



Is any sounding better than no sounding ?

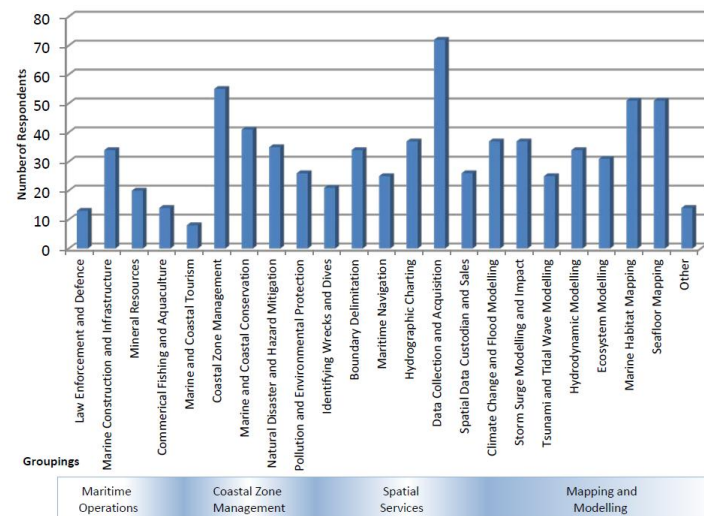
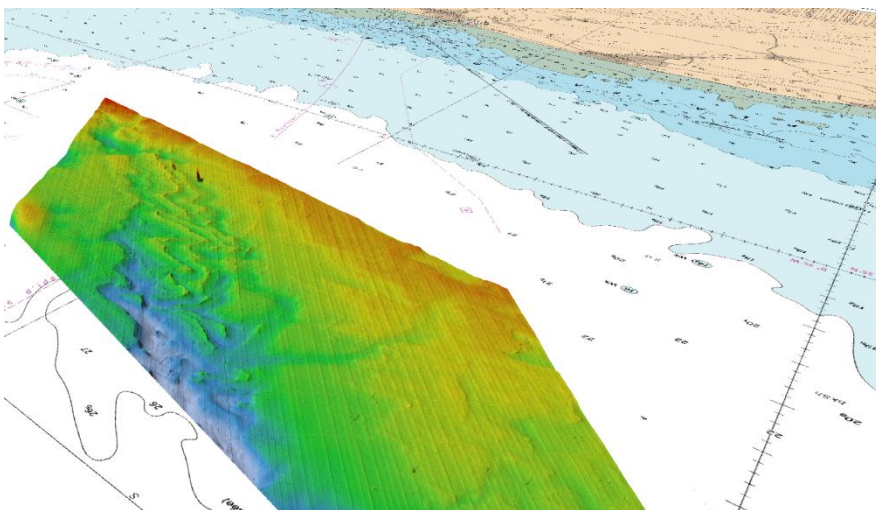
