Marine Data: what role for HOs

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Hydrography and its fields of application

Risk assessment and management

Environmental protection

Hydrography

Maritime spatial planning

Blue Growth

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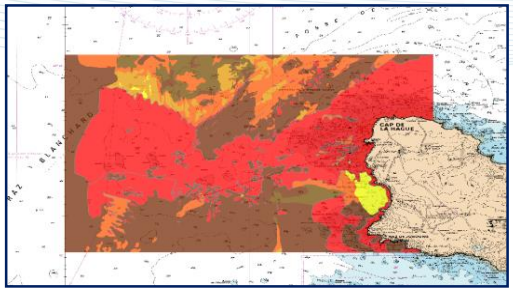
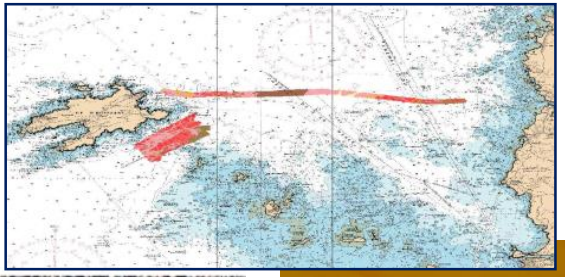
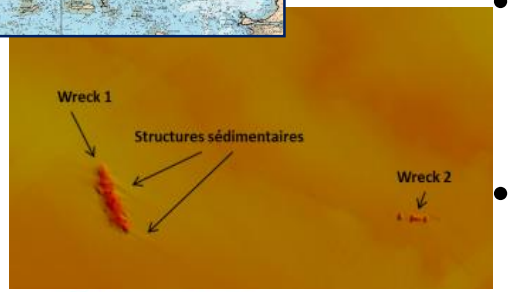
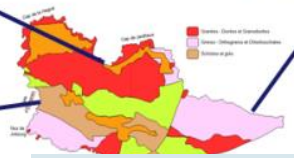
RÉPUBLIQUE FRANÇAISE
MINISTÈRE DE LA DÉFENSE

