EMODNET Preparatory Actions
Hydrographic and Seabed Mapping

Service Contracts MARE/2008/03 S12.531515 and MARE/2009/07 S12.563144

By
**Dick M.A. Schaap – Coordinator**

Hydrographic and Seabed Mapping – partnership

- Members of the **SeaDataNet** consortium together with other organisations from marine science, the hydrographic survey community, and industry:
    - **MARIS – NL** (Management, DM and IT expertise)
    - **IFREMER – FR** (Research institute)
    - **GGSGC – NL** (IT expertise, DM hydrography)
    - **IEO – ES** (Research institute)
    - **NERC-NOC – UK** (Research institute)
    - **GSI – IE** (HO – Ireland)
    - **SHOM – FR** (HO – France)
    - **UNEP-GRID Arendal – NO** (International Organisation)
    - **OGS – Oceanography department (IT)** (Research Institute)
    - **HCMR (GR)** (Research Institute)

    - Plus Data provider agreements with **HO's from Germany, Norway, Denmark, Netherlands and Belgium**

    - Plus Associate partners: **ISMAR-CNR –IT, OGS-RIMA – IT, LNEG – PT, UTM-CSIC – ES, NIOZ - NL** (Research Institutes) + **IHPT – PT** (HO) + **OceanWise (UK) + Israeli Government, Ministry of National Infrastructures (Israel)**

EMODNet Hydrography and Seabed Mapping

- It aims at compiling an inventory of available bathymetric surveys (plummets, single and multibeam surveys), adopting the SeaDataNet Common Data Index (CDI) infrastructure.

- Also survey data are gathered and processed as input for producing a higher resolution digital bathymetry of 0,25 minute by 0,25 minute for the following sea regions in Europe:

  - the Greater North Sea, including the Kattegat and stretches of water such as Fair Isle, Cromarty, Forth, Forties,Dover, Wight, and Portland

  - the English Channel and Celtic Seas

  - Western Mediterranean, the Ionian Sea and the Central Mediterranean Sea

  - Iberian Coast and Bay of Biscay (Atlantic Ocean)

  - Adriatic Sea (Mediterranean)

  - Aegean - Levantine Sea (Mediterranean).

Hydrographic portal

http://www.emodnet-hydrography.eu
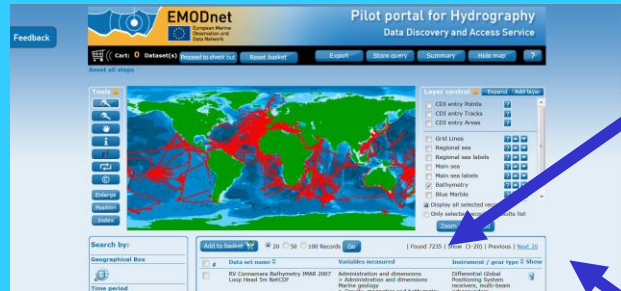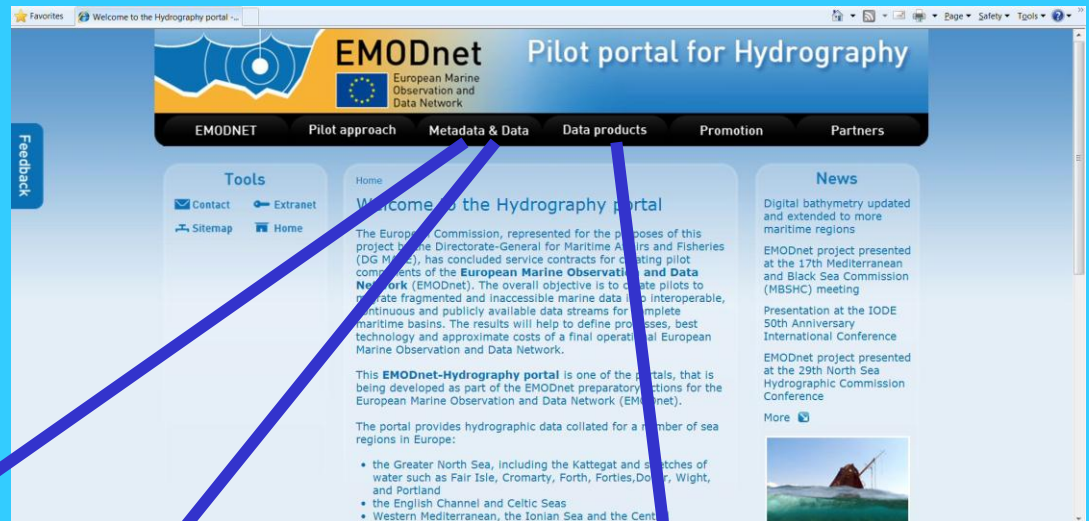
CDI metadata service
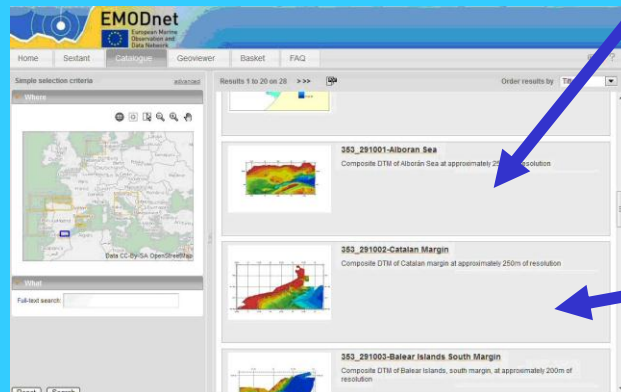
Sextant metadata service
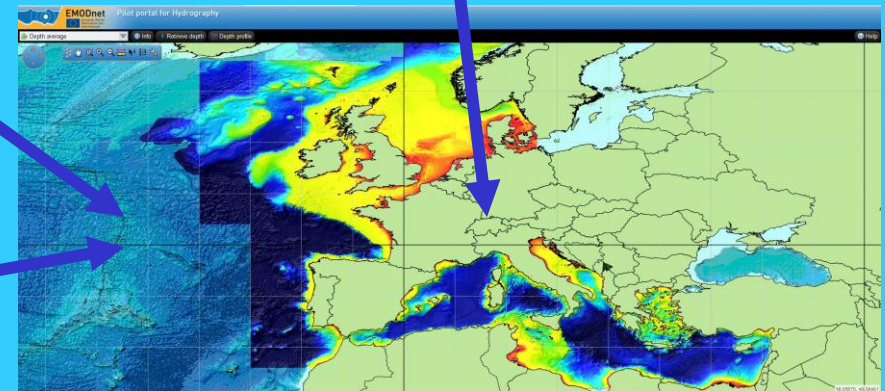
Data products service

Progress

- Up till today, 8400 survey CDI metadata records from 14 data centres and 114 data originators have been collated and imported into a dedicated EMODnet Hydrography CDI data discovery and access service. This service was launched in May 2010 and has been upgraded over time with extra functionality

- These survey data and other gathered composite DTMs have been collated into regional EMODNet DTM's that are available for viewing and downloading in several formats via the Hydrography Products portal service.