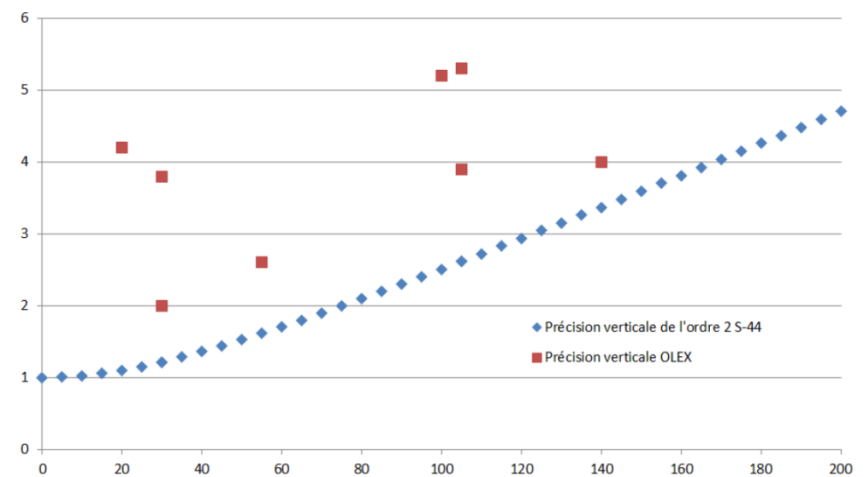
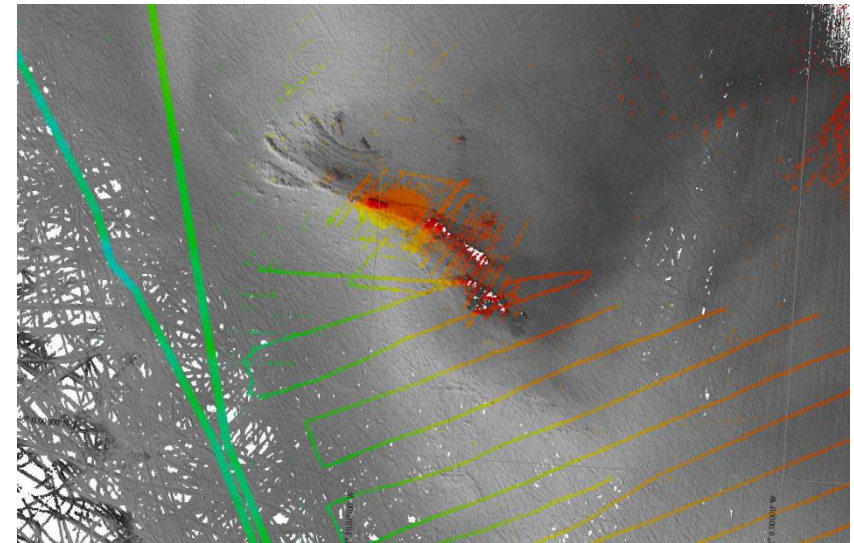
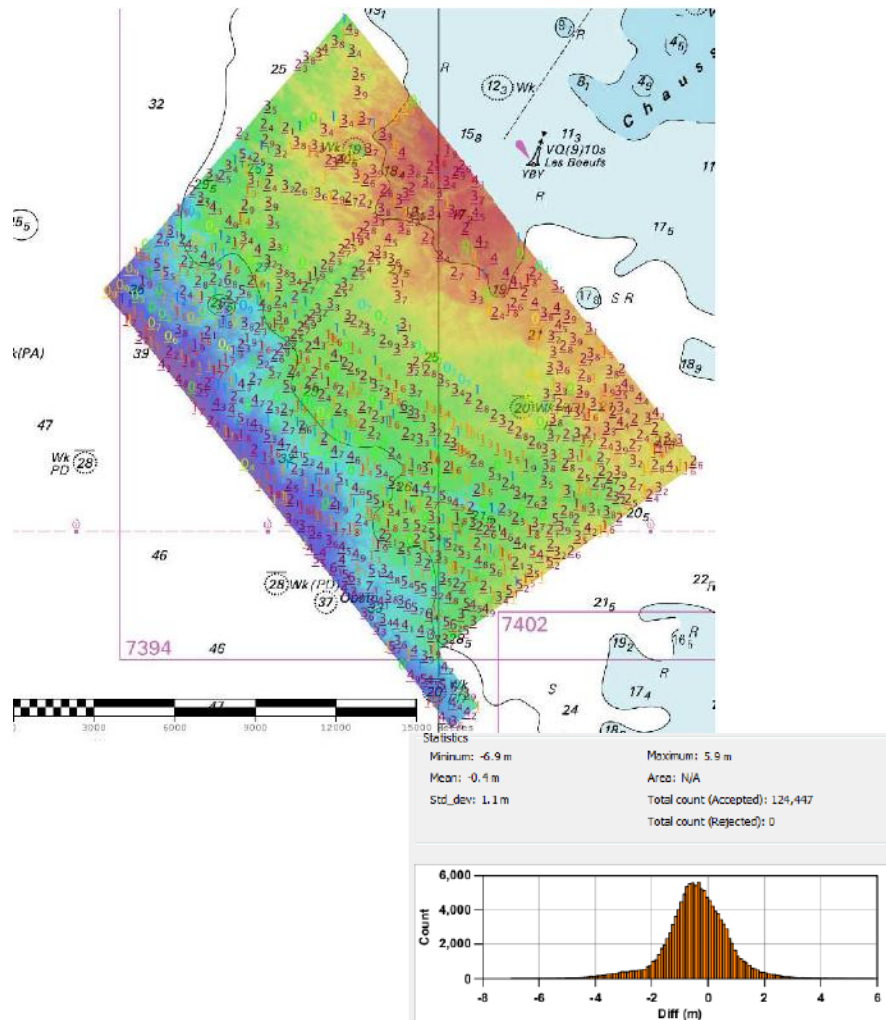