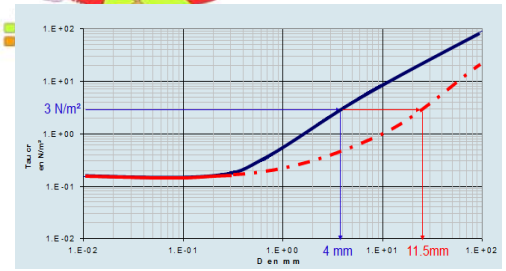
RME: Sea bottom expertises

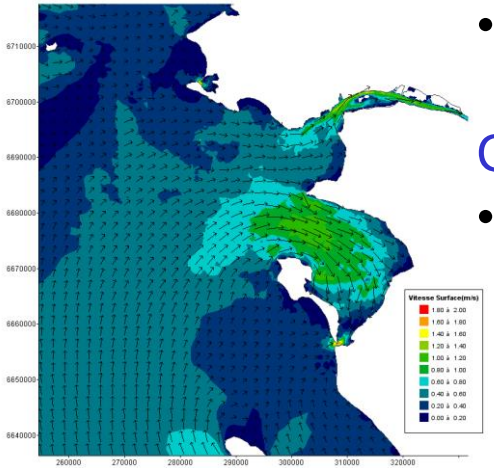












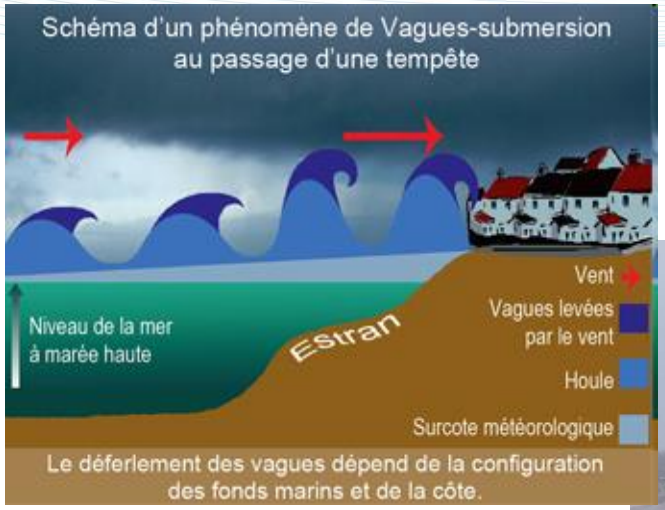
Sea bottom nature

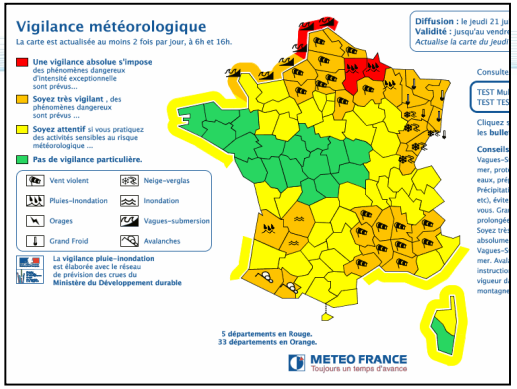
- Adapt machine design to foundation
- Evaluate risk of pebbles damaging propeller blade
- Make sure no mine buried
- Find a path for cable

Current models

- Enhance performance, monitor farm

Marine submersion risk





Timeliness and relevance of warnings to take good decisions for evacuation, pre-positioning of rescue teams…