- The dedicated EMODnet Hydrography products portal has been launched in May 2010. It sits atop of the central DTM database and interacts with the CDI service and with OGC WMS services

- Later also the Sextant Data Products service has been added to give metadata about the composite DTMs that have been used next to survey data sets.
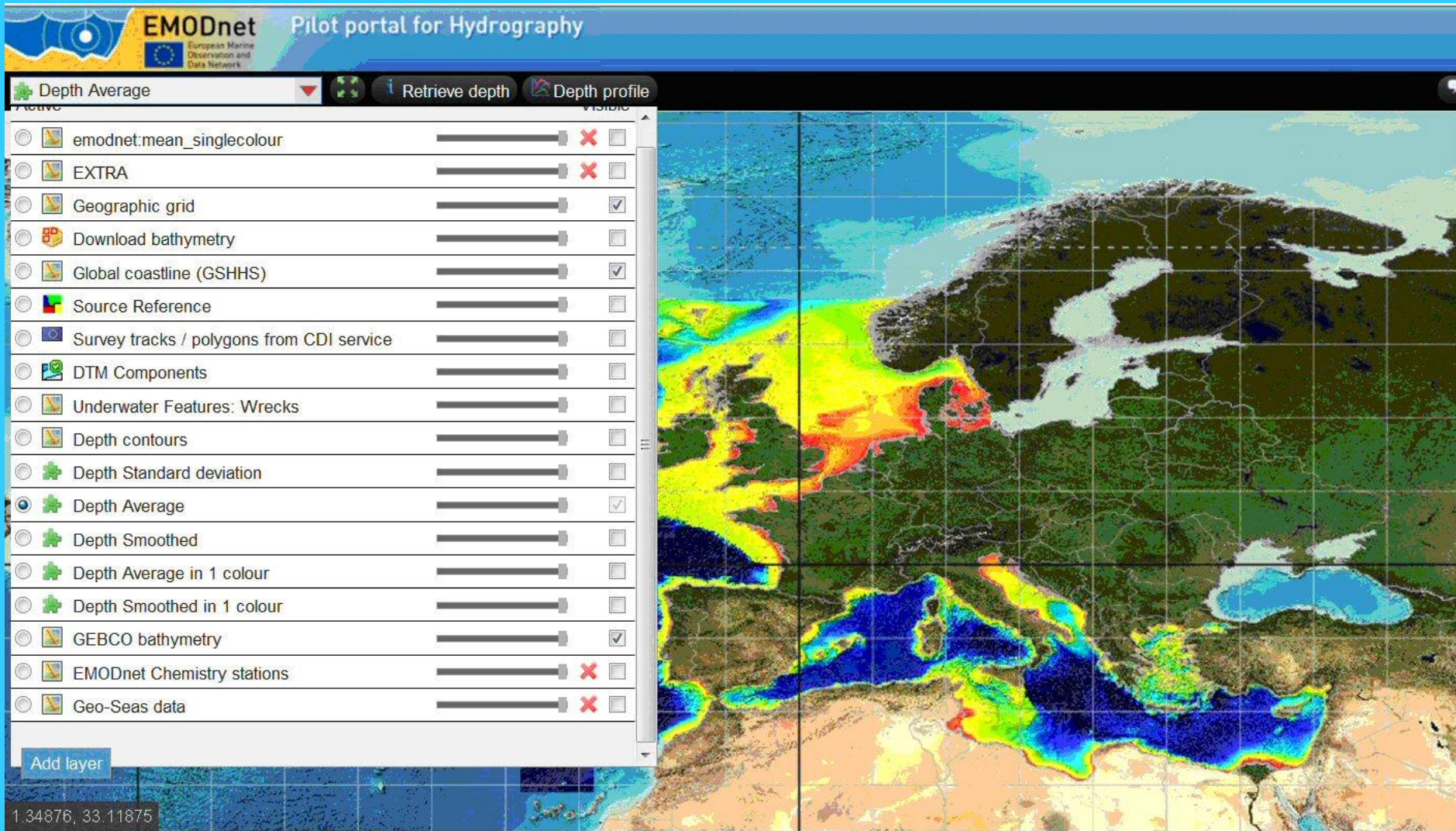
CDI Data Discovery and Access Service

Discovering and requesting access to bathymetric survey data sets (single and multibeam

