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Observation and
Data Network

Your gateway to marine data in Europe

EMODnet Bathymetry: le Modèle Numérique de Terrain bathymétrique européen

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Tous les partenaires de
EMODnet HRSM



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EMODnet bathymetry

I- Présentation d'EMODnet bathymetry

II- Création du Modèle Numérique de Terrain (MNT)

III- Collaborations Internationales

IV- Perspectives



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EMODnet bathymetry: La philosophie

Rassembler et partager la connaissance bathymétrique au sein d'une infrastructure distribuée et d'un portail de découverte et d'accès:
<http://www.emodnet-bathymetry.eu/>



- Unifier les méthodes et les outils pour la réalisation de produits et de métadonnées
- Partager les rôles, du producteur local au coordinateur de bassin, et des coordinateurs de bassin à l'intégration sur le portail
- La diffusion des données est gérée au niveau du producteur en respect avec sa propre politique

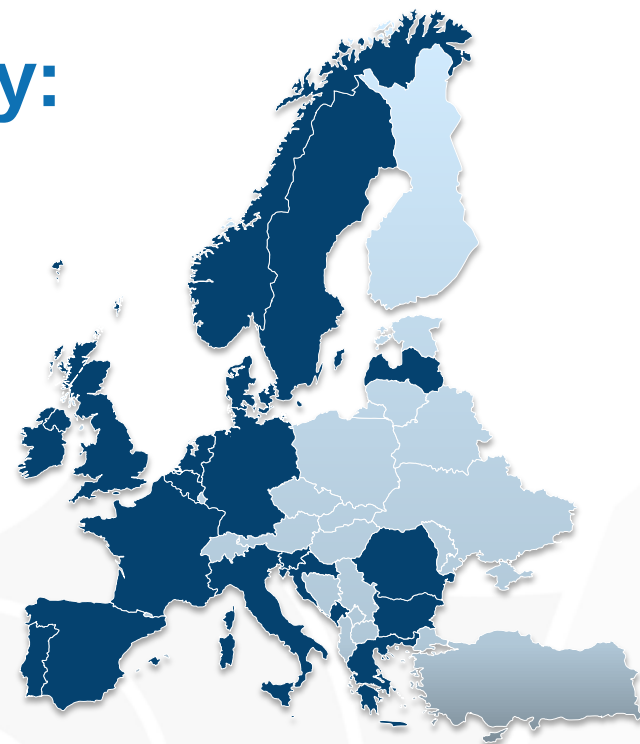


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EMODnet bathymetry: Les partenaires

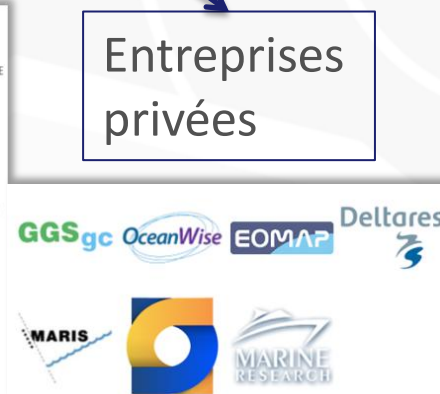


- Décembre 2016, nouvelle phase:
EMODnet High Resolution Seabed Mapping
- 41 partenaires

Services hydrographiques

Entreprises
privées

Instituts de recherche





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EMODnet bathymetry: Plusieurs Services

- Des catalogues de produits bathymétriques et de métadonnées
26 875 lots bathymétriques + **115** produits composites
- Respecte les normes INSPIRE et le vocabulaire commun SeaDataNet

**BATHYMETRY**
Understanding the topography of the European seas
CDI Data Discovery and Access Service

 Dataset(s) 0 [Proceed to basket](#) [Reset basket](#)

[Timeseries on](#) [Export](#) [Store query](#) [Summary](#) [Show map](#) [Help](#)

Reset all steps

Search by:

Geographical Box

Time period

Measuring area type

Parameter categories

Disciplines

surface (25232)

curve (1829)

point (5)

Gravity, magnetics and bat... (27066)

Terrestrial (27066)

Field geophysics (424)

Administration and dimens... (415)

Water column temperature... (15)

Marine geology (27066)

Terrestrial (27066)

#	Data set name	Disciplines - Topics	Instrument / gear type	Show
☐	S196900100-016	Marine geology > Gravity, magnetics and bathymetry Terrestrial > Terrestrial	single-beam echosounders	
☐	S196900100-014	Marine geology > Gravity, magnetics and bathymetry Terrestrial > Terrestrial	single-beam echosounders	
☐	Zeegebied_Havens_NPT_HAV	Marine geology > Gravity, magnetics and bathymetry Terrestrial > Terrestrial	multi-beam echosounders	
☐	Zeegebied_Havens_BKE_HAV	Marine geology > Gravity, magnetics and bathymetry Terrestrial > Terrestrial	multi-beam echosounders	

