://www.ifremer.fr/services/geologie
 - http://www.ifremer.fr/services/oceanographie physique



- Data extraction
 - OGC standard Web Feature Service (WFS)
 - http://www.ifremer.fr/services/wfs1
 - OGC standard Web Coverage Service (WCS)
 - http://www.ifremer.fr/services/wcs1









Interoperability and Inspire





Sextant harvesting, from the National Geocatalogue

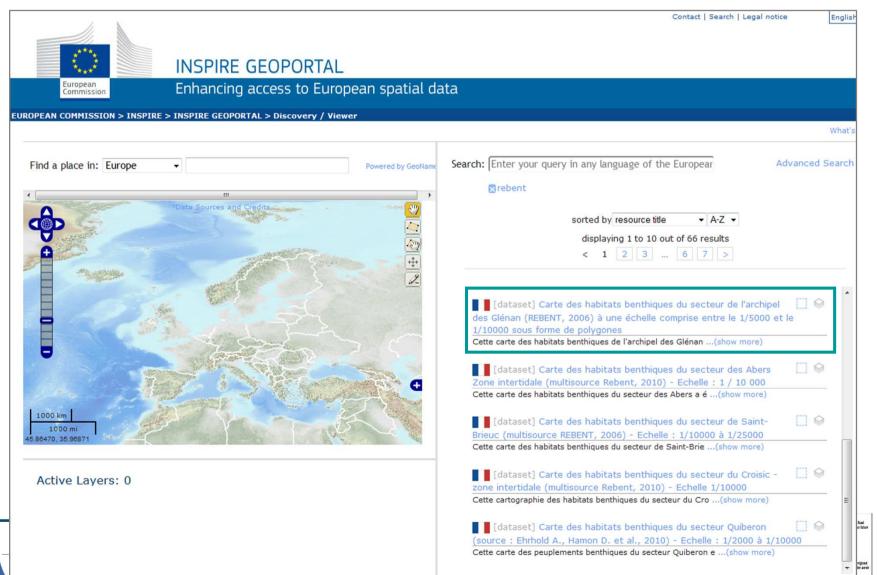


Interoperability and Inspire





... to the European Inspire Catalogue





Sextant into Interreg projects



- CHARM (CHannel integrated Approach for marine Resource Management)
 - The CHARM project offers a status report of the Channel ecosystem and a range of tools based on scientific knowledge for the sustainable management of living marine resources.
 - > Through a thematic catalogue and a personnalized webportal, the whole set of data is made accessible to managers and any stakeholders.



- 1300 metadata describing layers related to benthic habitats, fisheries resources and environment
- one CSW url and one WMS service, which allow interoperability with the MEDIN portal in UK







Sextant into Interreg projects





- PANACHE (Protected Area Network Across the Channel) and VALMER (Valuing ecosystem services in the western Channel)
 - > Together both projects will focus on better management, sustainable use and protection of the Channel marine area.
 - They will use specialy the data available from CHARM.
 - The Web GIS tool will access both Sextant and MEDIN catalogues through a unique web portal (in progress).

The PANACHE and VALMER projects have been selected within the scope of the INTERREG IV A France (Channel) – England cross-border European cooperation programme, co-financed by the ERDF.