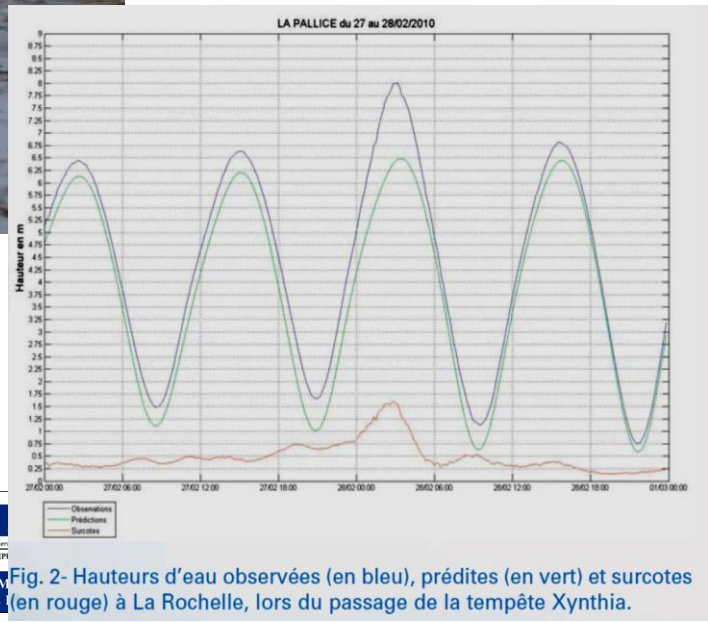
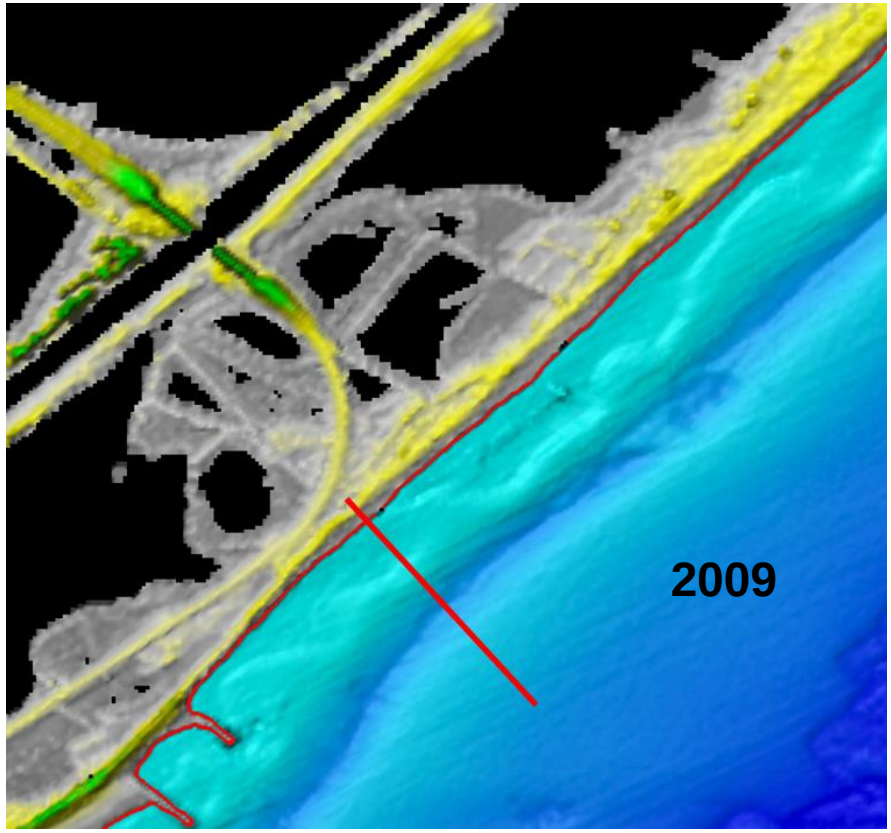
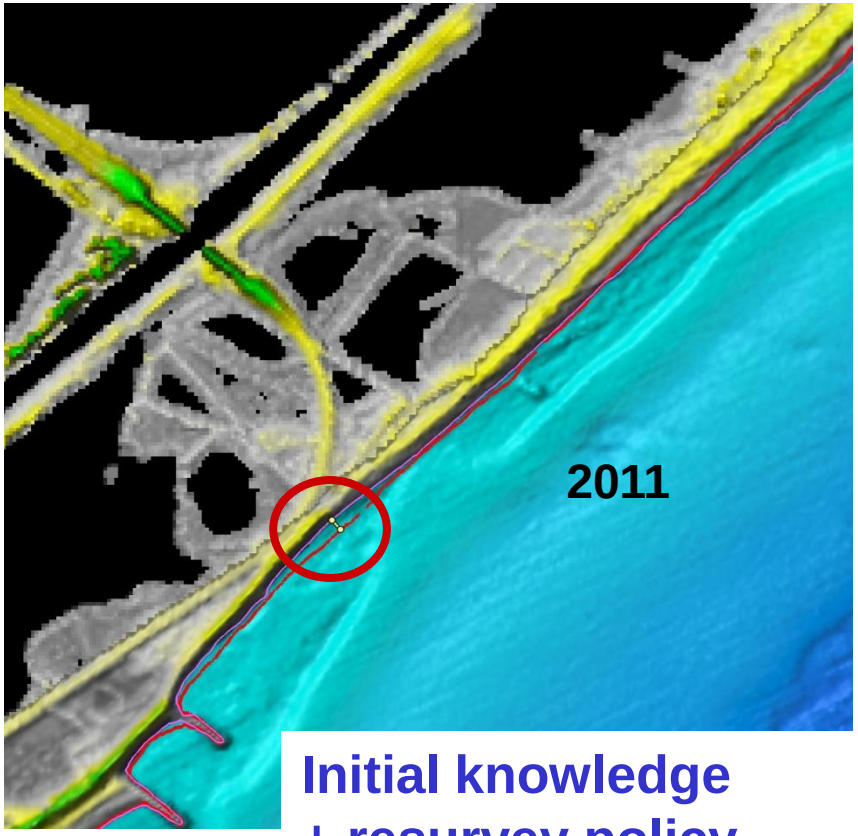


Fig. 2- Hauteurs d'eau observées (en bleu), prédites (en vert) et surcotes (en rouge) à La Rochelle, lors du passage de la tempête Xynthia.