**BATHYMETRY**
Understanding the topography of the European seas

[CONTACT](#) [SUBMIT DATA](#)

[APPROACH](#) [METADATA & DATA](#) [DATA PRODUCTS](#) [NEWS](#) [PROMOTION](#) [PARTNERS](#) [HELPPAGE](#)

Sextant Catalogue service

[Catalogue](#)[Sextant Themes](#)[Inspire Themes](#)[Keywords](#)[Contact for the resource](#)[Years](#)[Associated services](#)

[Reset filters](#)

Results 1 to 20 on 134 : 20 by page

Sort by: Popularity

Baltic Sea Bathymetry Database



The Baltic Sea Bathymetry Database (BSBD) gathers and distributes 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 ...

574_EMODNET REGIONAL DTM OF NETHERLANDS CONTINENTAL SHELF



DTM compiled for inclusion into the EMODnet hydrography dataset. Original data was received from Netherlands Hydrographic Service at a source resolution of approximately 125 metres. An area north of the northern deep-water routes on the Dutch continental shelf was not part of the.

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.

486_Bathymetry_Bay of Biscay - Channel (DTM resolution : 1000m ; ed. : 2008)



The Digital Terrain Model of the Bay of Biscay and of the Channel is the result of the processing of a compilation of single and multibeam echosounder data, of DTM and of chart contours produced before 2008 for hydrodynamic modeling.



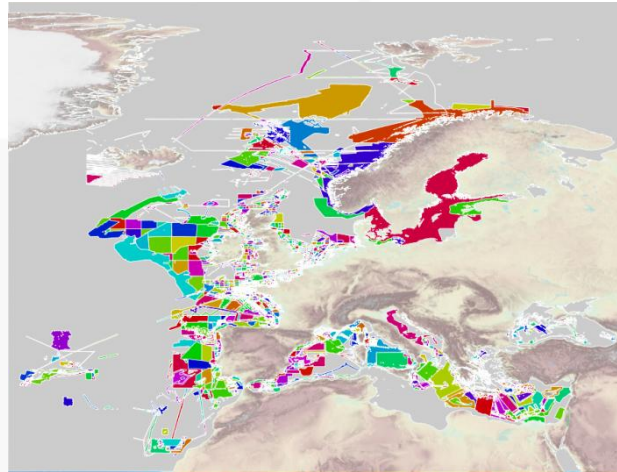
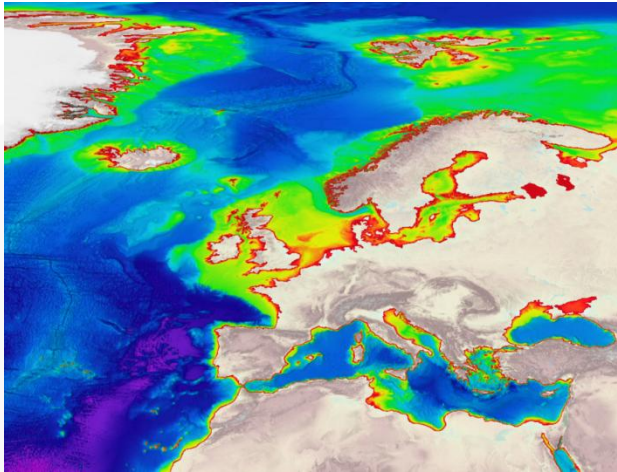
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EMODnet bathymetry: Plusieurs Services

- Un Modèle Numérique de Terrain multicouches: Profondeur moyenne, minimale, maximale, sources de références,...



- Maille de 1/8 de minutes d'arc (250 m) => **1/16 de minutes d'arc (100m)** pour deuxième trimestre 2018
- **Libre de droit:** disponible en plusieurs formats (ASCII, NetCDF, XYZ, RGB GeoTiff, ESRI ASCII, QPS SD) et des services web (WMS, WFS, WMTS, WCS)

