

EMODnet Bathymetry progress

By
Dick M.A. Schaap – Coordinator

ISPRA - Italy, 1st July 2015, SC EMODnet Meeting



EMODNet Bathymetry



- Ongoing in 3 consecutive projects since 2009 with expanding consortium (at present >30 partners)
- Consortium consisting of bathymetric and IT experts and data providers from National Hydrography Services, marine research institutes and SME's
- **Overall objective:** to bring together bathymetric surveys of European seas and to produce, publish and serve a harmonised and medium resolution Digital Terrain Model of all European seas



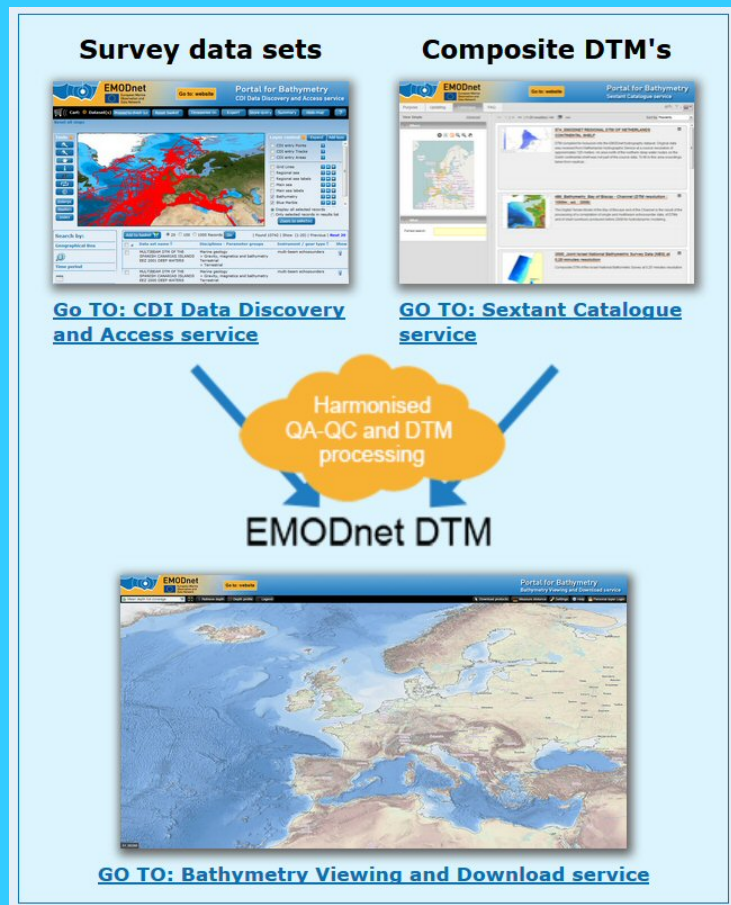
EMODNet Bathymetry consortium



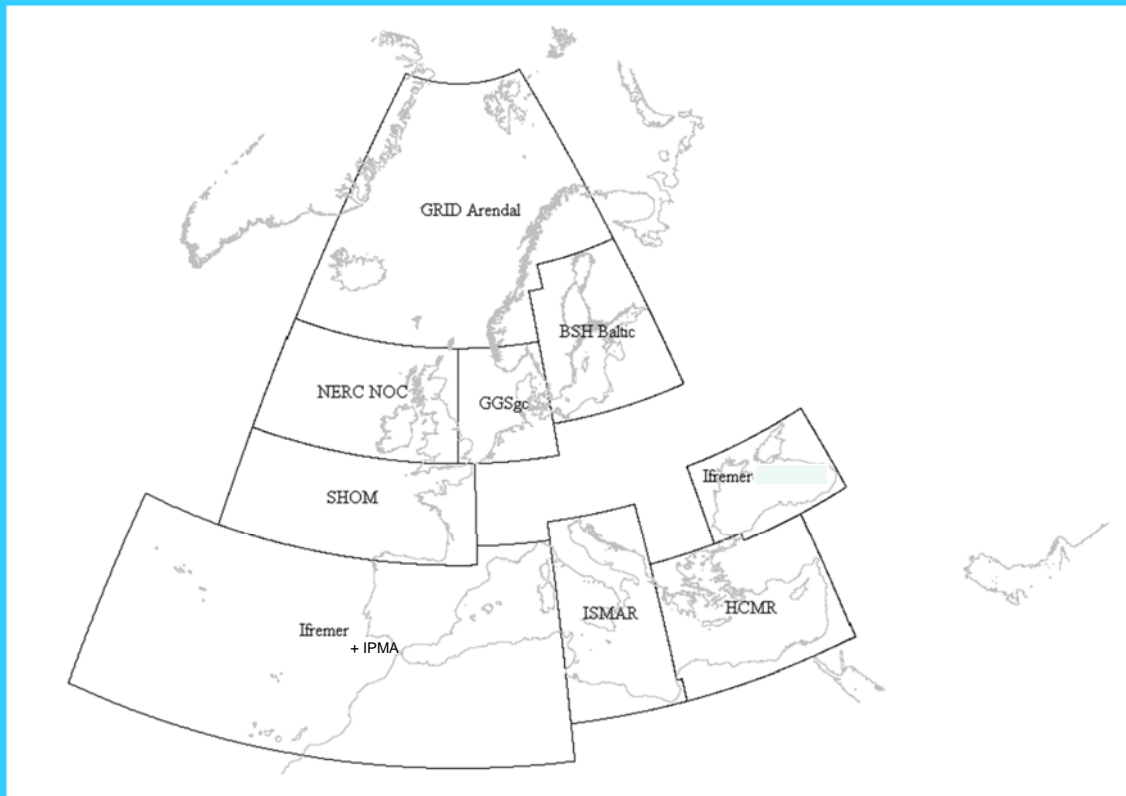
Process flow and services

Adoption of SeaDataNet standards and services

Common method and software (Globe) used by all data providers and regional sea coordinators



EMODNet Bathymetry – Regional DTMs



Results so far

- Up till today, **13883** survey CDI metadata records from **27** data centres and **166** data originators **from 1816 to 2015** have been collated and imported into a dedicated EMODnet Bathymetry CDI data discovery and access service. This service was launched in May 2010 and has been upgraded over time with extra functionality
- The SeaDataNet Data Products Catalogue service gives **43** metadata records about composite DTMs that have been used next to survey data sets