Coastal erosion monitoring





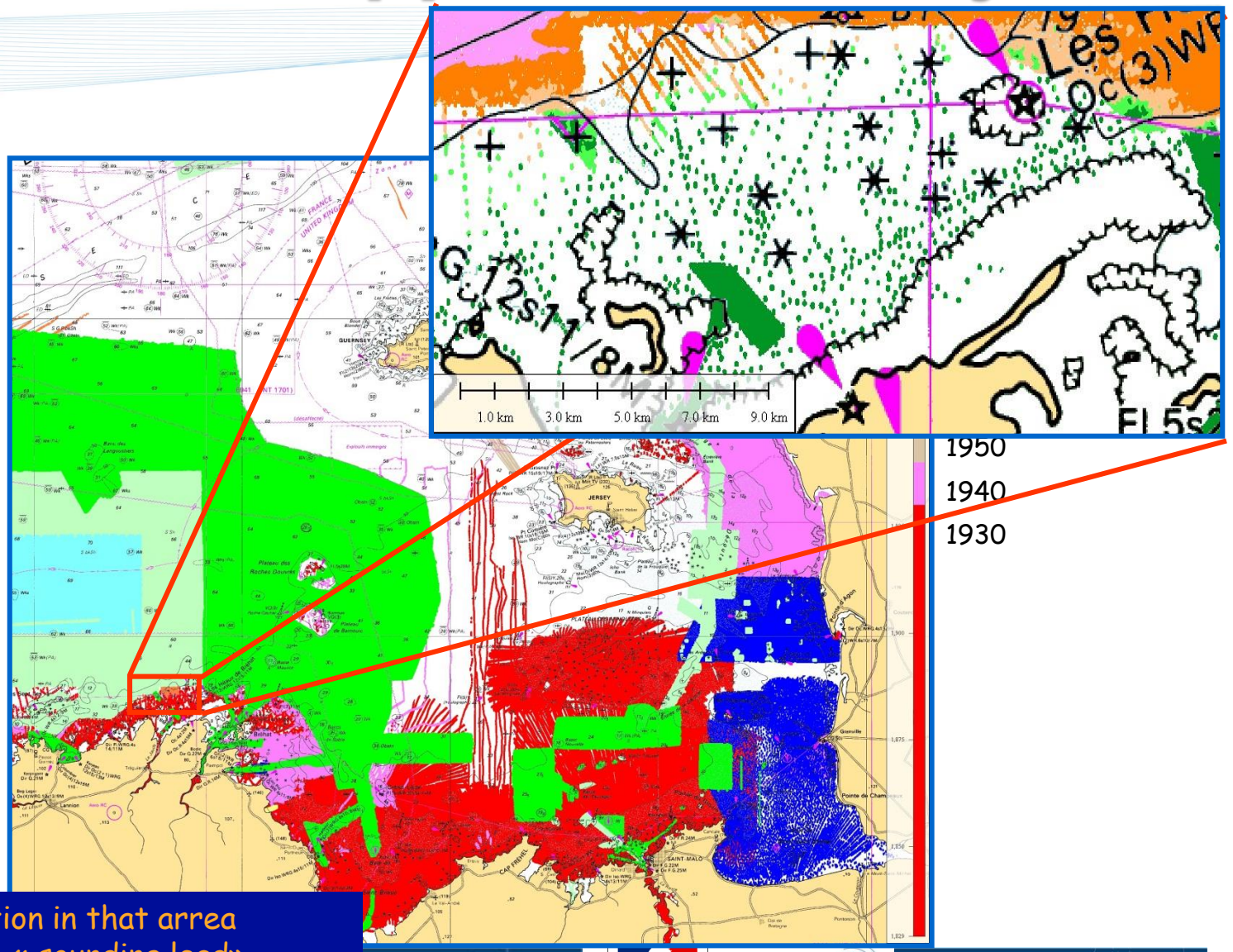
17 m shift of the coastline

Road not so far from the coastline than it used to be!