Figure 4 - Applications of bathymetry within each work unit

- IHO recognises the need to consider bathy from non HO sources
- Data are generally acquired and processed to be fit for the intended usage. Precision targets and survey constraints are not all looked the same way.
- Estimating the quality of a survey is not trivial without a standard. Applying a standard allows to scale the various level of quality .
- HOW COULD WE BENEFIT FROM NON-HO DATA ? HOW COULD WE HELP NON-HOs TO PROVIDE VALUABLE INFORMATION HELPING US ASSESSING THE QUALITY OF THEIR DATASET?

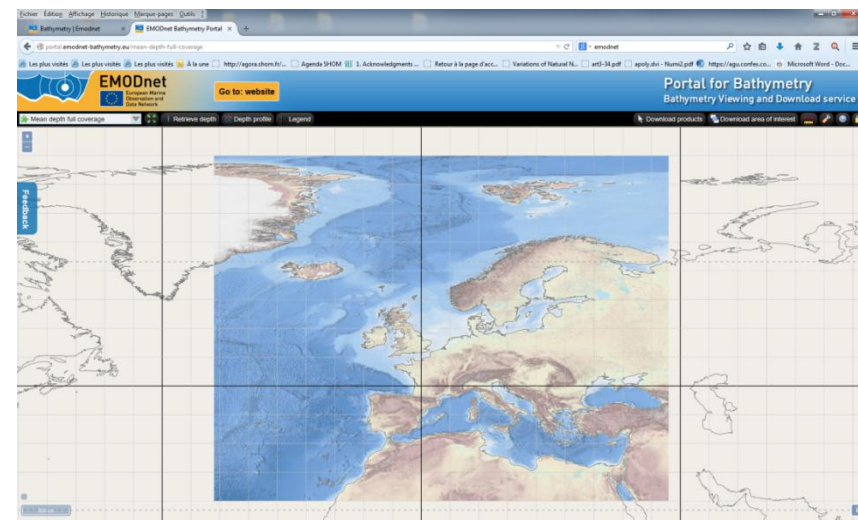
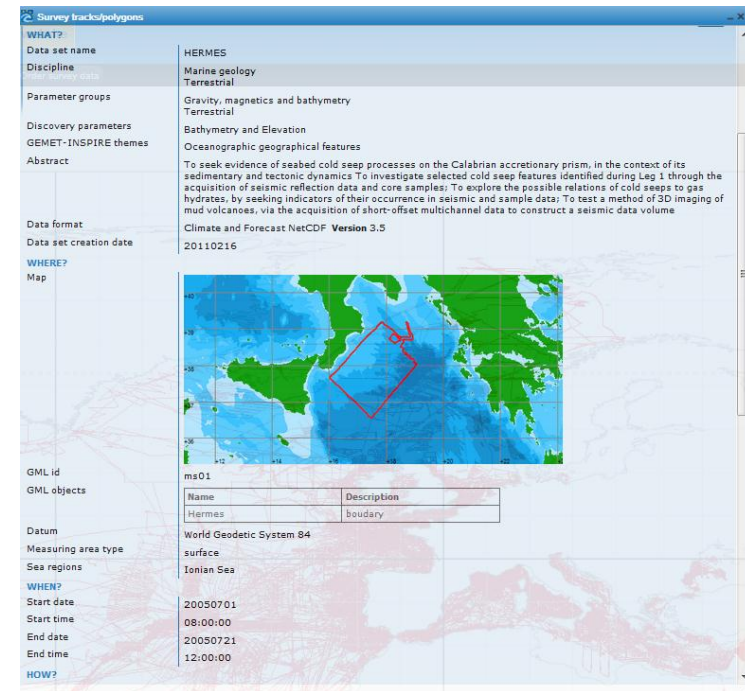