- These survey data (circa 6000) and other gathered composite DTMs have been collated into regional EMODnet DTM's (**$1/8 * 1/8$ arc minutes**) for all European regions by 9 regional working groups.
- The harmonized EMODnet DTM is available for interactions and viewing as well as for downloading in 16 tiles in several formats via the Bathymetry Products portal service.
- The dedicated EMODnet Bathymetry Products portal has been launched in May 2010. It sits atop of the central DTM database and interacts with the CDI service and Sextant service and provides OGC WMS services

CDI overview of bathymetric data sets

EMODnet European Marine Observation and Data Network
Go to: website
Portal for Bathymetry
CDI Data Discovery and Access service

Cart: 0 Dataset(s) Proceed to check out Reset basket Timeseries on Export Store query Summary Hide map ?

Reset all steps

Tools
Enlarge Position Index

Layer control
Expand Add layer
 CDI entry Points
 CDI entry Tracks
 CDI entry Areas
 Grid Lines
 Regional sea
 Regional sea labels
 Main sea
 Main sea labels
 Bathymetry
 Blue Marble
 World
● Display all selected records
○ Only selected records in results list
Zoom to selected

Search by:
Geographical Box
Time period
Measuring area type
surface (12347)
curve (1531)

Add to basket 20 100 1000 Records Go | Found 13883 | Show (1-20) | Previous | Next 20