Initial knowledge
+ resurvey policy
+ morphodynamic models

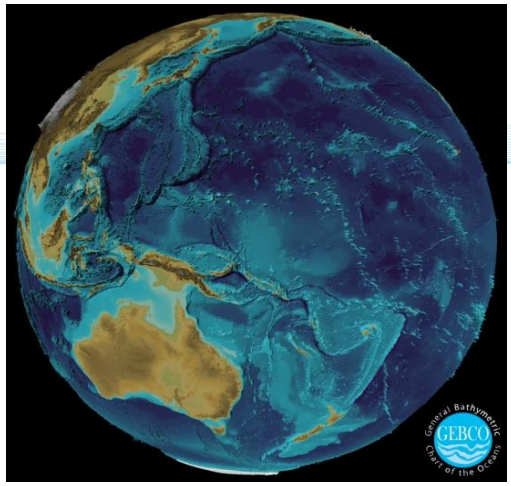
Isn't it all done, mapped, charted yet?

More than 2 centuries of data collection and still scarce soundings, old or even unsurveyed areas



Most information in that arrea originate from « sounding lead» surveys between 1829 and 1939.

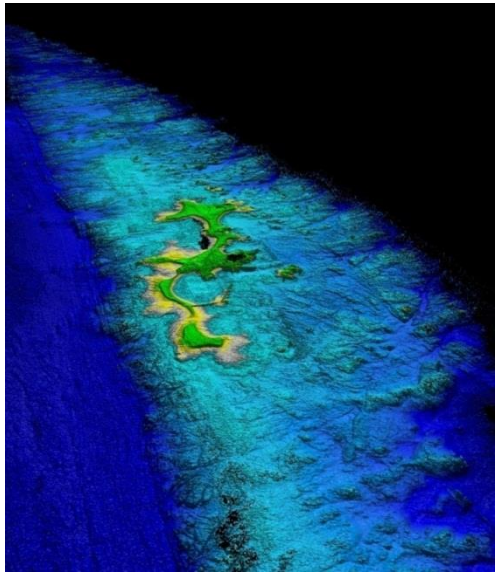
Isn't it all done, mapped, charted yet?



Less than 10% of oceans surveyed

For coastal waters, depths < 200 m

(Source IHO)



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Polar regions > 95%

Caribbean > 80%

W. Africa > 80%

USA ~ 40%

UK ~ 30%

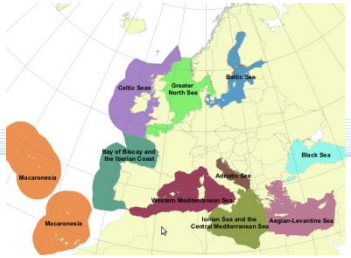
France (Atlantic) ~ 17 %

are not surveyed or inadequately surveyed according to IHO standards

Do not match modern needs for safety of navigation, for computing DTM necessary for hydrodynamic models…

EMODnet 2: 2 M€. 2013-2016

16 partners



Way ahead

EMODnet Central Portal

European programs

- ***To guarantee availability of DTM***
- ***Foster downstream services (open products)***

Programs to be continued for sustainable and up to date knowledge

Programs to cover not only portals and DTM but also to sponsor the acquisition of high-definition bathymetric data, for multidisciplinary purposes