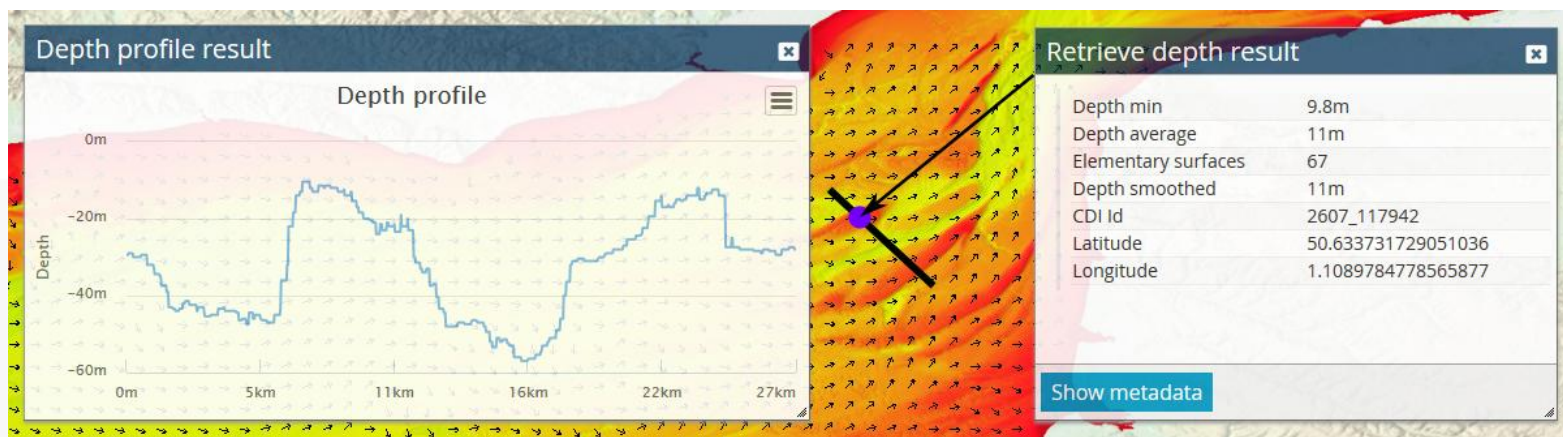


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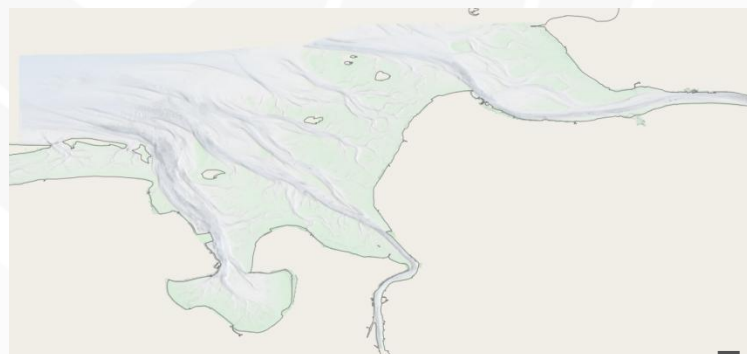


EMODnet bathymetry: Plusieurs Services

- Un portail de visualisation avec plusieurs fonctionnalités



- Des couches additionnelles de bathymétrie haute résolution sur les côtes
- Isobathes, Epaves, ...