#	Data set name	Disciplines - Parameter groups	Instrument / gear type	Show
<input type="checkbox"/>	S201304900-6	Marine geology > Gravity, magnetics and bathymetry Terrestrial > Terrestrial	multi-beam echosounders	
<input type="checkbox"/>	S201306500-8	Marine geology > Gravity, magnetics and bathymetry Terrestrial > Terrestrial	multi-beam echosounders	
<input type="checkbox"/>	S201302800-3	Marine geology > Gravity, magnetics and bathymetry Terrestrial > Terrestrial	multi-beam echosounders	

<http://www.emodnet-bathymetry.eu>

Sextant Catalogue overview of composite DTMs

EMODnet European Marine Observation and Data Network
Go to: website
Portal for Bathymetry
Sextant Catalogue service

Purpose Updating Catalogue FAQ

View Simple Advanced
Where
What
Full text search: [input field]
Reset Search

<< >> | 1-20 result(s) / 43
Sort by Popularity

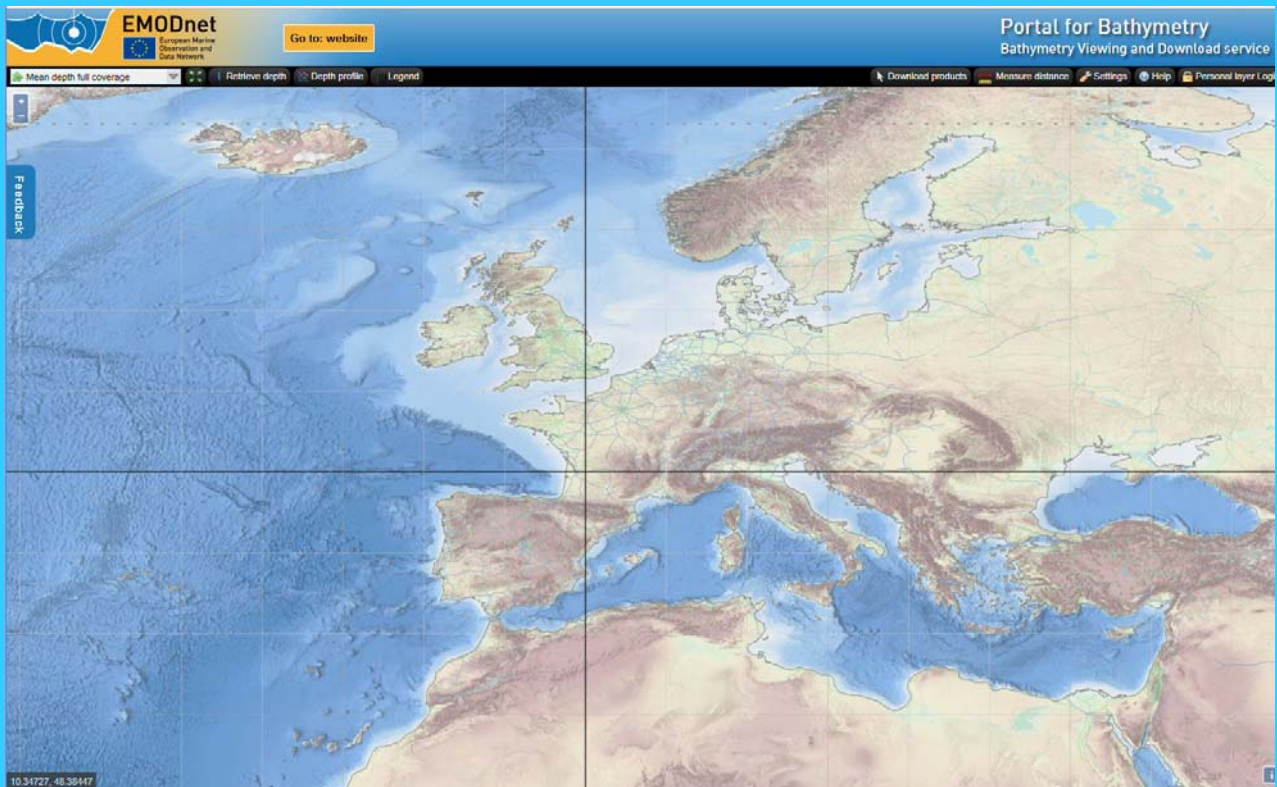
Baltic Sea Bathymetry Database
The Baltic Sea Bathymetry Database (BSBD) gathers and distribute water depth data — bathymetry — for the areas of the Baltic Sea countries. Measuring bathymetry is mostly a national duty for each country, primarily because the production of nautical charts lies within each state's responsibility. Contains complete, homogeneous...