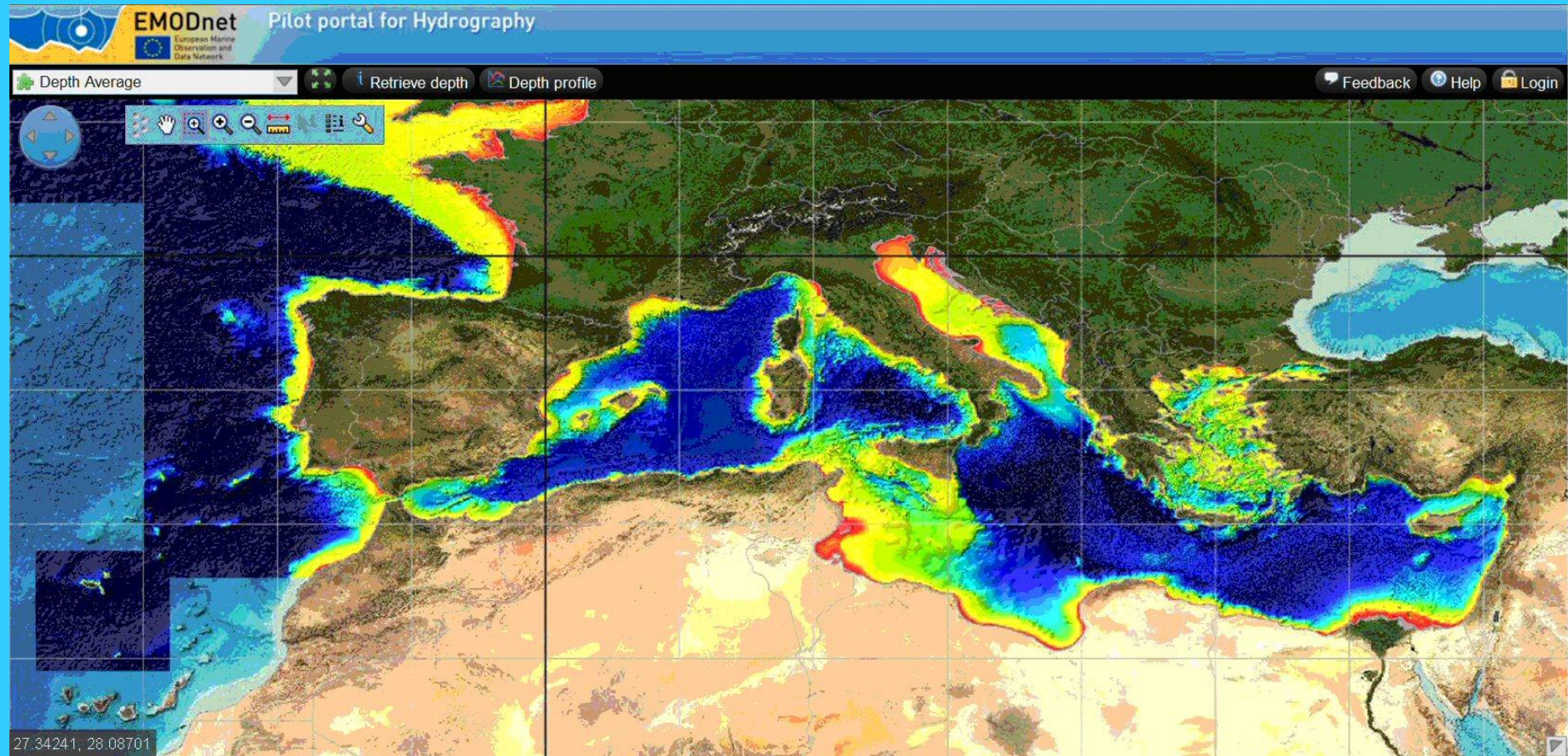# Hydrographic Data Products viewing service
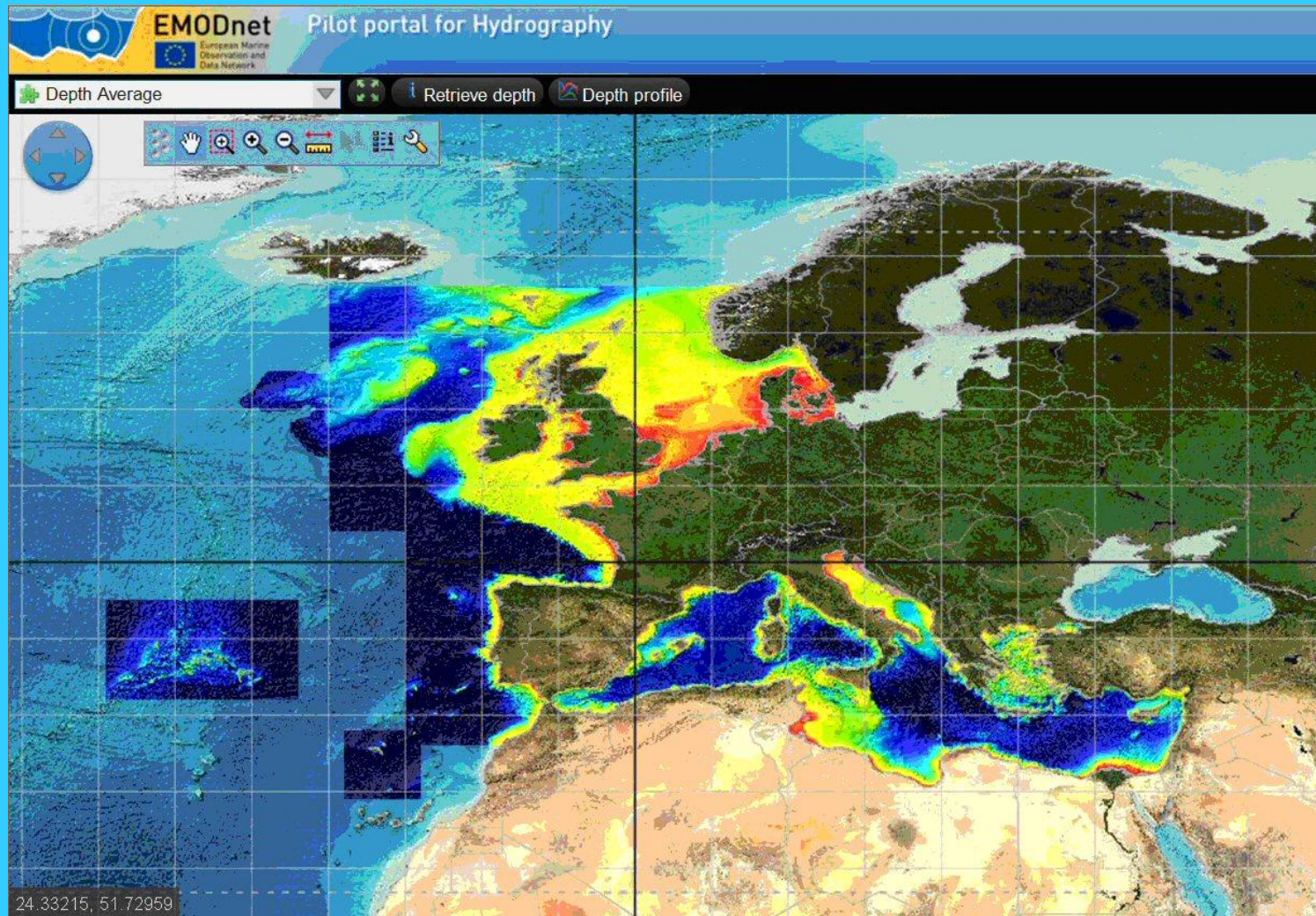
New DTM for European sea basins
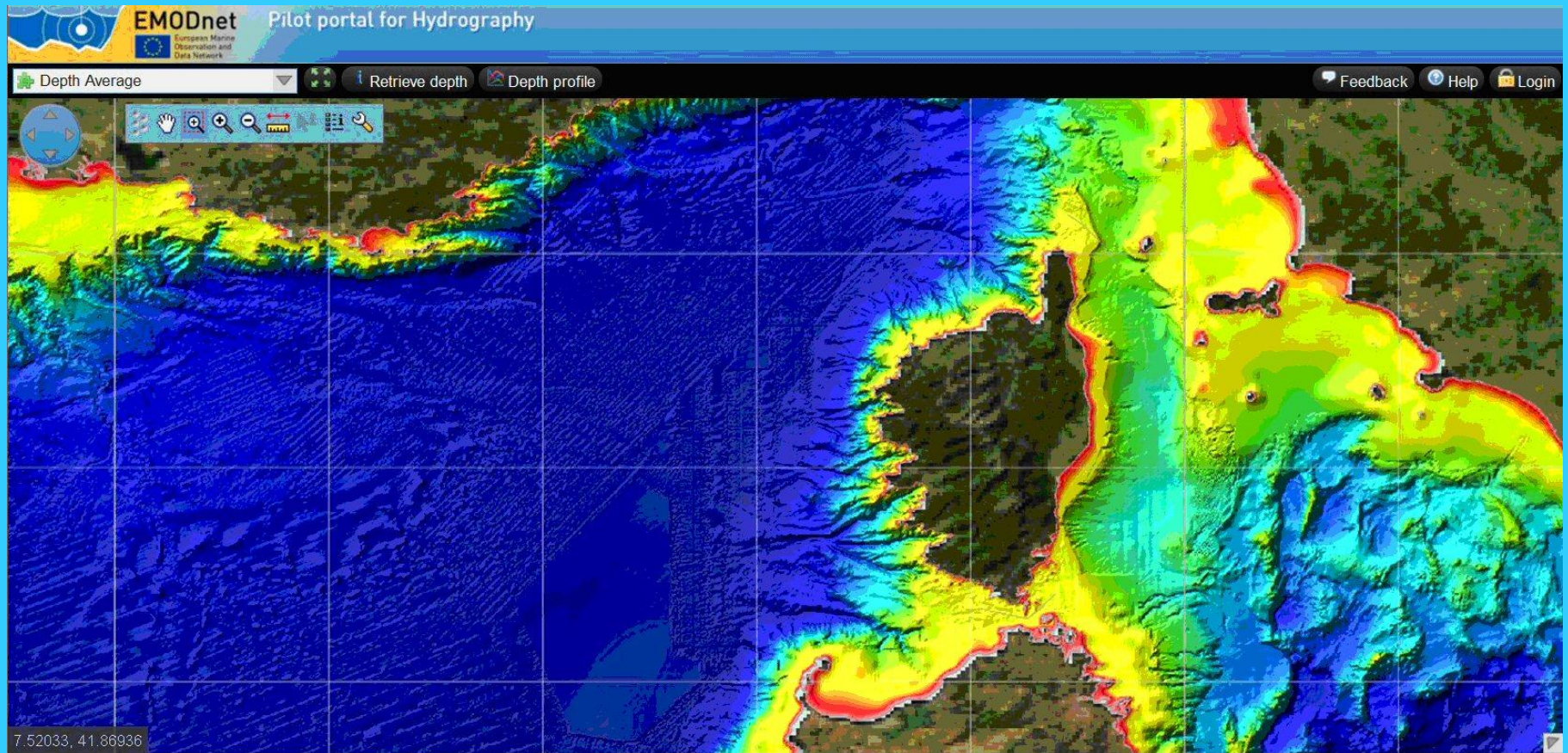
Hydrographic Data Products viewing service