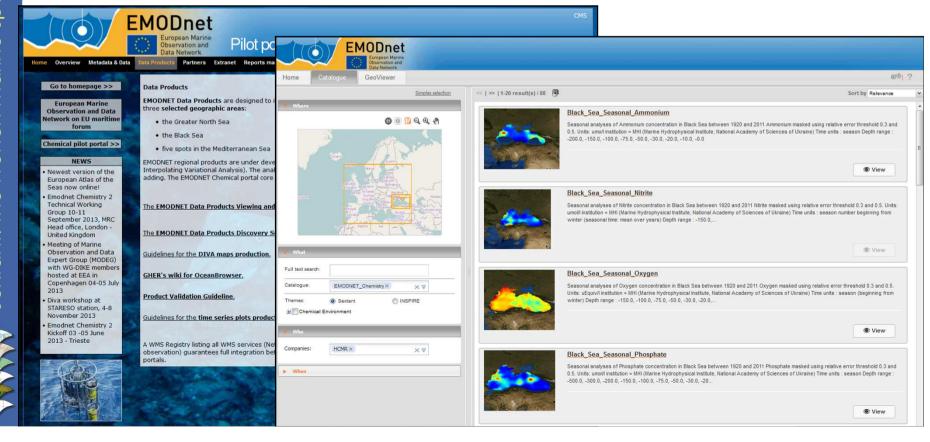






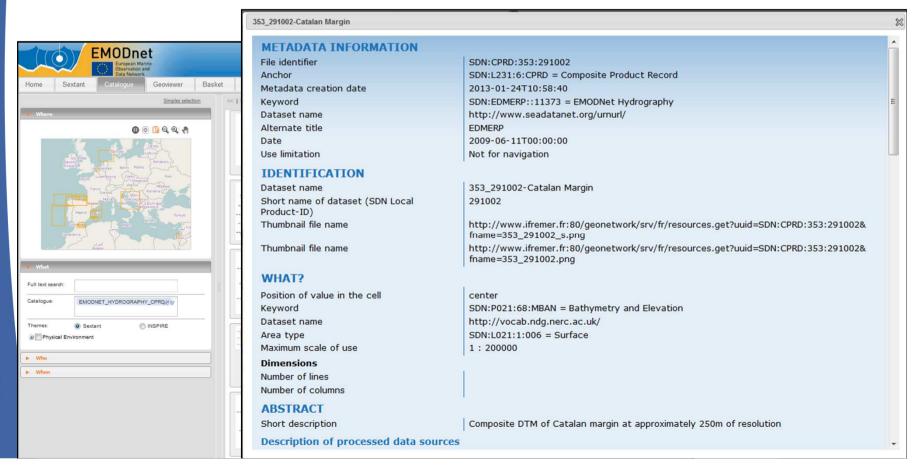


- A catalogue data products for Emodnet Chemistry
 - 90 metadata describing the chemical characteristics of the water column
 - http://www.emodnet-chemistry.eu/portal/portal/emodnet/Data+Products
 - http://www.ifremer.fr/sextant/en/web/emodnet_chemistry





- A catalogue data products for Emodnet Hydrography CPRD
 - 35 metadata describing bathymetric composite products, using a personalized template and the SeaDataNet metadata profile
 - http://www.ifremer.fr/sextant/en/web/emodnet_hydrography_cprd

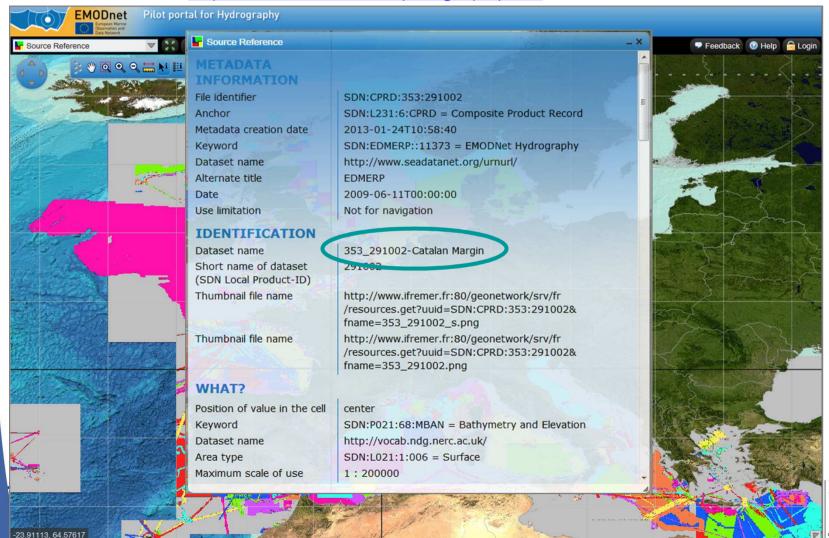






A catalogue data products for Emodnet Hydrography CPRD

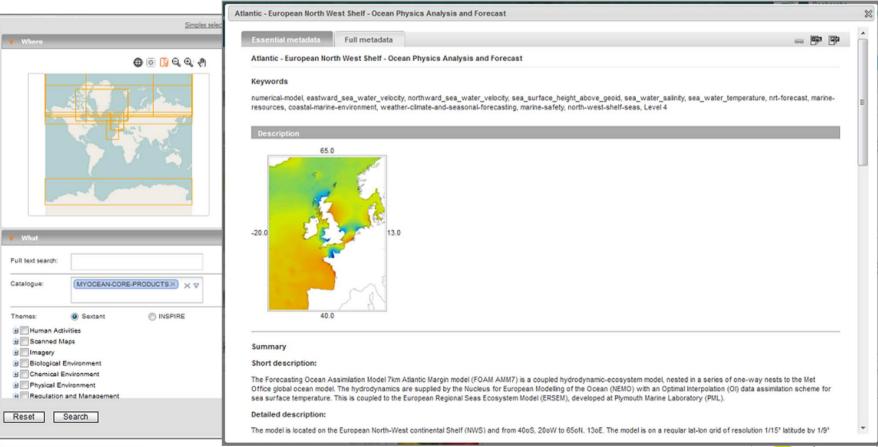
http://www.emodnet-hydrography.eu/







- To manage the metadata for MyOcean data products
 - using common vocabulary lists and metadata template











- Using the MyOcean web portal to discover the metadata
 - http://www.myocean.eu



Conclusion



Due to its interoperability, using the ISO standards and the OCG protocols, and its capacity to be adapted at many national and international profiles, using Seadatanet vocabulary lists,

Sextant becomes one of the major marine spatial data infrastructures used in national projects,

and also plays an important role for products management in European projects (ie the products catalogue).