3005 Joint Israel National Bathymetric Survey Data (NBS) at 0,25 minutes resolution
Composite DTM of the Israel National Bathymetric Survey at 0.25 minutes resolution

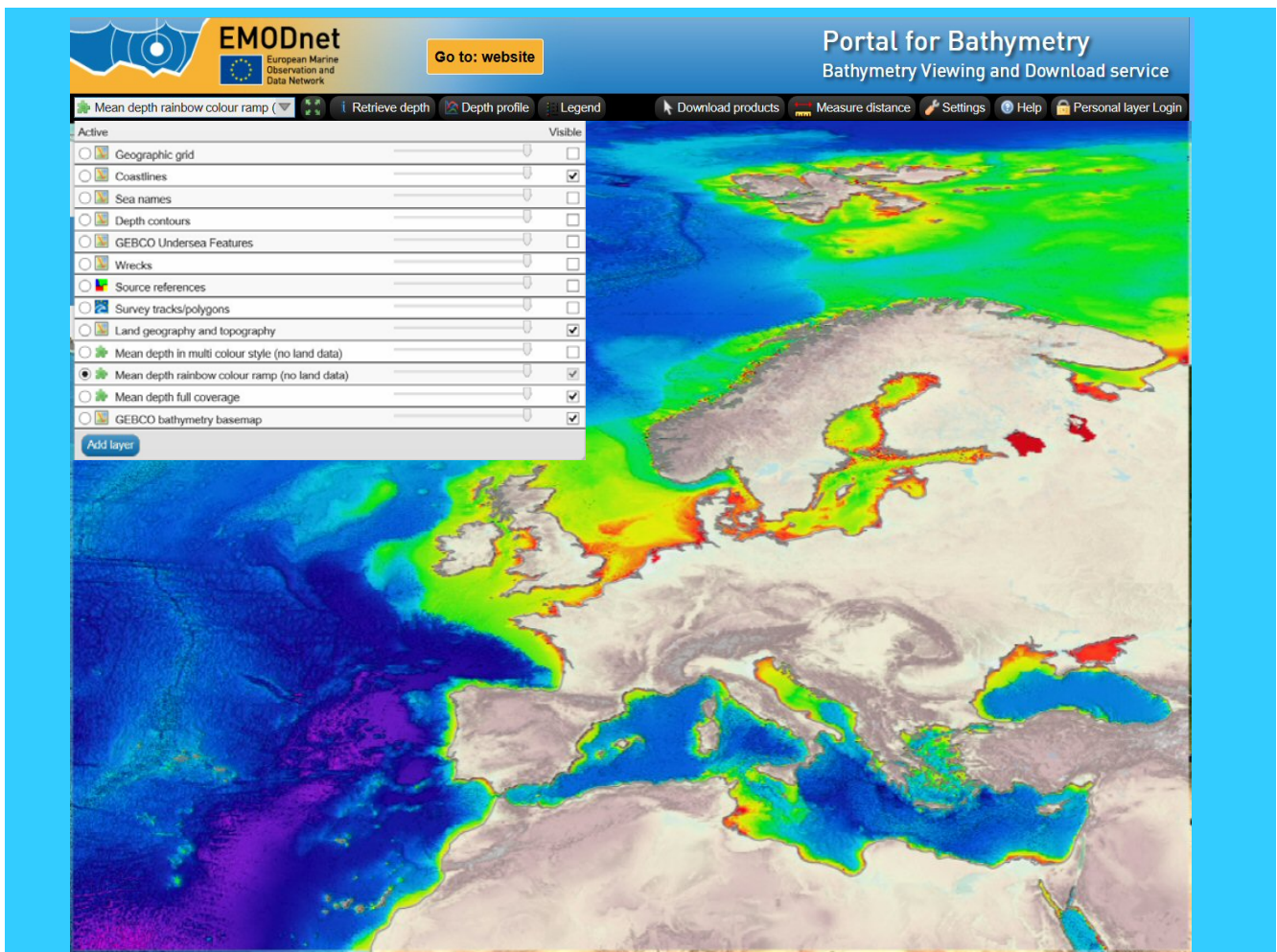
145 DTM CNR-ISMAR-22 Adriatic singlebeam
Bathymetry of the Adriatic Sea compiled by CNR-ISMAR for the Italian side of the Adriatic Sea to illustrate the main geological features of the Western Adriatic Basin using a single beam echosounder