New DTM for European sea basins with layer menu
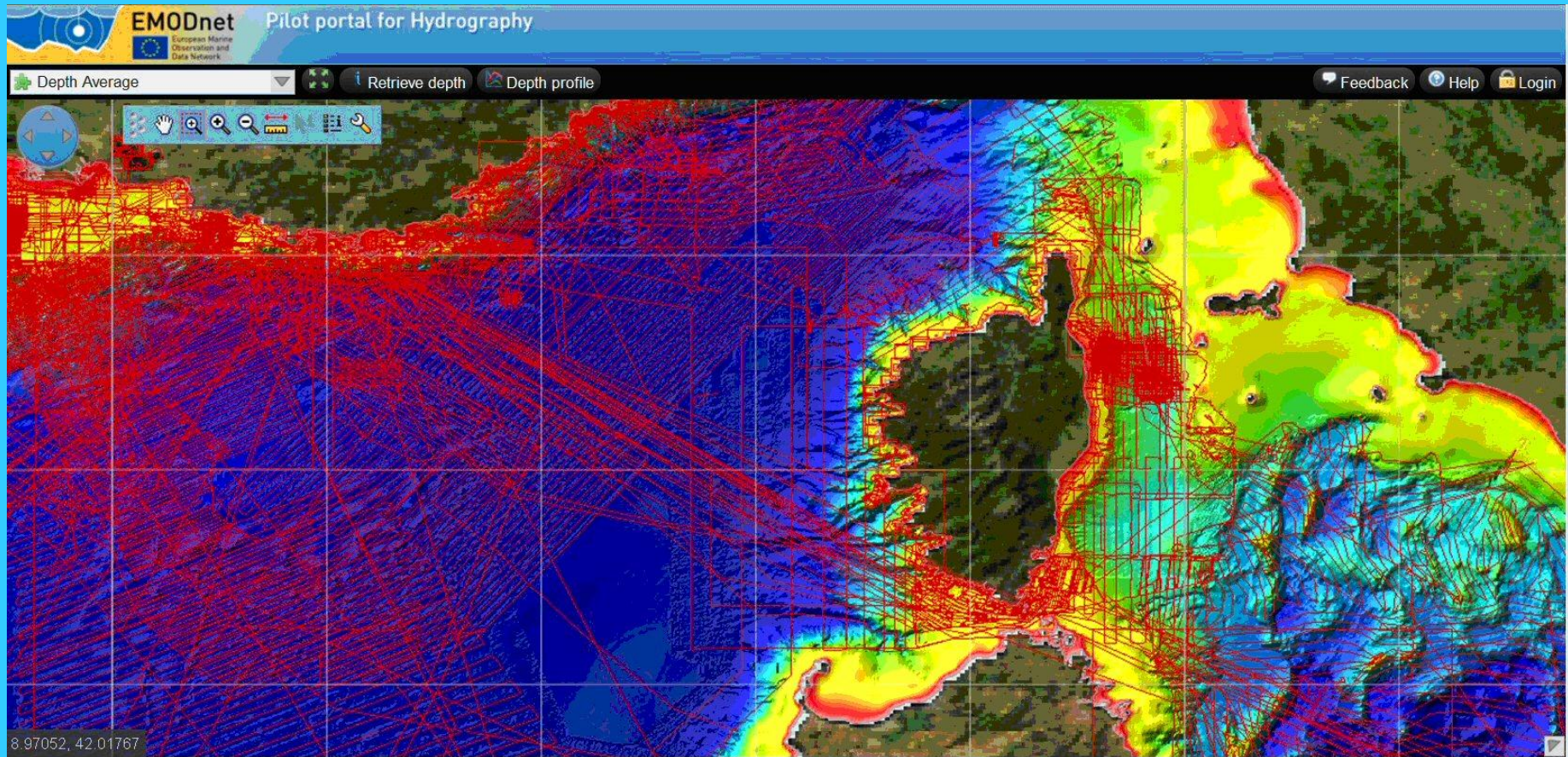
Hydrographic Data Products viewing service

