

A stable reference area for multibeam bathymetry and backscatter: KWINTE, a dedicated quality control area in the Belgian North Sea

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Habitat mapping is nowadays increasingly carried out using multibeam echosounders (MBESs). However, the measurements of each operational MBES need to be regularly controlled on a well-known area to validate the quality of both the bathymetry and backscatter. Such a reference area has now been established in the Belgian part of the North Sea (KWINTE) based on multiple high quality hydrographic and research surveys over a coarse-grained and stable seabed with low seabed dynamics.

The importance of such a measurement control area was recognized in the 2020-2026 Belgian Marine Spatial plan, allowing its protection from seabed disturbing activities. The area is open to use for every public or private institute or company wanting to calibrate and evaluate the quality of measuring devices. The reference bathymetric model and backscatter level are available on request. The KWINTE area is ideal for performing a cross check test. The cooperation with the project partners is strongly encouraged by suggesting that users transmit their data collected on the KWINTE area. After a quality control, the new dataset will be integrated into the reference bathymetric model and the backscatter database. All necessary information can be found on the project website: <https://www.afdelingkust.be/en/acoustic-reference-area-kwinte>

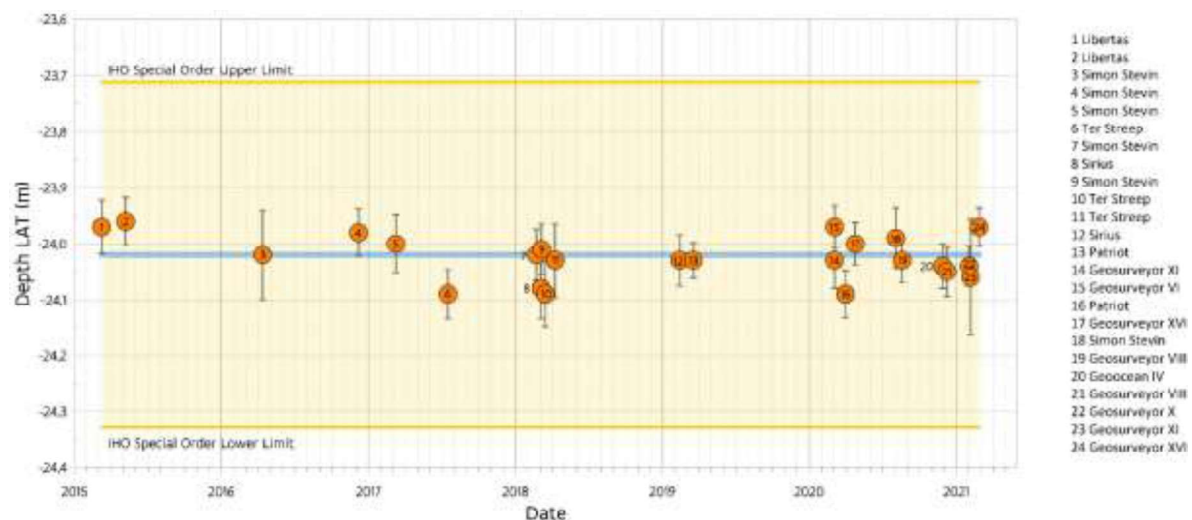


Figure 1 : Bathymetric time series of approved surveys (orange dots: mean depth value of all soundings with 95% confidence error bars; blue line: reference towards the mean depth value of the reference model; yellow line: reference towards the IHO Special Order Limits).