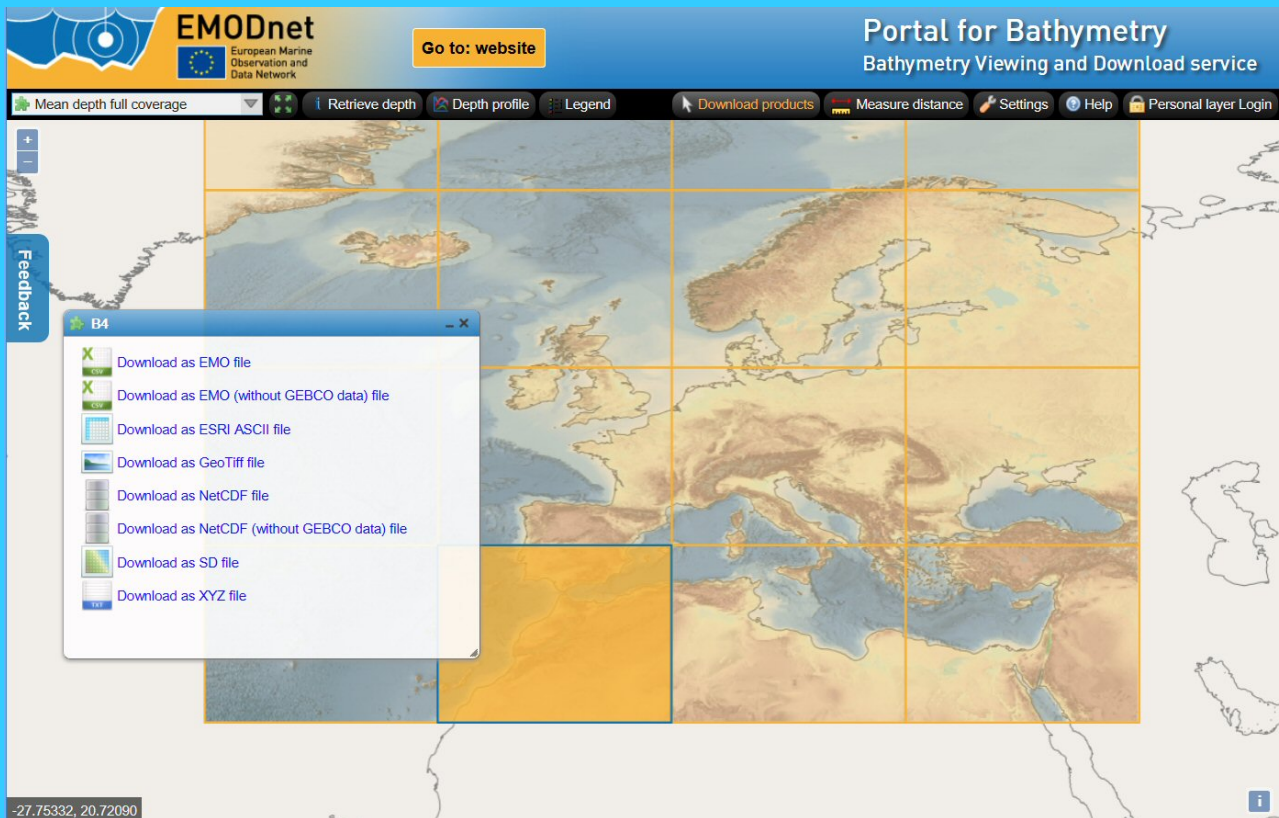
<http://www.emodnet-bathymetry.eu>

Bathymetry Viewing and Download service with EMODnet DTM



<http://www.emodnet-bathymetry.eu>

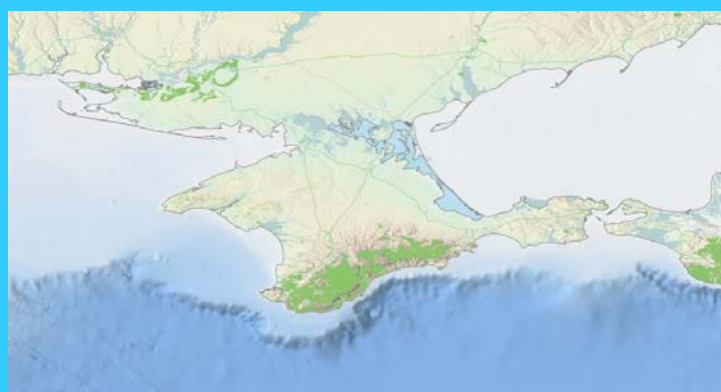




Download DTM tiles in various formats

Issues

- Complaint by the Embassy of Ukraine and consecutive request of EU DG MARE concerning Crimea 2 layers have been de-activated in the Bathymetry Viewing and Downloading service:
 - boundaries of EEZs
 - geographic place names
 - both were derived from the community driven OpenStreetMap service.
 - Real miss: geographic names are very useful for many purposes. EU is looking into a solution by means of a dedicated geographic names service (Status?)

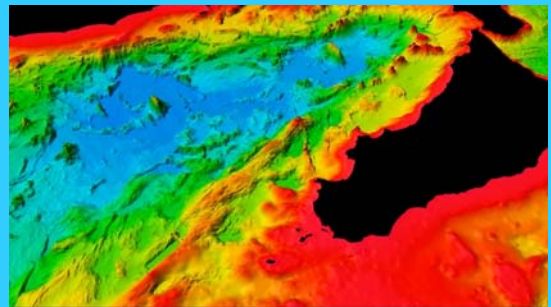


EMODNet Bathymetry – Progress

- Kick-off meeting on 17 – 18 June 2013 in Lisbon – Portugal
- 1st Progress meeting and Training Workshop on 27 – 30 January 2014 at Tenerife – Canary Islands
- 2nd Progress meeting on 27 – 28 May 2014 in Hamburg – Germany
- 3rd Progress meeting on 21 – 22 January 2015 in Brest - France
- New release of EMODnet DTM on 9th February 2015
- UKHO Wrecks layer added on 4th May 2015

EMODNet Bathymetry – Promotion since Feb 2015

- Early March 2015, 3D Tyrrhenian fly-through – animation via youtube on portal