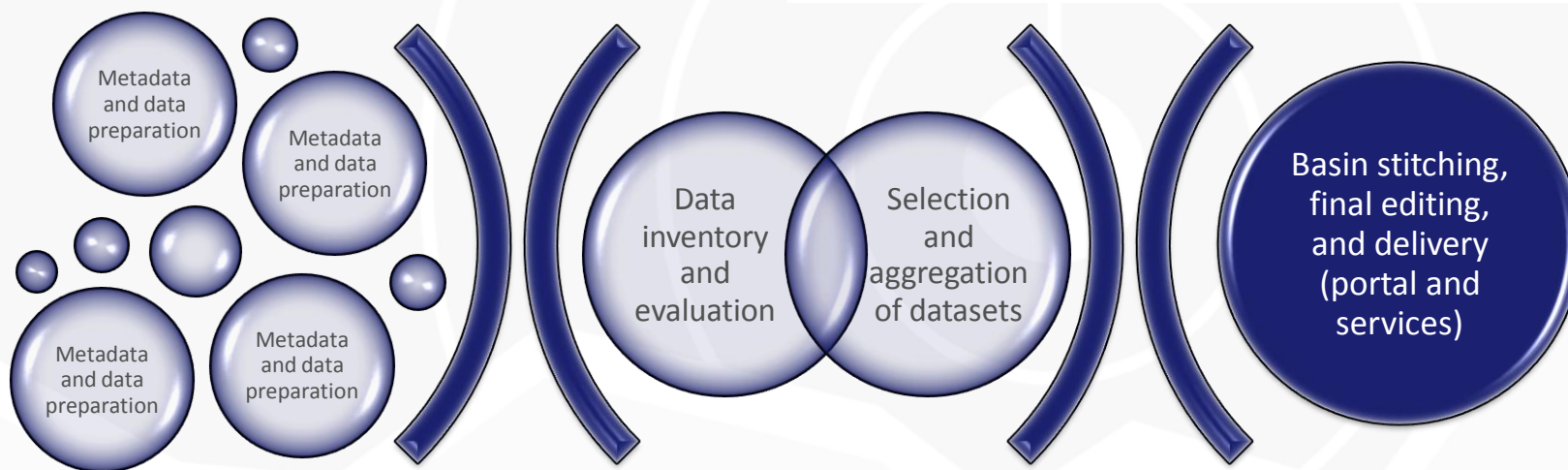


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Création du MNT



Data providers

Basin Coordinators

Integration



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Création du MNT: Contributeurs

- Des formats communs pour faciliter le partage de données: fichiers dtm et emo
- Des outils simples et standardisés, pour créer les fiches de métadonnées et les données (logiciels fournis par l'IFREMER: Mikado et Globe)

Mikado 3.3.5 SDN V2 Manual / CDI : N:\BATHY\PROD\MNT\TRAVAIL\MONPERT\Technique\code_PythonXML\creation_SDN_data_shom...

Manual Automatic Options Tools ?

Identification Where When What How Who Where to find the data Cruise/Station Documentation Quality Others

Geographic coverage (bounding box)

West longitude *	East longitude	South latitude *	North latitude
-180	180	-90	90

Measuring area type

Object type code * surface

Horizontal datum

Name: World Geodetic System 84

code list value: 4326

Vertical datum

name: Lowest Astronomical Tide

Identifier: org/turnit/SDN.L11.D01

Depth observation

Minimum depth: 0

Maximum depth: 1000

Water depth: 500

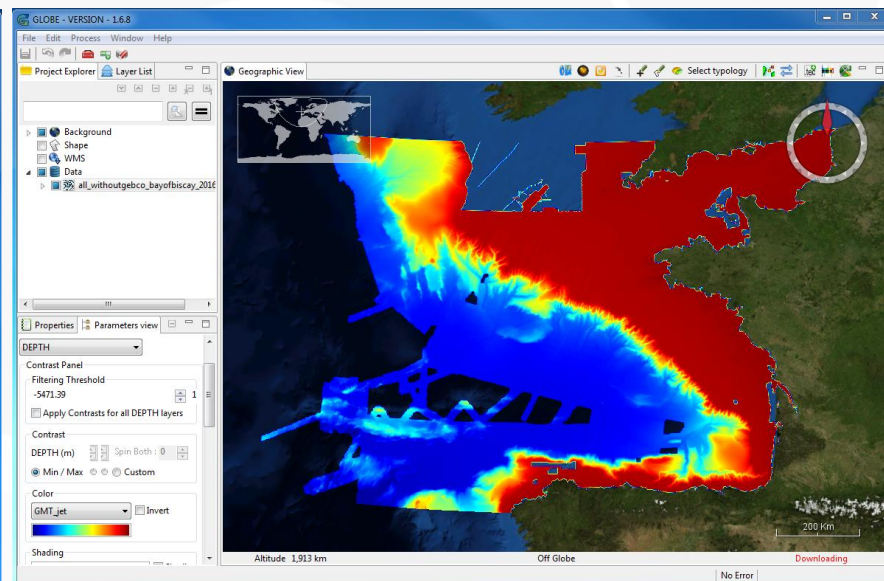
Unit: metres

GML

None Curves Surface

enter waypoints against the clock and repeat the first waypoint as last waypoint

Descripti...	name	Coordinates
Coverage	polygon	-179 +89 +179 +8...



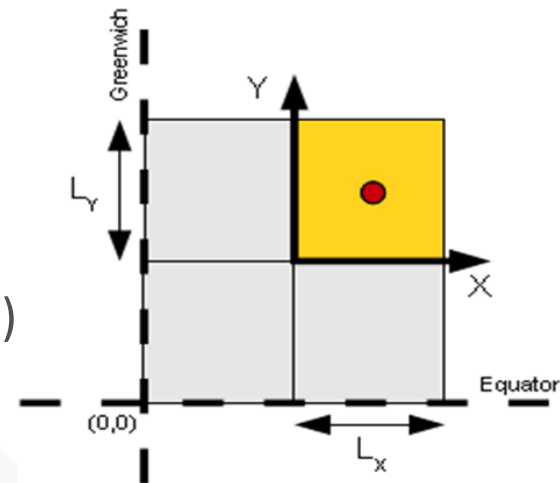


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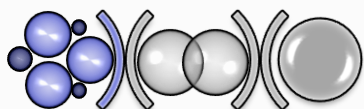