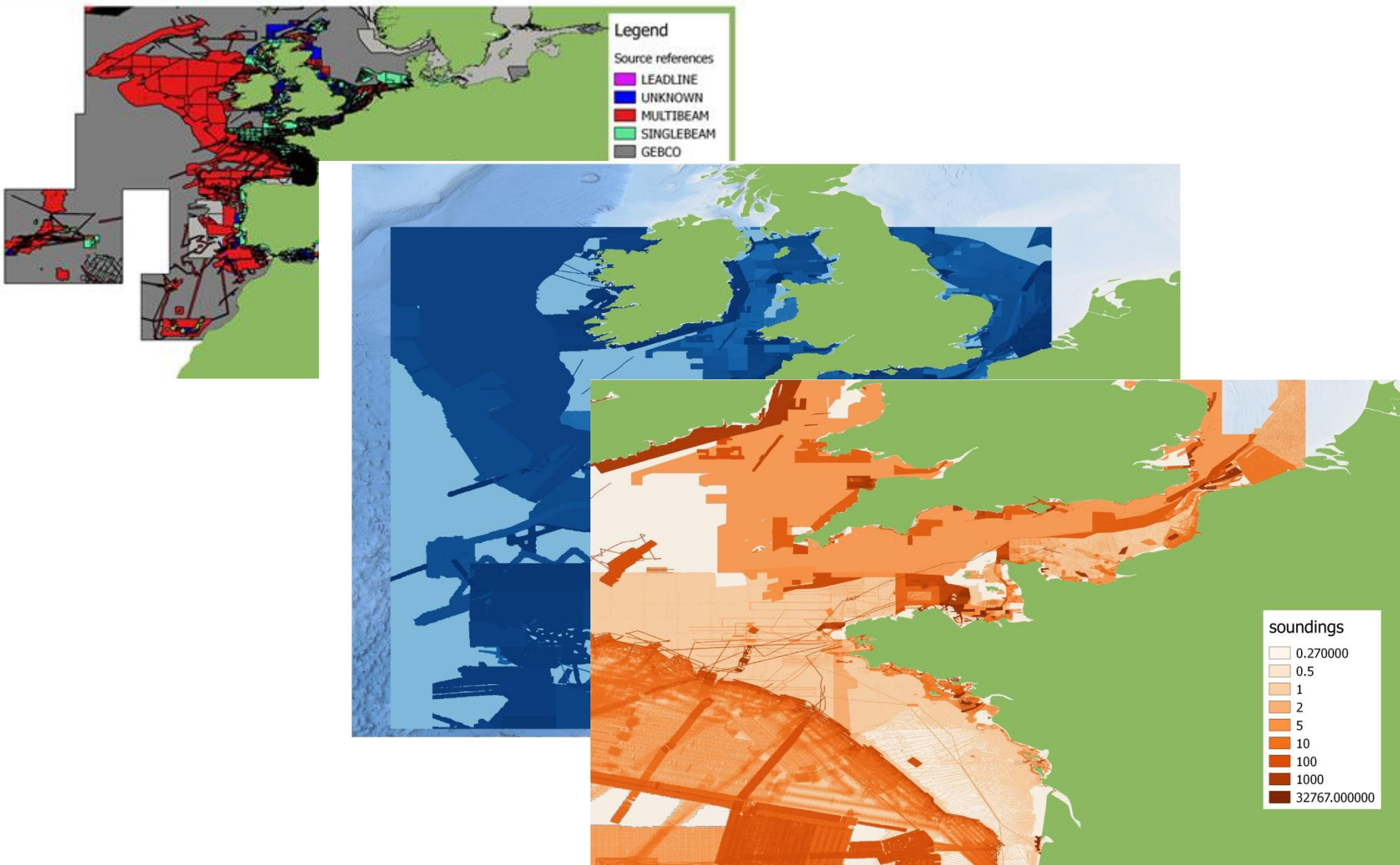


**“ General Guidance Notes on the collection and use of Crowdsourced Bathymetry”**

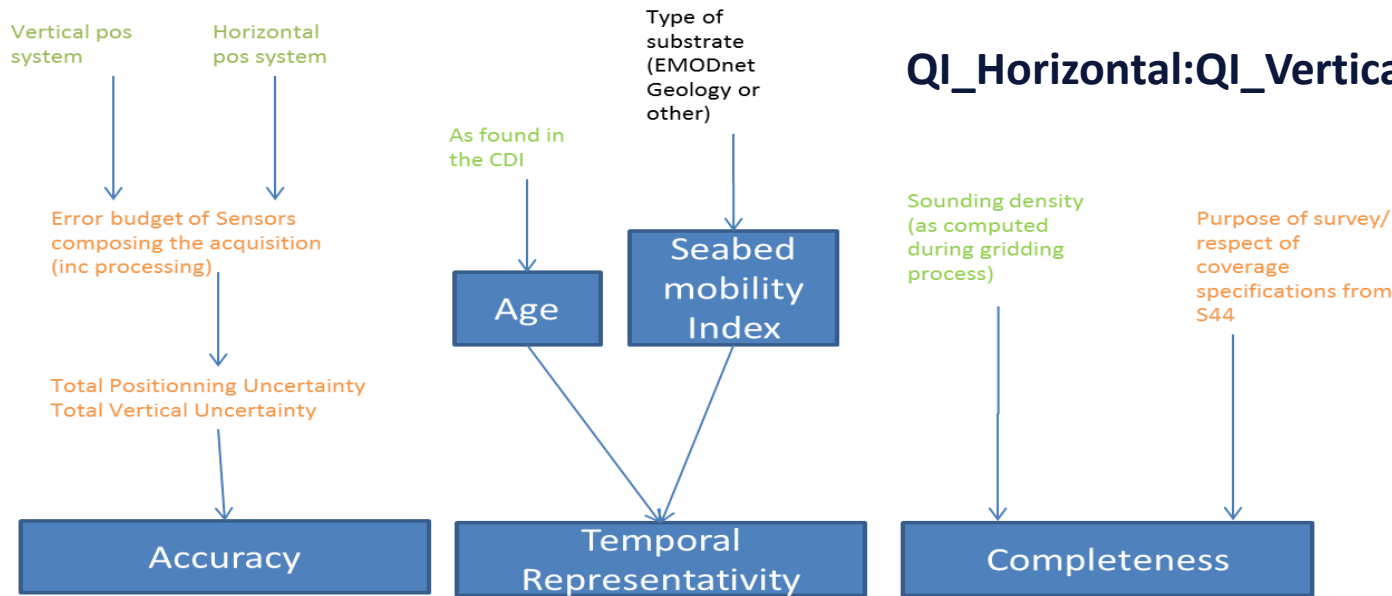
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- Since 2009 for the bathymetric theme.
- Distributed infrastructure bringing an inventory of bathymetric data available (under data producer's terms) and a synthetic product (DTM).
- Last release October 2016 (at 250m) with over 7000 datasets (surveys) and composite grid (including GEBCO, MAREANO, Baltic DTM...)
- EMODNET HRSM launched 20/12/2016 for 2 years with the objectives:
  - improving the resolution to 100m (1/16 arcminute)
  - expanding to the North Pole
  - including alternative data sources (Satellite Derived Bathymetry)
  - provide auxiliary information to the user (Quality)
  - developing cloud based processing









**QI\_Horizontal:QI\_Vertical:QI\_Age:QI\_Purpose**

## QI\_Horizontal:

- 0: Unknown or > 500m (That is grossly equivalent to TACAN, OMEGA systems or similar)
- 1: between 500m and 50m (That is grossly equivalent to LORAN, DECCA systems or similar)
- 2: between 50m and 20m (That is grossly equivalent to natural GPS systems)