- 12 – 17 April 2015, EGU 2015, Vienna – Austria, oral presentation by MARIS in ESS1.2 session and poster at 'CyberGIS as an Engine of Data Stewardship' session
- 14 – 16 April 2015, Ocean Business 2015 exhibition, Southampton – UK, poster by OceanWise
- 20 – 23 April 2015, ODIP 4th Workshop, Liverpool – UK, oral presentation by MARIS



EMODNet Bathymetry – Promotion since Feb 2015

- 24 April 2015, IOGP Geomatics Committee meeting, Dublin – Ireland, oral presentation by MARIS
- 30 April 2015, EU Seminar on Standards, organised by EU DG R&I, Brussels – Belgium, oral presentation by MARIS
- 28 May 2015, European Maritime Day 2015, Piraeus – Greece, oral presentation by SHOM
- 26 June 2015, Hydrographic Society Benelux, World Hydrography Day, Hook of Holland – NL, oral presentations by MARIS and MOW

EMODNET HYDROGRAPHY – SEABED MAPPING – BATHYMETRY PROJECTS
PRODUCING A HIGH RESOLUTION DIGITAL BATHYMETRY FOR EUROPEAN SEA BASINS

In December 2007 the European Parliament and Council adopted the Marine Strategy Framework Directive (MSFD) which aims to ensure environmental healthy marine waters by 2020. This Directive requires an update to an existing (European Marine Observation and Data Network (EMODNet)).