Création du MNT: Contributeurs

- Une grille, un système géodésique de référence (WGS84) et une référence verticale (PBMA) en commun
- Des indices de qualité pour évaluer la donnée



QI Horizontal	QI Vertical	QI age	QI purpose
> 500m	Inconnu, plomb de sonde	> 30 ans	Inconnu
500m – 50m	SBES, SDB	10 – 30 ans	Transit / opportunité
50m – 20m	MBES basses fréquences	5 – 10 ans	Bathymétrie / Morphologie
< 20m	Lidar, SBES hautes fréquences	0 – 5 ans	Levés Hydrographiques respectant les normes OHI
	MBES hautes fréquences		



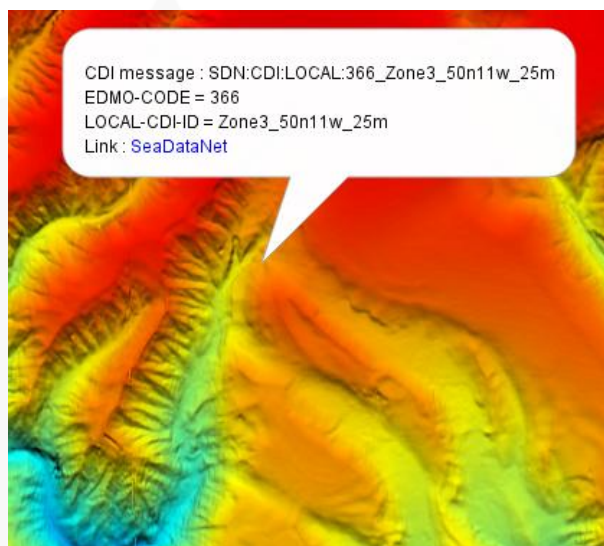


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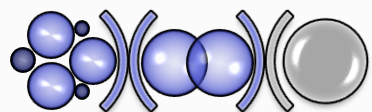
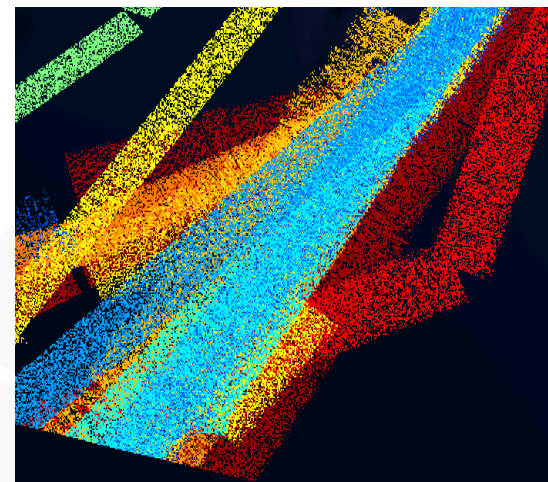


Création du MNT: Coordinateurs de bassin

1. Effectuer l'inventaire des données sur le bassin
2. Vérifier la cohérence des données



3. Retraiter la donnée si nécessaire (sonde incohérente, interpolation, ...)





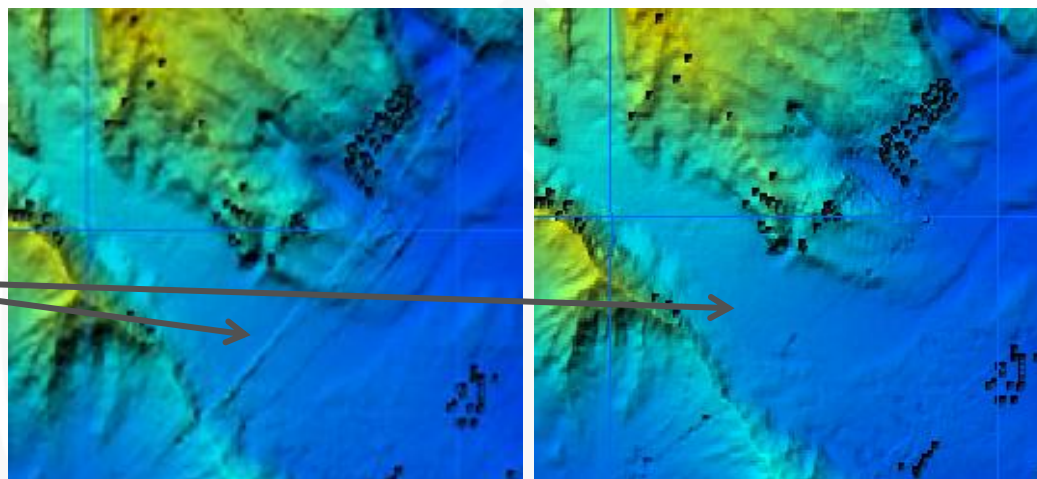
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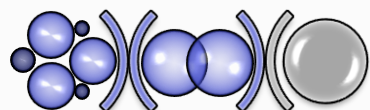
Création du MNT: Coordinateurs de bassin

