



HiSea – High resolution Copernicus-based information services at sea for ports and aquaculture*

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The increasing availability of data and technological advancements have been contributing to today's capability of better understanding the surrounding environment and providing improved forecasts of future conditions. However, the accuracy and spatial resolution of the data play a crucial role in representing physical, chemical and biological processes. For this reason, the combination of Earth Observation and numerical model outputs has an enormous potential to improve the understanding of the coastal environment. The Copernicus Services and Sentinel missions, providing high resolution data, contribute to a comprehensive view of environmental variables for climate and environmental research. However, the users might be hampered by the unavailability of products that can directly be included in their own applications, hence; the demand of relevant information available in a simple and effective way is of increasing importance.

The EU funded HiSea project aims at tackling these issues by delivering accurate and reliable information, readily available, easily understandable and with a high resolution to fit seamlessly users' operation, planning and management requirements. The project offers a service co-designed with users to give focused answers to specific questions from the targeted port and the aquaculture sectors. Additionally, the service will interest a wider range of potential future user groups as it provides high resolution physical- (meteorology, waves, currents, etc.) and water quality variables (Chlorophyll-a, marine pollution, etc.).

The HiSea services will integrate Copernicus Services Products, such as Copernicus Marine Environment Monitoring Service (CMEMS) products, local monitoring data and advanced numerical modelling in the service. The services offered as the end product are based on the harmonization of different types of data and the added value is in their fusion and merging including estimates of the uncertainties and including data provided by the users/citizens through a crowd service concept. This allows improving operation, planning and management of different marine activities in ports and aquaculture sectors. Such information services include among others early warning services, real-time crisis management, key performance indicators, information for planning operations, and a knowledge data base.

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