



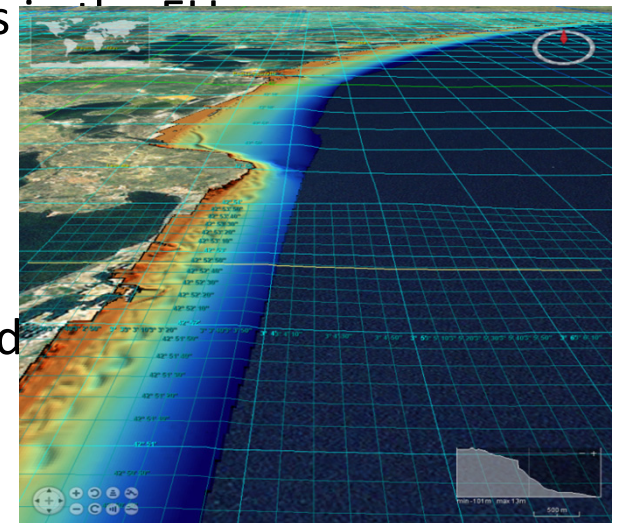
# High resolution seabed mapping A European strategy for the coastal risks and integrated management ?

Bruno Frachon



## Shared objectives - IHO-DG MARE-CPMR

- Development of the concept of a Joint European Coastal Mapping Programme (JECMaP) within the IHO EU network in relation with the DG MARE,
- *Bathymetric data is the basic common layer for all the users of marine data*
- CPMR and its member-regions work since a lot of years on knowledge of the marine environment for integrated management of coastal areas
- 2015 - Launch of project financed by the DG MARE (EMFF funds) – « Coastal Mapping »
  - ❖ Assess the current availability of digital coastal maps in the EU
  - ❖ Disseminate this information by EMODnet
  - ❖ Share experience of coastal mapping in the EU
  - ❖ Develop standards for best practices
  - ❖ Propose how a future JECMaP could be implemented







# Consortium

- **Hydrographic offices :**

FRANCE – BELGIUM –  
GERMANY – GREECE –  
IRELAND – ITALY – LATVIA –  
NORWAY – PORTUGAL –  
SLOVENIA – SWEDEN

- **Regions :**

CPMR – Regione Lazio

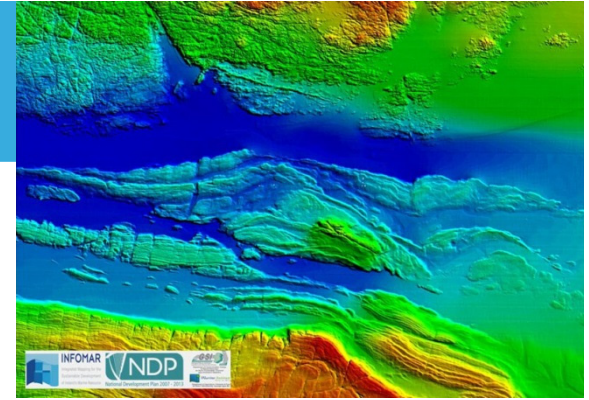
- **Public Bodies :**

ISPRA – RWS - GeoEcomar –  
DDNI

- **IT company :**

Worldline





## Contributions

- Hydrographic offices involved in the acquisition of coastal data to fulfill their mission for the safety of navigation, are specialists of bathymetric measurements and processing
- CPMR and the Region helped to refine the perception of the needs of data for implementation of coastal policies, particularly coastal risks. *High resolution bathymetric data is an essential data for coastal policy making*
- Scientists of ISPRA brought the vision of the scientific needs and built tools for helping decision