New DTM for European sea basins
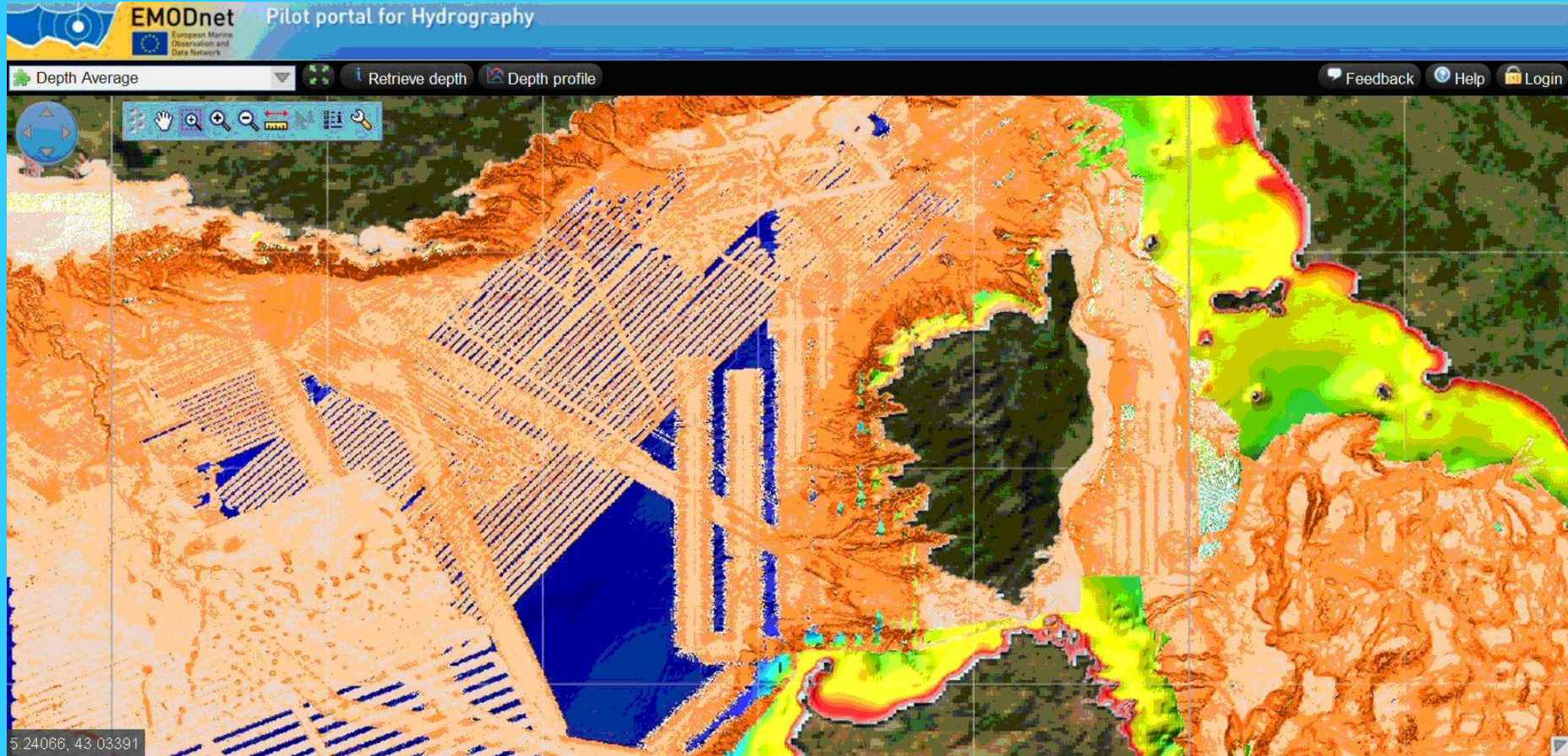
Hydrographic Data Products viewing service