4. Evaluer la cohérence des différentes données entre elles
(morphologie, Indices de qualité, ...)

Rejet du lot par le QI_Purpose



5. Compilation des lots choisis



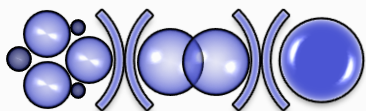
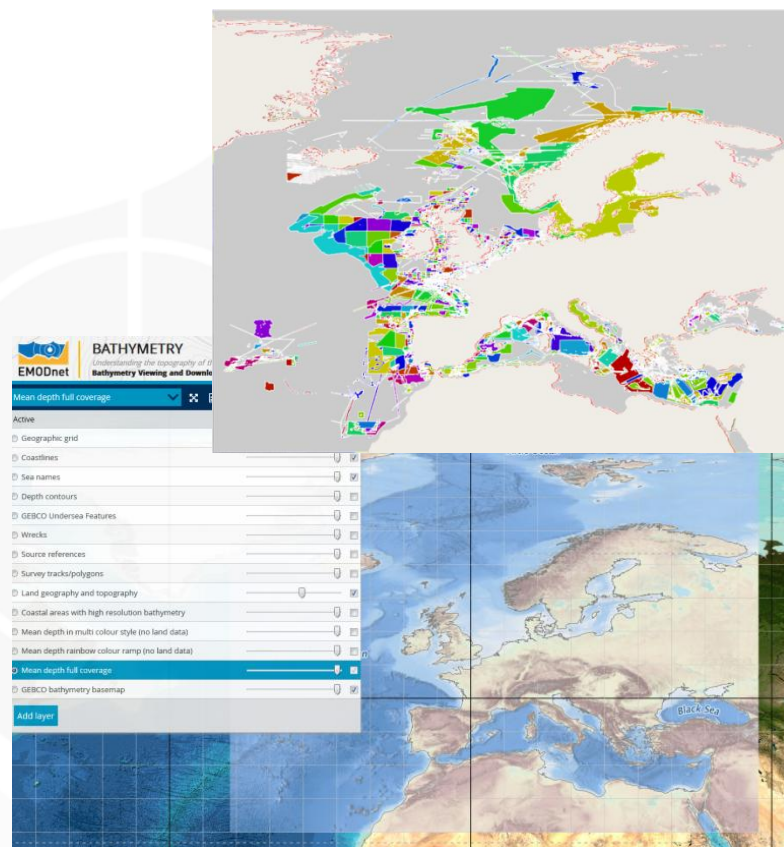
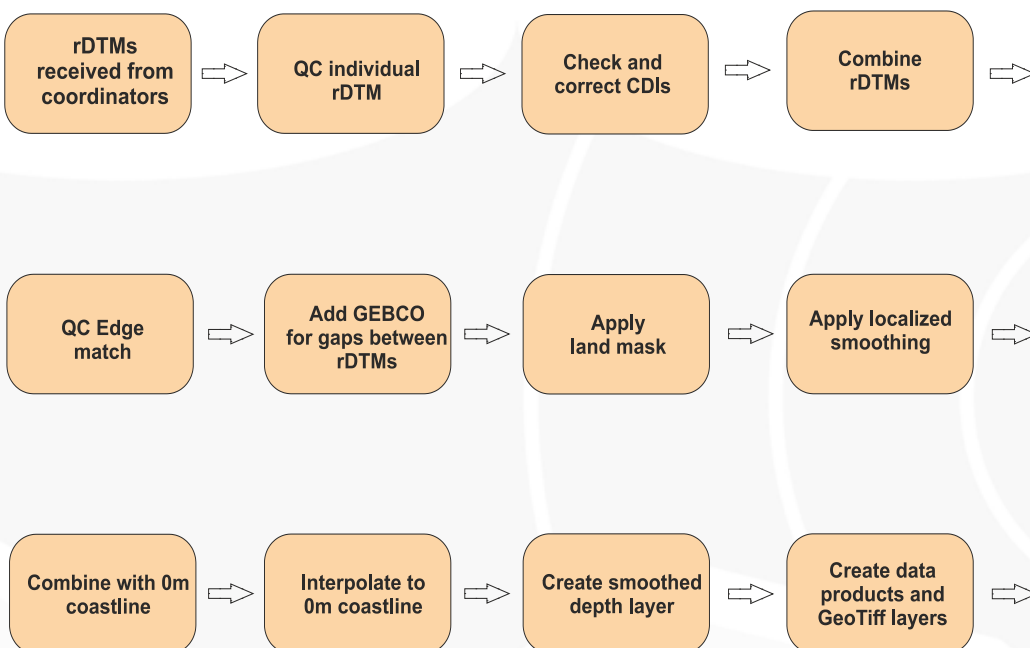