➔ ***Coastal mapping follow on***

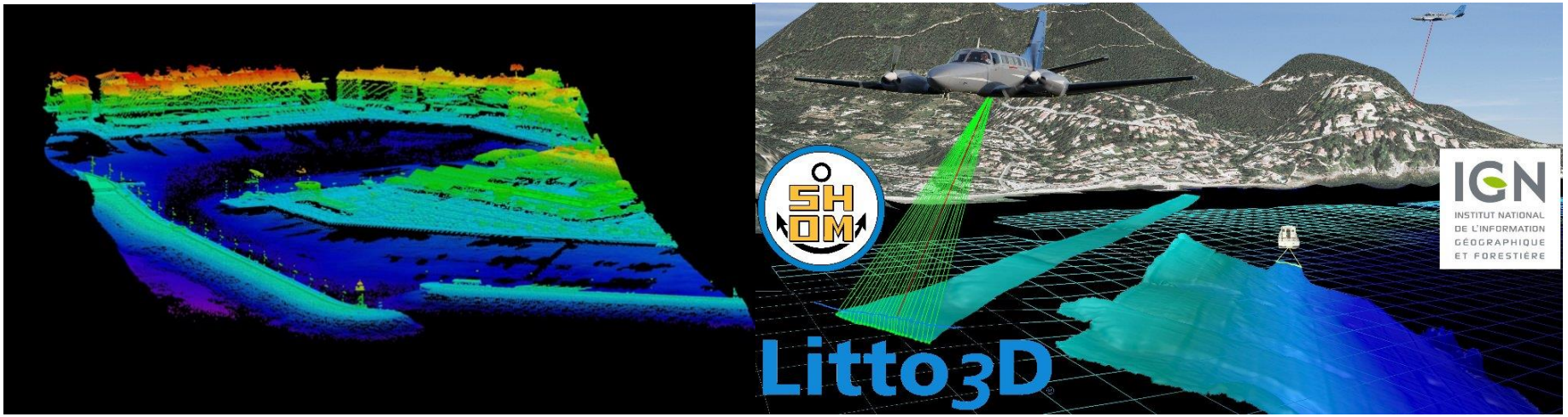
European union HOs are key players of the European Maritime Integrated Policy

Memorandum of understanding, April 2012, between the IHO and the European Commission

A sustainable maritime policy has to rely on organisms with strong skills and expertise in hydrography

HOs: what do they bring?

Surveying knowhow and capacities



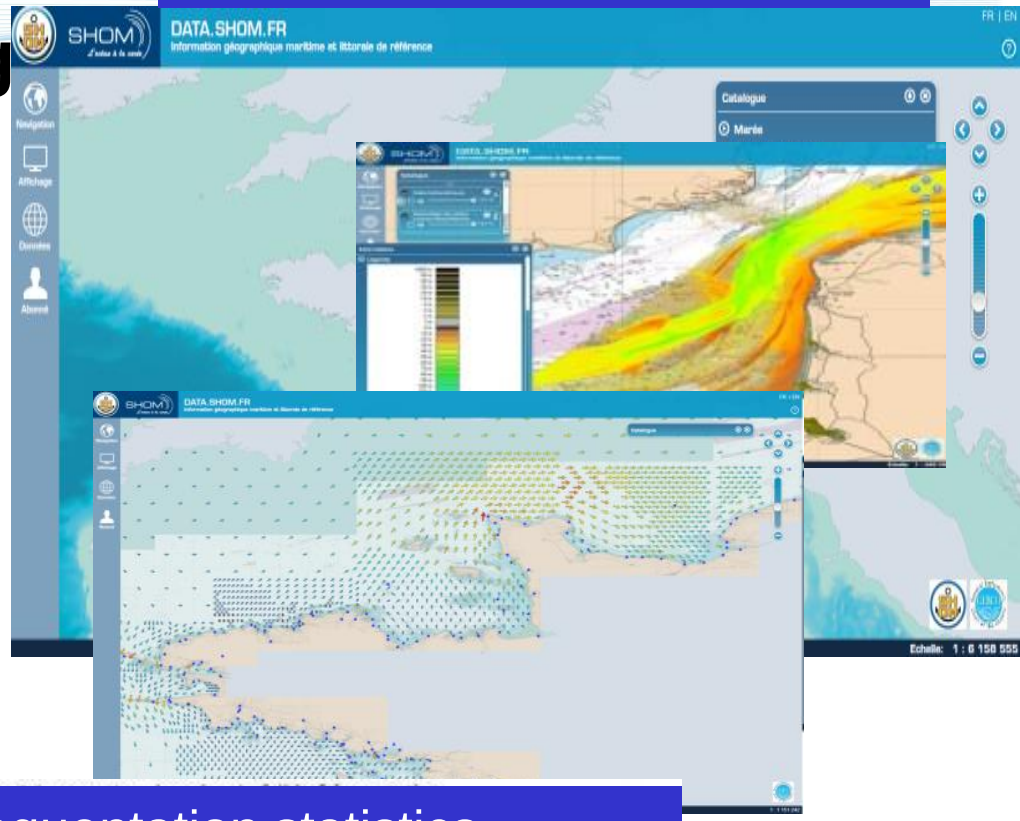
Trained and qualified personnel

HOs: what do they bring

Standardized data under the aegis of IHO (S-44) ➔ reliable authoritative normalised data safely kept in national repositories

