

High-frequency observations from Ferrybox - Contribution to process understanding in the Coastal OceansGMES context

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Ships of opportunity have been used for many years to observe the ocean and coastal seas and to complement monitoring capabilities of the marine environment. Within recent years a rapid improvement of ocean observing systems has taken place in which observations from existing commercial ships such as ferries and cargo ships have raised increased interest. Instrument packages onboard of these vessels are nowadays also referred to as Ferryboxes. The most advanced Ferryboxes integrate both measurements of physical, chemical and biological parameters of the marine environment and observations of optical properties of ocean and atmosphere. A network of Ferryboxes has been established within the North Sea/Skagerrak, the Norwegian Sea and towards the boundary of the Barents Sea including trans-national collaborative efforts for managing and harmonising the systems. The network provides continuous high-frequency observations along repeated transects which form a unique and highly valuable dataset for apprehending short-term to longer-term responses of pelagic ecosystem to environmental variations. An overview of the collected dataset will be presented and the combined approach of Ferrybox and remote sensing data for general monitoring will be addressed. Furthermore the potential of the Ferrybox data for improving process understanding as well as for model validation and assimilation will be highlighted.