

# High Resolution Forecasts of Sea Water Quality Data at Your Fingertips



HiSea Services for Ports offers sea water quality information and forecasts to port users in a clear, visual, digestible way, presenting flexible layers for port authorities and managers.

Near-real-time data based on analysis of satellite images provides accurate, reliable and high-resolution information that will make your port operation more cost-effective. The data are provided in unparalleled resolution at the level of visualising a single container at the port and high image frequency of every few days. These images will also help to calibrate High Resolution model for forecasting.

HiSea services support port authorities by helping them to plan maintenance and expansions and lower expenses arising from climate change.

## The HiSea Platform

The HiSea Platform was developed by the EU-funded HiSea Project to provide high resolution data of water quality at sea. The innovative services incorporate and process data obtained through the marine, land and climate service COPERNICUS (the EU Earth Observation and Monitoring service), local monitoring data and advanced modelling. The platform improves operation, planning and management of different marine activities.

This cost-effective service provides tailored accurate and reliable information resulting from the integration of different data sets. HiSea simulates different response actions for crisis management and seasonal events. The service provides port users with daily reports containing information on selected parameters or events and sends warnings and alerts according to the port's specific needs.



# The services offered by the HiSea Platform include, among others:



## Spill response and clean-up:

Forecast trajectories and plan response for oil spills, floating objects (e.g., cargo or large debris), man overboard, etc. This service provides accurate forecasts of the development of such spills, enabling port authorities to take faster action, thus reducing the costs of the subsequent cleaning. This also increases the cost effectiveness and efficiency of port management as fewer resources are then needed for such events.



## Weather conditions at sea reporting:

More effective ship scheduling, using forecasted and real-time weather reports. Record past, current and future weather conditions along entire shipping routes for optimising ship scheduling when entering/leaving ports and loading/unloading cargo.

Use this forecast data to predict the best window for safe passage of ships into ports and efficient timing for loading cargo. This accurate recording of information is also an excellent tool for resolving disputes.



## Safe port depth for ships:

Support current technologies to monitor water depth and water levels based on hydrodynamic conditions (waves, wind, currents, turbidity), thus requiring fewer resources for ongoing monitoring and allowing for more precise port basin maintenance operations in case of increasing sediments.



## Accurate recording:

Provide water quality and weather conditions at sea, near or around ports, to help resolve disputes and for regulation compliance reporting.



## Early warning and anticipation of harmful algal blooms:

Forecast the timing and magnitude of the event as well as to monitor and evaluate its impact on port activities. By simulating alternative actions, this service will mitigate adverse effects on port operations and environmental impact.