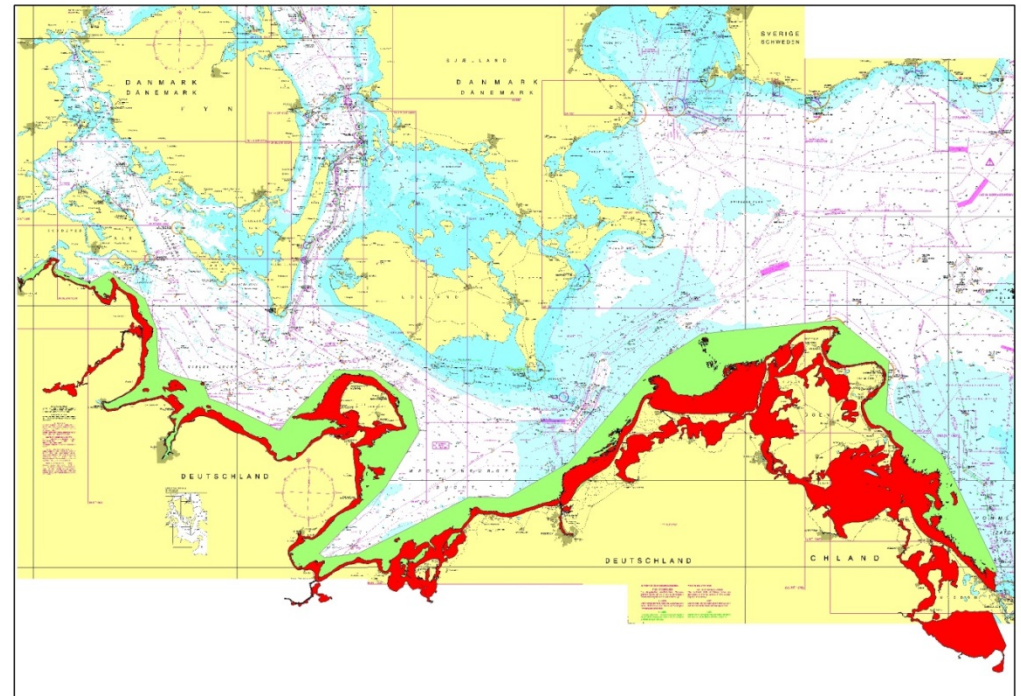
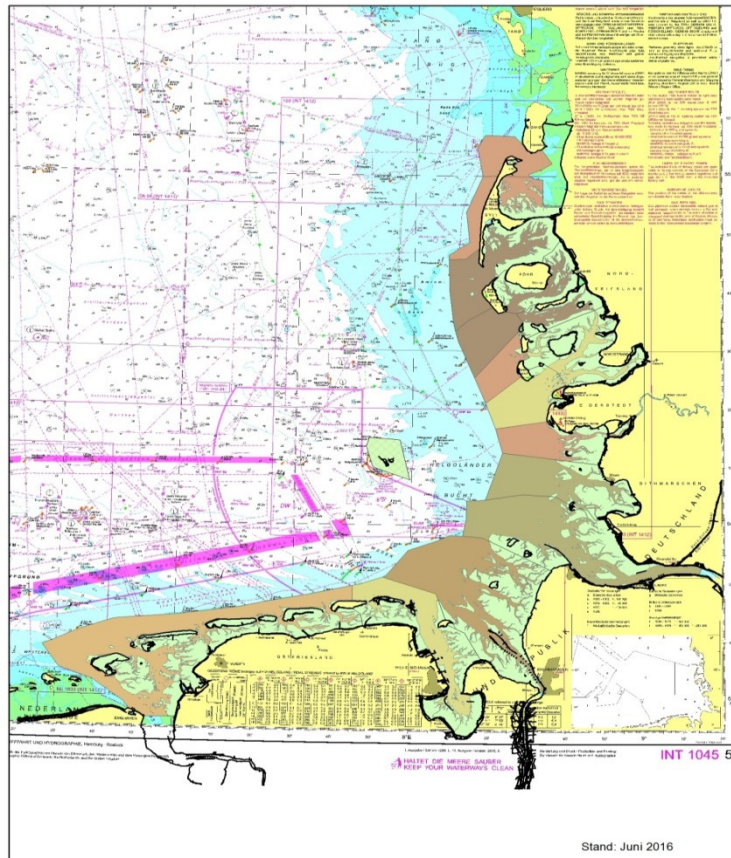
## Main results

- A gap analysis (12 countries of the panel): more than 175 000 km<sup>2</sup> of acquisition to do
- An analysis of the possibilities to share means: planes, vessels ... *Possibilities identified but how to combine it with the EU financial programmes?*
- An analysis of the national governance, business models running: how to combine the open data and the lack of financial means?





# Gap analysis





## Main results

- *Standardized and high resolution data* are the conditions of reusability of data by national and local authorities and stakeholders for the maritime policies
- Using standard procedures is necessary for data quality assurance. *IHO standard must be used, no data should be collected without an assessment of its accuracy*