The EMODNet hydrography – seabed mapping – bathymetry projects make very good progress in delivering the EMODNet Bathymetry portal to provide visitors and users to explore bathymetry, ocean resources and generate an International Digital Bathymetry for Europe's sea basins. Up to February 2015 more than 10,000 bathymetry data sets have been processed and uploaded to the EMODNet Bathymetry portal. The EMODNet Bathymetry portal provides a user-friendly interface to explore and download bathymetry data. The EMODNet Bathymetry portal also provides a user-friendly interface to explore and download bathymetry data. The EMODNet Bathymetry portal also provides a user-friendly interface to explore and download bathymetry data.

The EMODNet Bathymetry portal provides a user-friendly interface to explore and download bathymetry data. The EMODNet Bathymetry portal also provides a user-friendly interface to explore and download bathymetry data. The EMODNet Bathymetry portal also provides a user-friendly interface to explore and download bathymetry data.

Partners: EMODNet, MARIS, SHOM, MOW, etc.

Associate Partners: etc.

Visit us at: WWW.EMODNET-BATHYMETRY.EU

Statistics

Bathymetry main portal					
Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Jul-14	988	1,791	15,955	45,079	1.92 GB
Aug-14	933	1,602	12,575	36,651	1.63 GB
Sep-14	1,107	1,954	19,065	52,457	1.70 GB
Oct-14	1,289	2,518	26,742	82,029	3.09 GB
Nov-14	1,343	2,435	19,135	62,204	2.50 GB
Dec-14	1,159	1,950	20,262	62,927	2.32 GB
Jan-15	1,199	2,366	25,138	75,329	2.87 GB
Feb-15	1,567	2,725	28,218	98,671	3.42 GB
15-Mar	1,996	3,246	33,321	113,897	3.36 GB
15-Apr	1,969	3,278	25,305	99,038	2.87 GB

Bathymetry Viewer					
Month	Unique visitors	Pages	Hits	Bandwidth	
14-Jul	1.23	1,417	2,319	23.88 GB	
14-Aug	970	1,249	2,131	26.64 GB	
14-Sep	1.39	1,906	3,149	54.00 GB	
14-Oct	1.686	2,456	4,348	55.88 GB	
14-Nov	1.884	2,614	4,714	77.69 GB	
14-Dec	1.663	2,274	4,447	52.71 GB	
Jan-15	1,490	2,153	5,695	62.39 GB	
Feb-15	2,592	4,440	8,155	215.479 GB	
Mar-15	4,198	7,585	10,787	232.22 GB	
Apr-15	4,271	7,051	10,157	186.42 GB	

DTM tile downloads		
Period	Number	
Jul-Aug 2014	3069	
Sep-Oct 2014	3488	
Nov-Dec 2014	4414	
Jan-Feb 2015	4862	
Mar-Apr 2015	4183	

Status

- Updated EMODnet DTM at 1/8 * 1/8 arc minutes well underway for release after summer 2015; taking away identified anomalies in present version
- Further cooperation and synergy with GEBCO. New GEBCO 2015 has adopted EMODnet DTM and EMODnet has adopted GEBCO 2015 to cover gaps in survey coverage.
- New EMODnet DTM release will also include 3 pilot High Resolution DTMs for coastal areas (Germany, France, Ireland) based upon combination of LIDAR and Multibeam data
- Regular deliberation with SHOM for establishing synergy between EMODnet Bathymetry and new Coastal Mapping project as well as for seeking a joint approach towards new expected EMODnet Bathymetry Call (end 2015?)



www.emodnet-bathymetry.eu