Inspire compatible data presented in Spatial Data Infrastructures (data.shom.fr as an example)

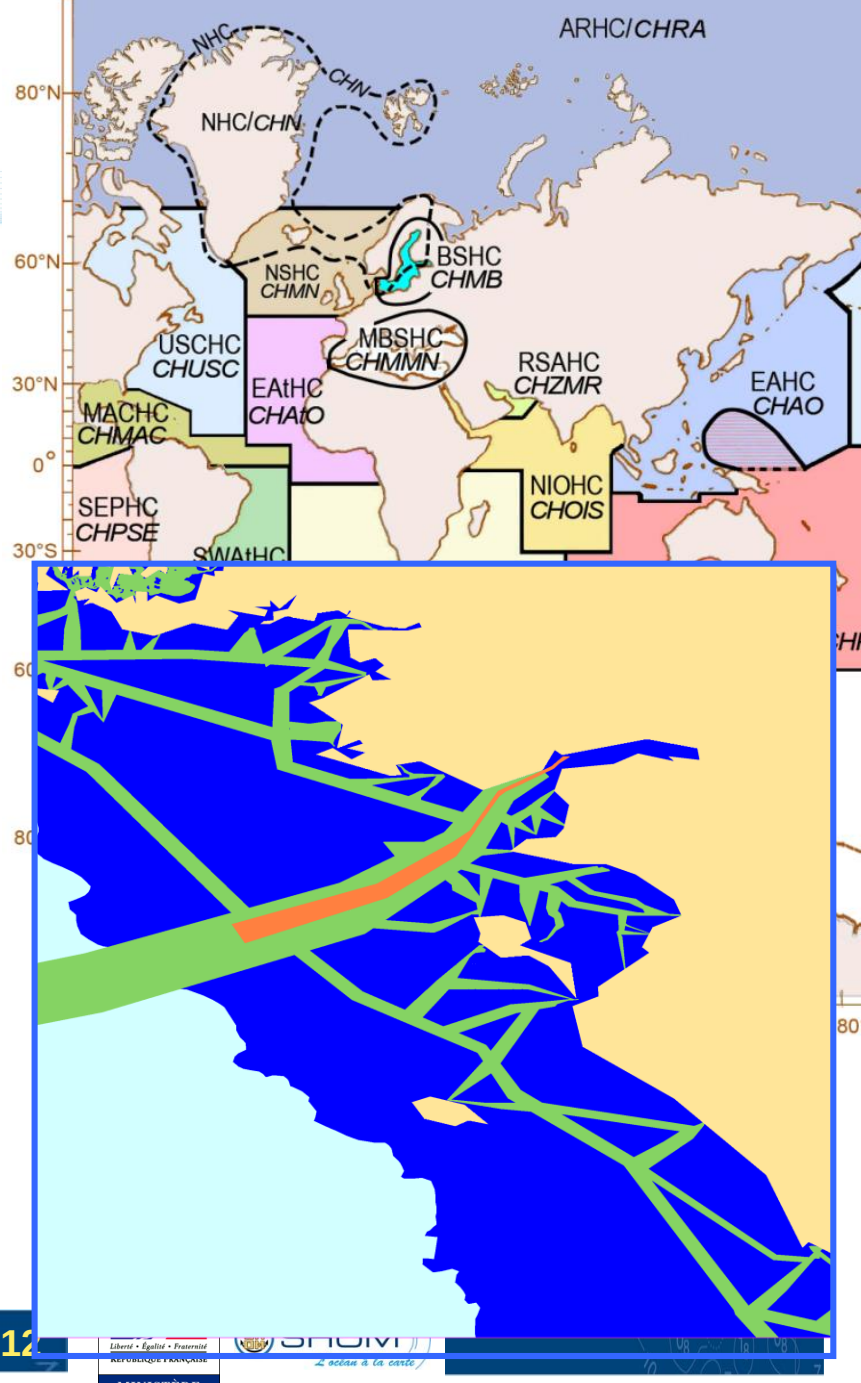
DATA.SHOM.FR



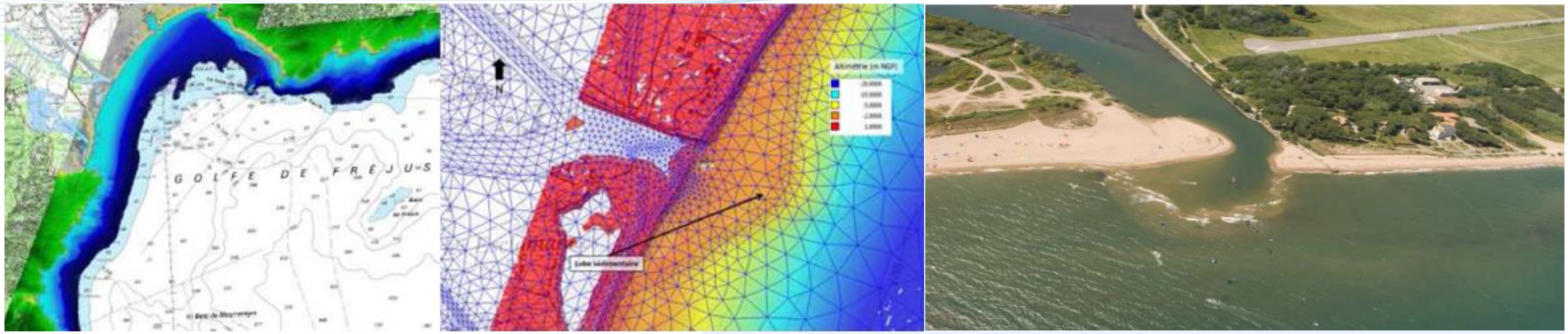
Frequentation statistics

HOs: what do they bring?

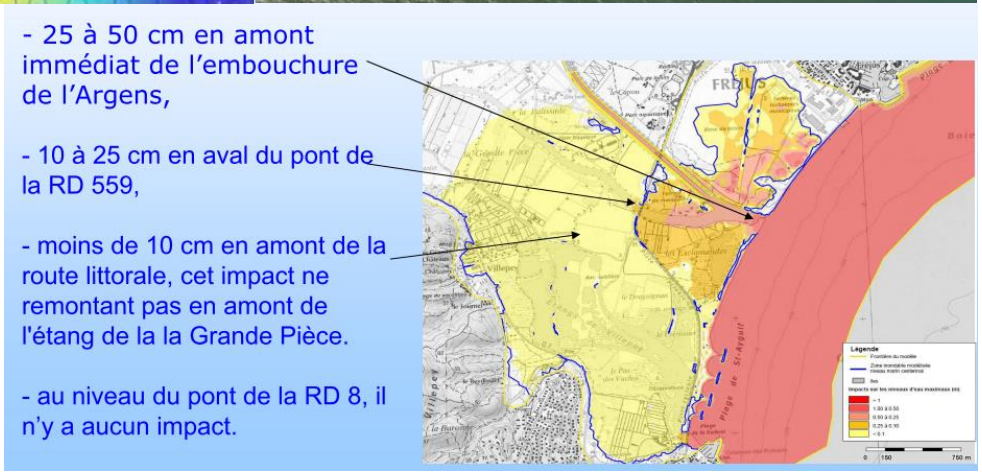
- ***Regional coordination***
- ***Organised survey strategy based on needs with accuracy according to usage.***



HOs: what do they bring?



A good knowledge of uses of hydrographic data through outreach actions. Example here with litto3D open data use cases (flooding risk management in river Argens)



http://georezo.net/blog/litto3d

HOs: what do they bring?

All together key sustainable competences at all the level of the chain value

➔ Ready to offer expertise for SRIA intergroup as needed

Thank you