***Recommendation: take a step forward with the use of these standards in EU funded projects.***







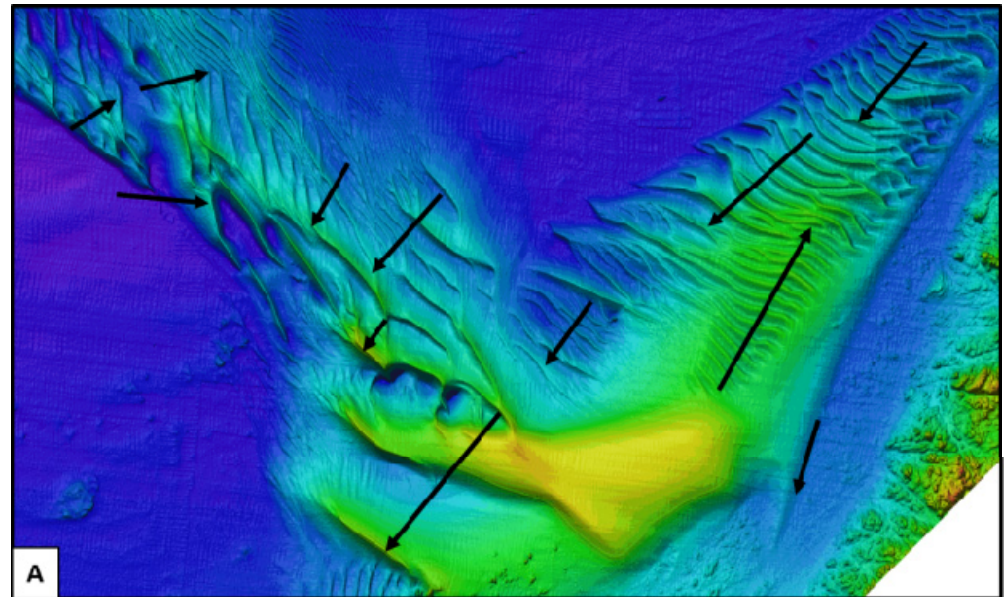
European  
Commission

***Protection against  
erosion***

***Modelling marine  
flood***



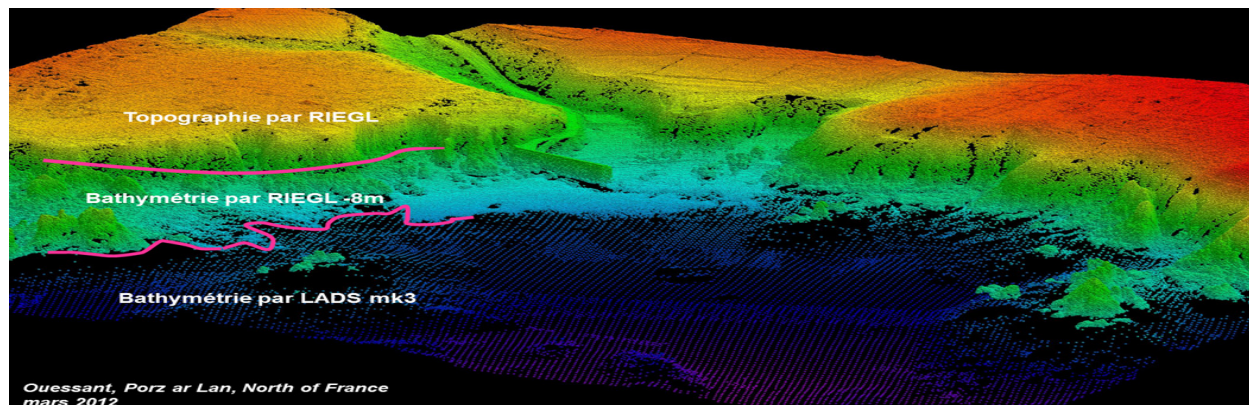
***Planning MRE***





# *High Resolution Bathymetry in shallow water TOWARD A EU STRATEGY?*

Bathymetric data in coastal zones:  
A common ground for the coastal  
and maritime policies (integrating land-sea interface)





## How to fill the gaps with a European Strategy ?

### Three axes proposed

- **AXIS 1:** Set up coordinated programmes for data acquisition at maritime basin scale
- **AXIS 2:** Increase the opportunities for bathymetric data acquisition in the framework of the EU operational programmes and funds
- **AXIS 3:** Promote the production of bathymetric data from multiple sources, usable by different categories of coastal users for maritime policies.



# AXIS 1

## Design Joint European Coastal mapping programmes ?

**Co-financed** by the States, the Regions and EU's relevant funds (EMFF, ERDF, H2020)

- Design programmes both at the scale of maritime basins AND by technology/platform
- Consider these data as a basis of research infrastructures in coastal areas, *including updating*
- What future developments with EOOS? A place for these considerations in the EOOS conference in November?





## AXIS 2

### **Increase the possibilities for coastal bathymetric data acquisition in the framework of the Interreg programmes, H2020, EMFF, LIFE**

- Coastal zone is a high-risk zone for climate change issues and requires a lot of knowledge and data to deal with extreme climate events
- A lot of marine bathymetric data produced in the EU projects suffers a lack of visibility, common standards and mutualisation. → data lost
- Use of international standards for data production funded by EU funds
- Pooling these data in the EMODNET database
- Need of data validation by the competent offices of the Member State
- Developing campaigns in homogeneous areas, sharing platforms and funds from EU programmes





## **AXIS 2**

**Increase the possibilities for coastal bathymetric data acquisition in the framework of the Interreg programs, H2020, EMFF, LIFE**

*Many opportunities but scattered and without long term management*

*How to work with the coordinators of EU programmes to deliver these messages and promote the eligibility of acquisition data projects ?*



## AXIS 3

### Crowd-sourcing

- Promoting the production of usable bathymetric data for maritime policies, coming from different sources (EU project included)
- Organising training and dissemination of data acquisition standards, (possibilities in EOOS area with HOs?)
- Organising the validation of these data by the HOs of EU Member States (link with EMODNET project “ingestion and safe keeping of marine data”)
- Evaluation of the gaps in the EU coastal seabed mapping suitable for crowd-sourcing
- Promoting the link between the EU and the IHO works (standards, databases)..





**THANK YOU**