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Création du MNT: Compilation finale et Intégration dans le portail



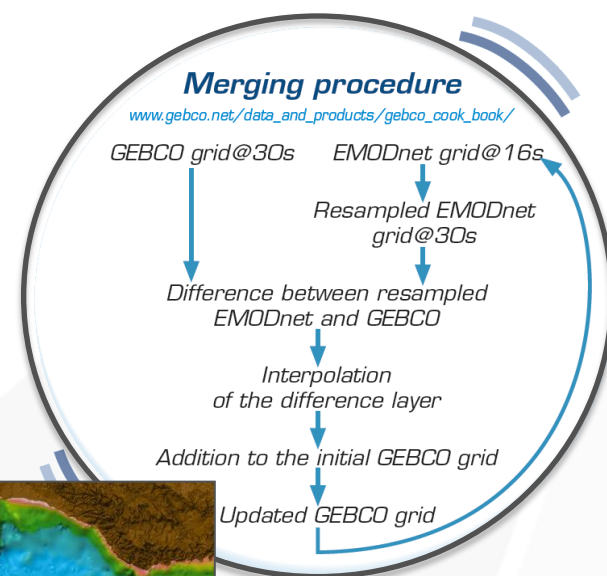
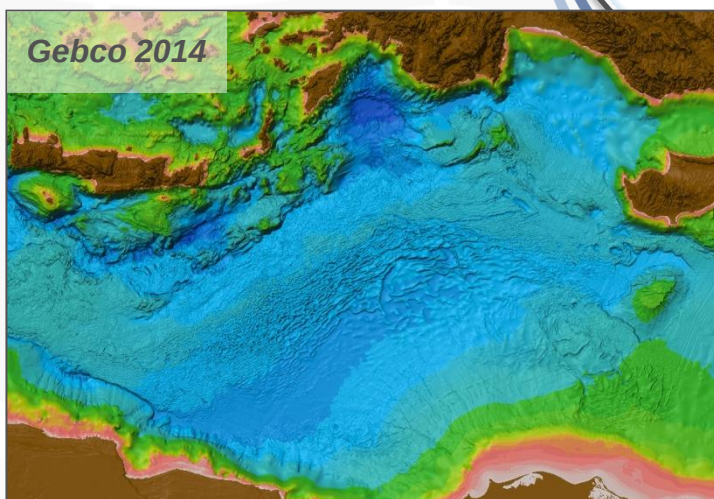
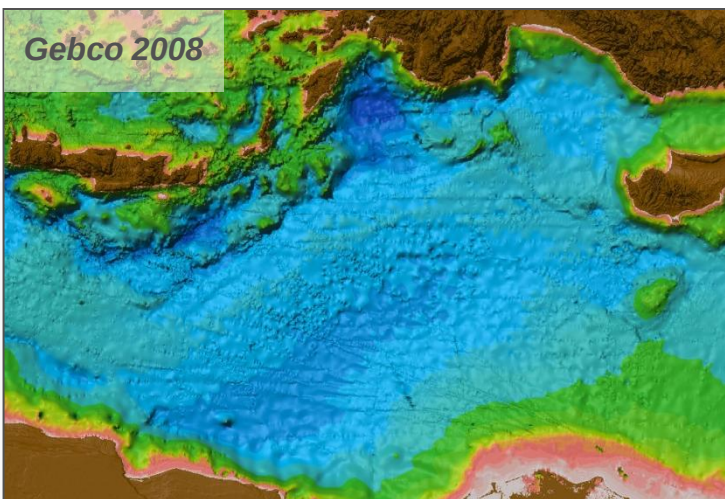


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Collaborations Internationales