New DTM for European sea basins
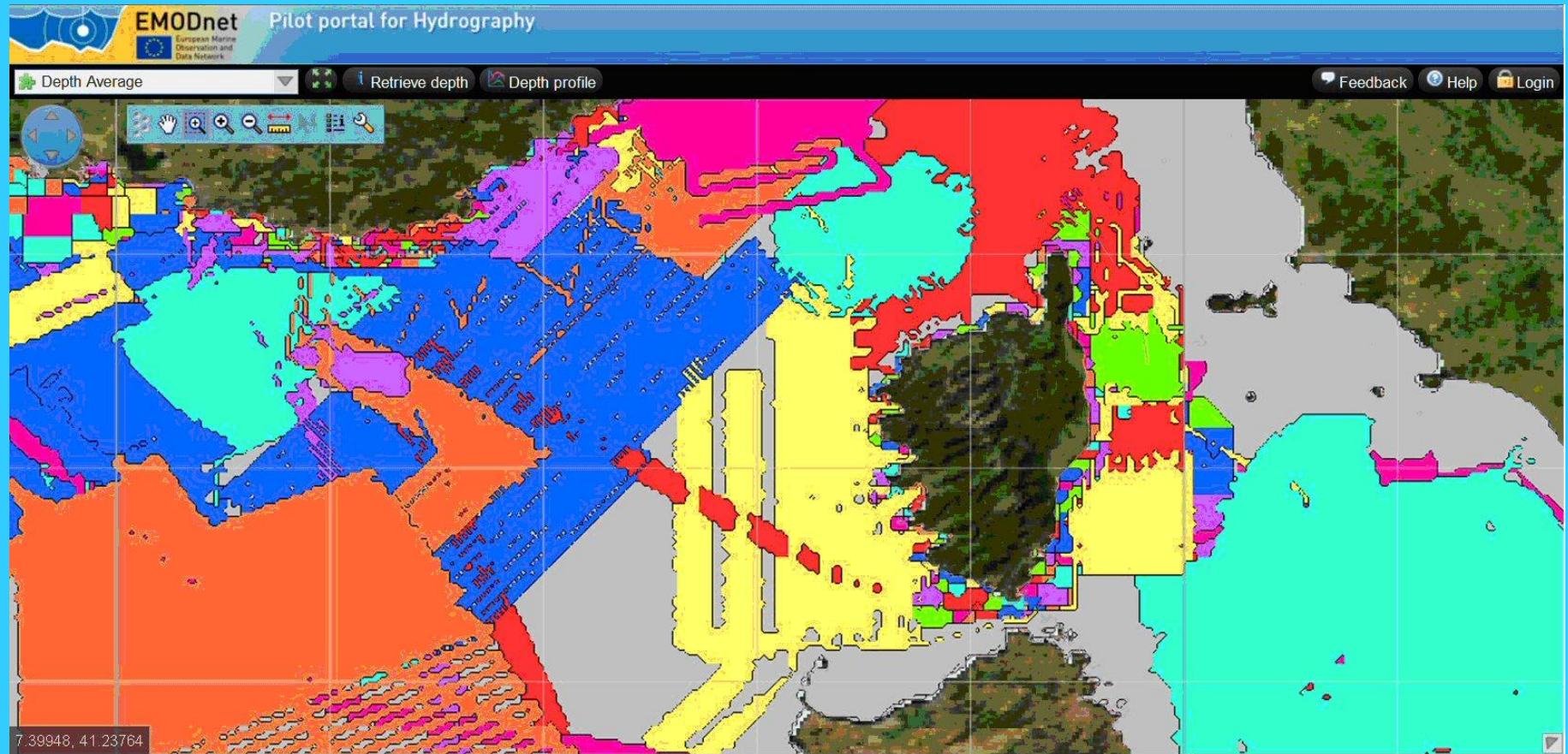
Hydrographic Data Products viewing service

New DTM for European sea basins with CDI overlay to indicate surveys

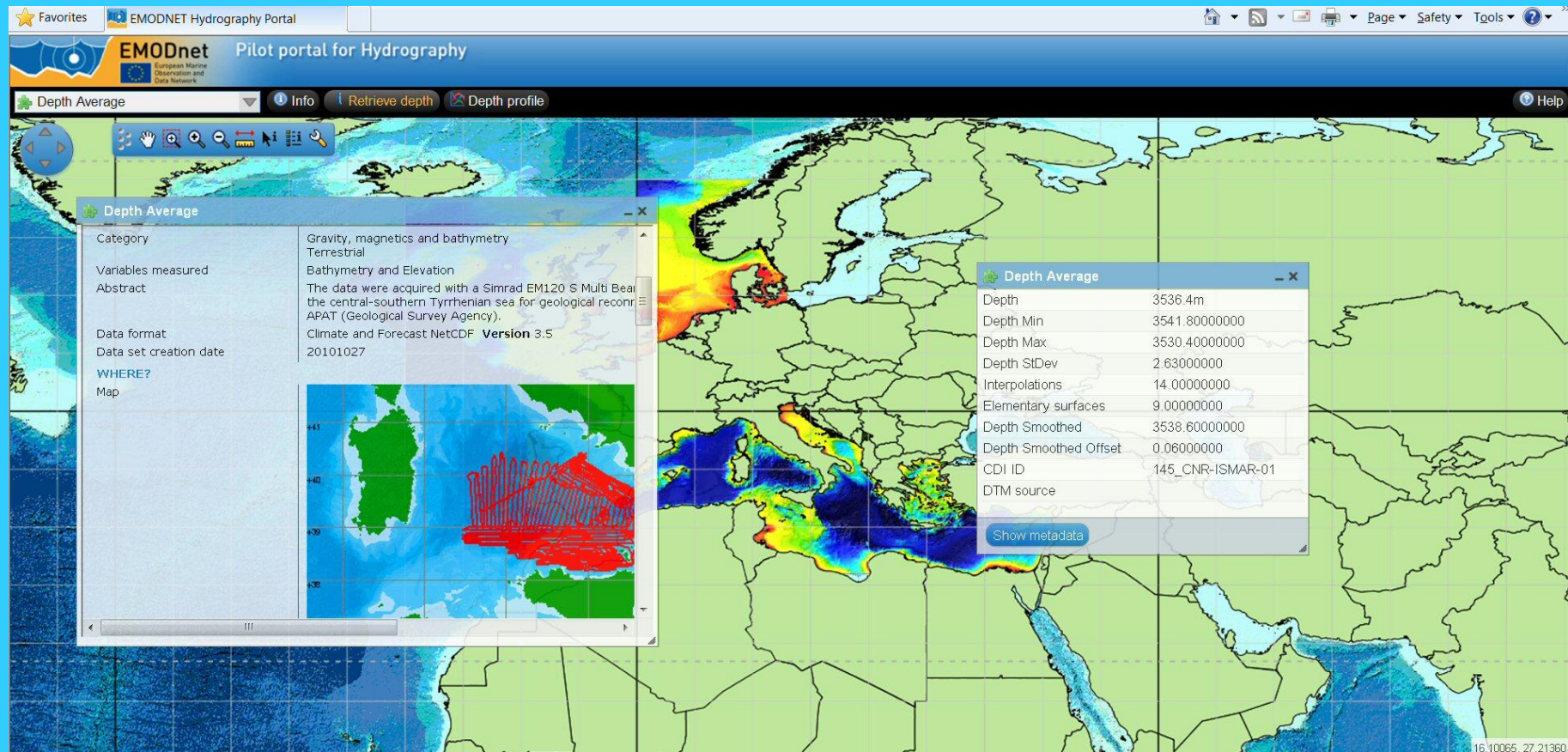# Hydrographic Data Products viewing service