- 3: < 20m (GPS with correction) (That is grossly equivalent to aided GPS system DGPS, RTK ...)

## QI\_Vertical:

- 0: Unknown, plummet, leadline,
- 1: SBES Low Frequency, SDB (similar than 2+5%d)
- 2: MBES low frequency (lower than 100kHz) (similar than 1+2%d)
- 3: Lidar, SBES High Frequency
- 4: MBES High frequency (higher than 100kHz) (1+0.5%d)

## QI\_age

- 0: 30y – oldest date (geological structural, tidal basin changes,)
- 1: 10y – 30y
- 2: 5y – 10y (erosion/deposition at the scale of structure like continental shelf / canyons...)
- 3: 0y – 5y (time frame of dune migration or coastal shoreface modifications)

## QI\_Purpose

- 0: Purpose of the survey unknown (historical survey with no associated information)
- 1: Transit and/or opportunity
- 2: Bathymetric/morphologic survey
- 3: Hydrographic survey or compatible with hydrographic standards

**Some Bathymetric product might not need to be safety of the navigation compliant**

**Data generated from non-HO sources can be highly valuable**

**Evaluating their quality is rapidly cumbersome**

**=> make the S44 widely known to the bathy producers and users communities**

**=> provide pragmatistical rules to help comparing datasets and provide a product quality assessment.**