- Amélioration de la **GEBCO**



- Collaboration avec l'OHI pour le projet **Data Centre for Digital Bathymetry**

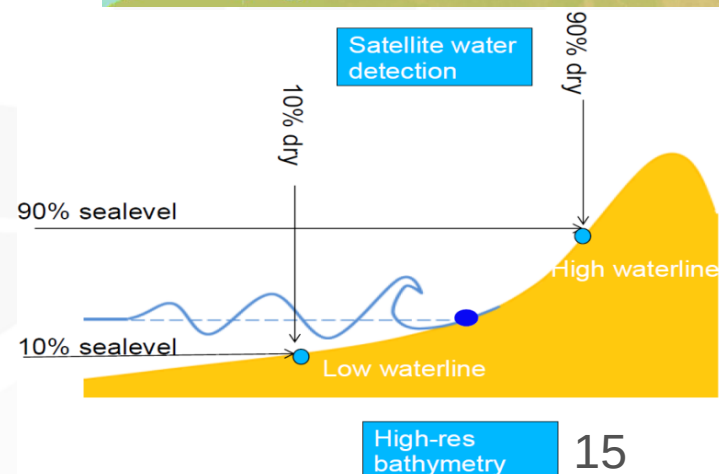
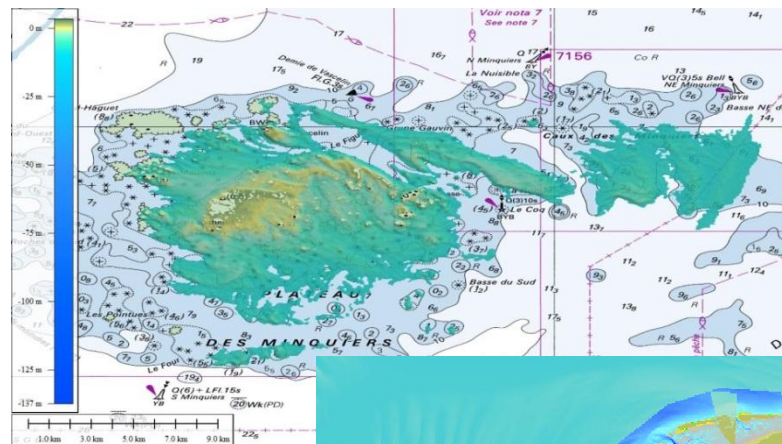


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Perspectives

- Associer à chaque nœud du MNT un **indicateur de qualité**
- Etendre l'inventaire des données et la génération du MNT à la **zone arctique**
- Renforcer la précision des zones côtières avec des **données de haute résolution** type Lidar
- Intégrer de la Bathymétrie provenant des techniques **d'imagerie satellitaire**
- Estimer le **trait de côte** à partir du MNT, d'images satellites et d'un modèle de marée





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Venez nous visitez: www.emodnet-bathymetry.eu

The screenshot shows the EMODnet Bathymetry website. At the top, there is a header with the EMODnet logo, the word "BATHYMETRY" in large blue letters, and the tagline "Understanding the topography of the European seas". To the right of the header is a search bar labeled "Free search" and two links: "CONTACT" and "SUBMIT DATA". Below the header is a dark blue navigation bar with the following links: "APPROACH", "METADATA & DATA", "DATA PRODUCTS", "NEWS", "PROMOTION", "PARTNERS", and "HELPPDESK". The main content area features a large blue banner with a yellow autonomous underwater vehicle (AUV) on the surface. The text on the banner reads: "Developing and providing a harmonised Digital Terrain Model (DTM) for the European sea regions". Below the banner are three columns of content. The first column is titled "SURVEY DATA SETS" and includes the text "CDI Data Discovery and Access service" and a "READ MORE" button. The second column is titled "EMODnet DTM" and includes the text "Bathymetry Viewing and Download service" and a "READ MORE" button. The third column is titled "COMPOSITE DTM" and includes the text "Sextant Catalogue service" and a "READ MORE" button. Each column has a small image: a magnifying glass over a globe for Survey Data Sets, a map of Europe for EMODnet DTM, and a hand holding a globe for Composite DTM.

WELCOME TO THE EMODNET BATHYMETRY PORTAL

The **EMODnet-Bathymetry portal** is being developed in the framework of the European Marine Observation and Data Network (EMODnet) as initiated by the European Commission.

It provides a service for viewing and downloading a harmonised Digital Terrain Model (DTM) for the European sea regions that is generated by the EMODnet Bathymetry partnership on the basis of an increasing number of bathymetric data sets. These are managed as survey data sets and composite DTMs by data providers from government and research. Services for discovery and requesting access to these data sets are provided as well. [Read more](#)





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Global workflow

GLOBAL WORKFLOW Input of a dataset in EMODnet bathymetry DTM