New DTM for European sea basins with waterdepth standard deviation layer

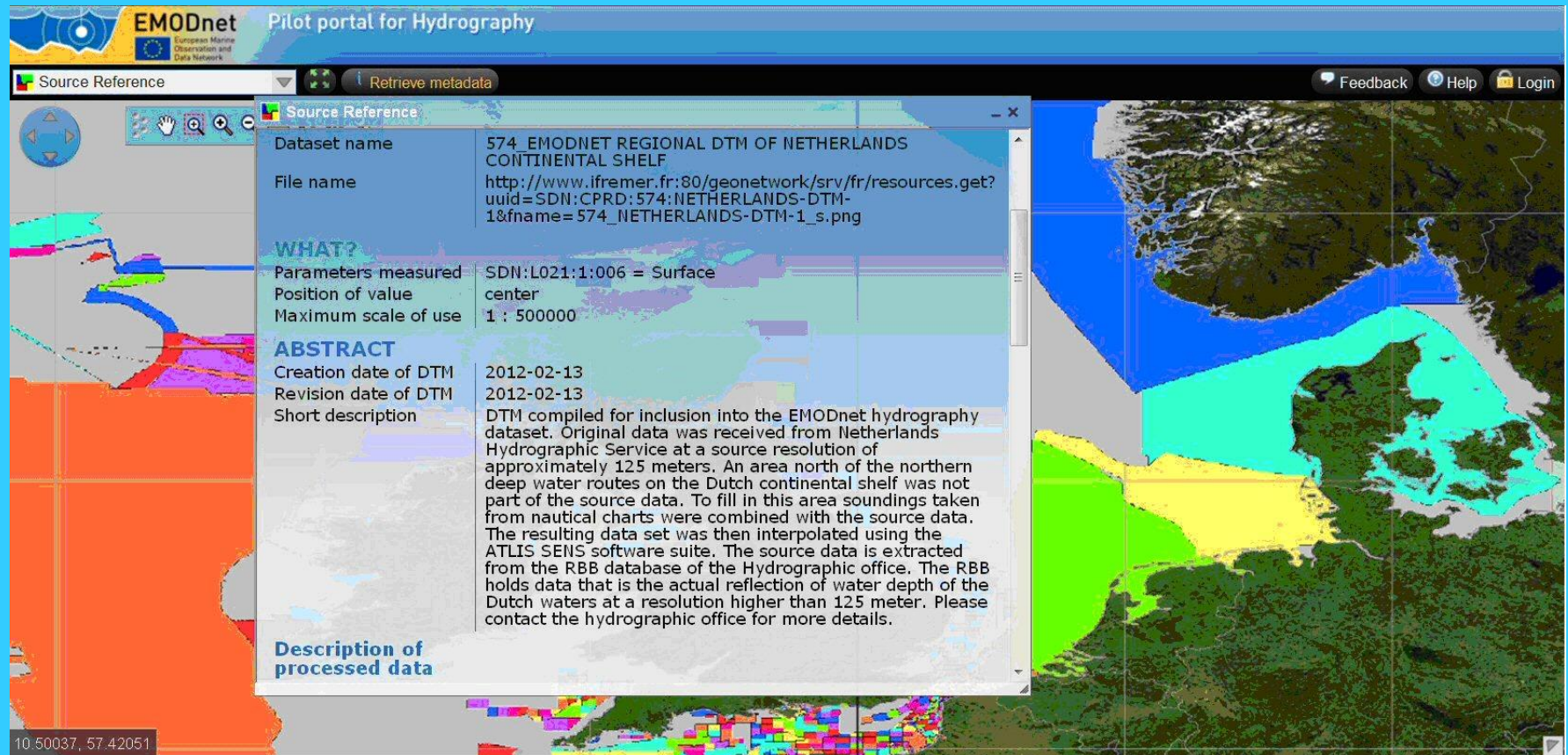# Hydrographic Data Products viewing service

New DTM for European sea basins with sources layer (surveys and composite DTMs)

Hydrographic Data Products viewing service

Retrieving parameters of an individual grid cell and retrieving CDI metadata of associated prevailing survey

Hydrographic Data Products viewing service

Retrieving Sextant metadata of associated composite DTM

Hydrographic Data Products viewing service
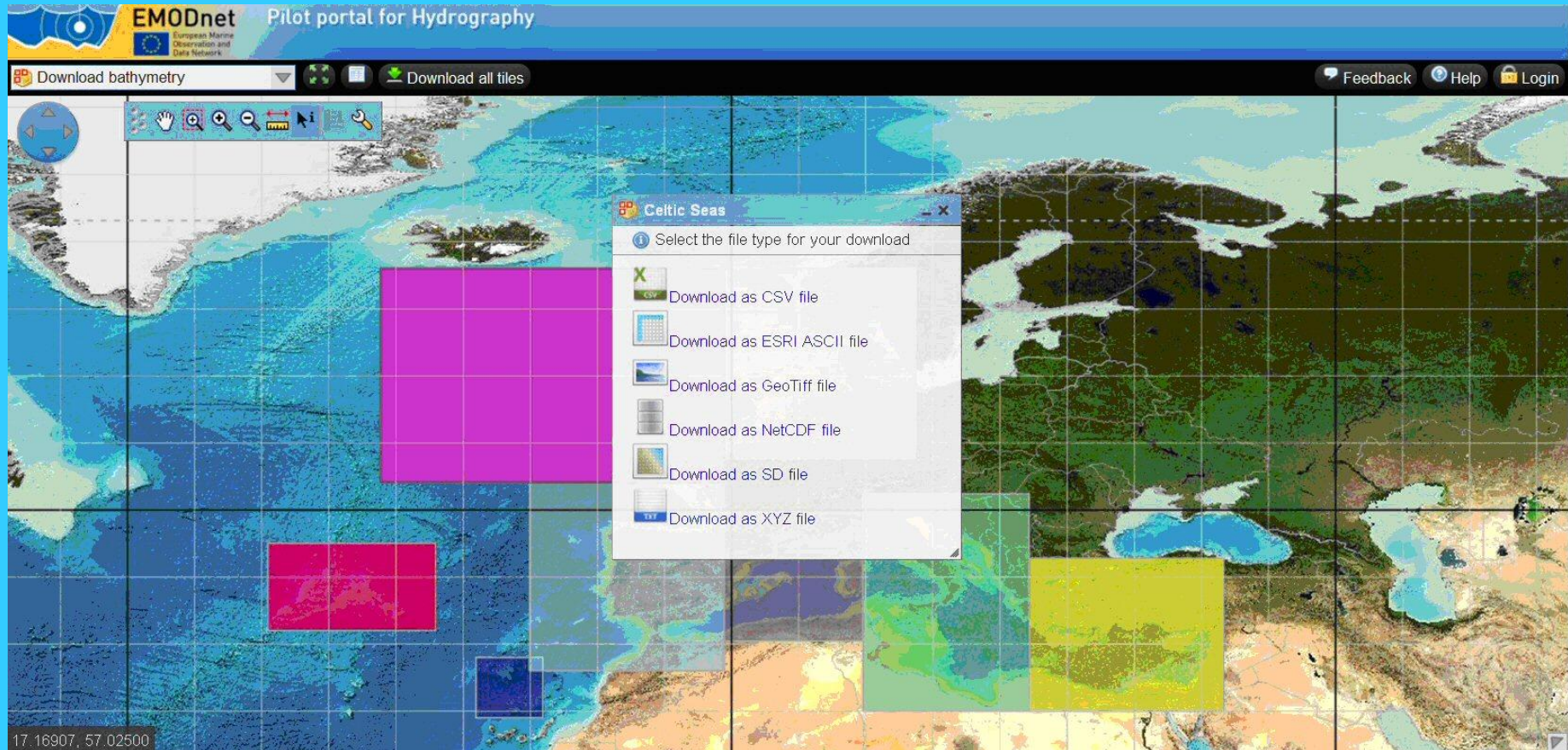
Downloading DTM tiles in a range of formats

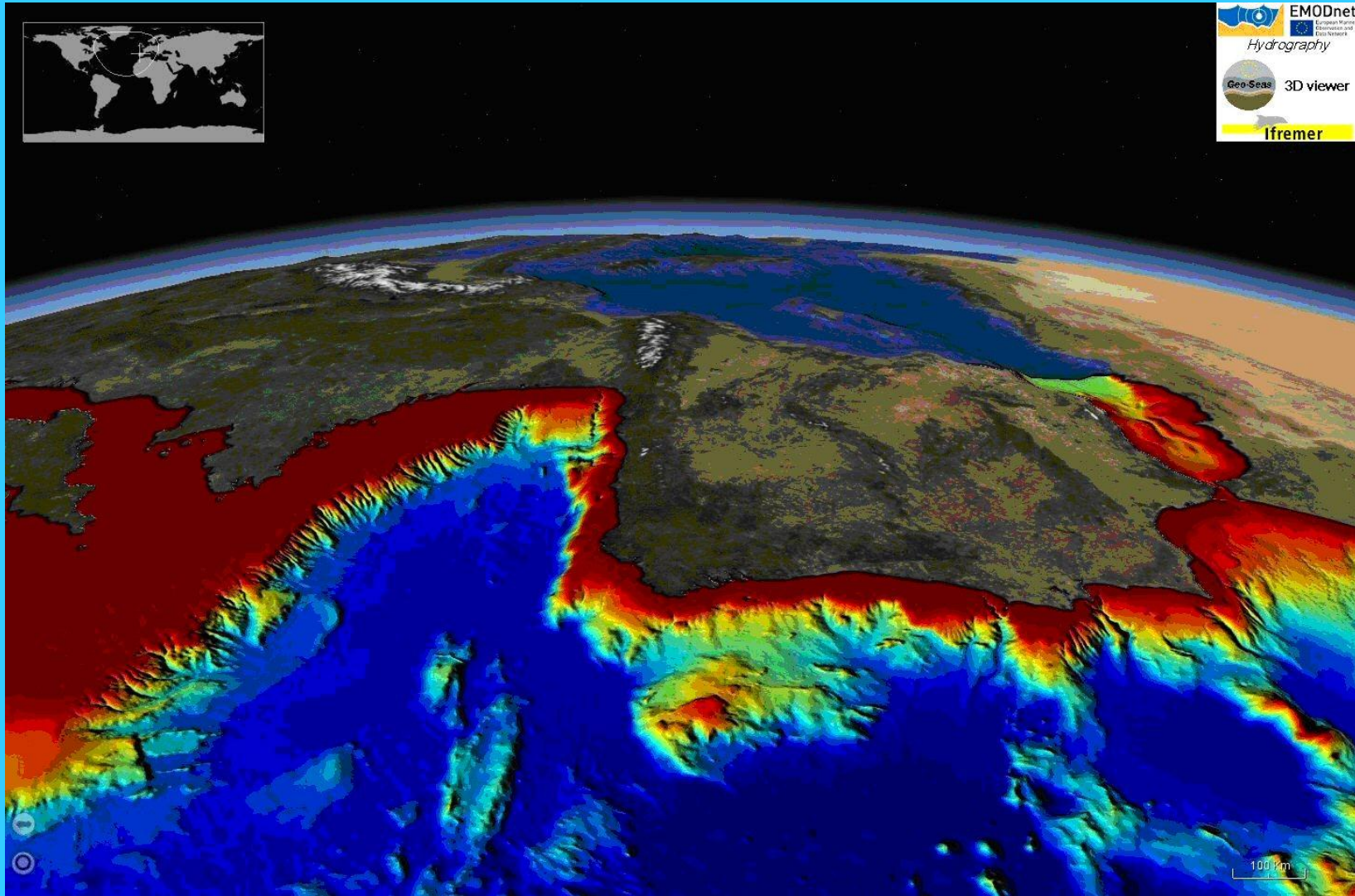# Hydrographic DTM – 3D-Viewer

DTM loaded into 3D-Viewer as developed in Geo-Seas

Successful approach

- Providers of bathymetric data sets understand and are welcoming the applied approach:

- Data sets are gathered for internal use by regional consortium groups to compile the DTM product which can be downloaded without any registration

- Data sets are described and included in the CDI Data Discovery and Access Service and composite DTMs in the Sextant Data Products Service.

- Each cell in the DTM product gives information about the data sets used and leads to the CDI / Sextant service for more information about the data provider and options for requesting the data itself

- This works as a shop window and results in more data providers coming forward

EMODNet Bathymetry – new tender

- Increasing the resolution of the DTM from ¼ to 1/8 of a minute of lat – lon (ca 225 m* 225 m)

- Covering missing sea basins:
  - Black Sea
  - Baltic Sea
  - Norwegian + Icelandic Sea

- Including new data sets from existing partners

- Consortium expanded with new partners and associate partners, including GEBCO

- Expected start, if successful, early 2013

www.emodnet-hydrography.eu