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First Capitalisation Workshop

*Designing the future system of observing systems to assess and address threats to the Mediterranean marine ecosystem
- State-of-the-art, needs and future direction*

Webinar: 14-15th December, 2020

Ghada El Serafy
HiSea



HiSea



Project name: **HiSea – High Resolution Copernicus-Based Information Services at Sea for Ports and Aquaculture**


Project coordinator: Ghada El Serafy (Deltares)

Project duration: 36 months

Funding authority: H2020 - EU

Geographic extension: Mediterranean Region and North Sea

HiSea in a nutshell: develop, test and demonstrate information services that provides high resolution data of water quality at sea

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- ❑ What kind of observations/data is your project able to provide?
 - Data acquisition platforms used (in situ, remote, satellite, etc.)? *The HiSea services are based on the integration of data from different sources, including in situ, model, and satellite data. Among all, HiSea make an intensive use of Copernicus Products.*
 - Variables measured? Operational? *HiSea service provide in operational mode real time and forecasted hydrodynamics (e.g. waves, currents) and water quality (e.g. temperature, suspended matter, etc.) variables*
 - At what spatial scale? *Local scale, the extension is based on users needs*
 - At what temporal scale? *Based on data availability and users needs, historical data, nowcast and forecast can be provided*
 - Main targeted applications/users? *Information services include among other early warning service, key performance indicators, knowledge data base, information for planning operations*

What level of data dissemination do you adopt? How is your data shared and who are the main users?

The level of dissemination is agreed with the data providers. HiSea targets port and aquaculture sectors. Data is accessible through a single user-friendly interface. The platform enables users to upload and share data. Projects can be public and therefore accessible to everyone.

Is your project addressing specific EU, international or regional regulations (e.g. MSFD, WFD, Ballast waters, MARPOL, ...)?

The project output can be used to address the WFD directory, governmental regulations

What kind of added value do you generate from your data?

The HiSea tailored user service is based on the harmonization of different types of high resolution data and the added value is in their fusion and merging including estimates of the uncertainties.

How much is your collected data relevant to environmental threats or risks in the Mediterranean?

By providing water quality forecasts, early warning services and personalized alerts, the HiSea service contributes in anticipating and reducing the environmental risks, among which harmful events such as algal blooms, oil spills, jellyfish invasion.

Which are the main gaps/needs that should be tackled to make observation systems better fit such challenges?


Increase availability of in situ measurements and their accessibility; promote the integration of different Earth Observation data and interoperability.

How much do you value the role of national observing systems in the framework of the European Ocean Observing System (EOOS)?

Observing system increases the availability and accessibility of data and their sustainability of data.

Which technological advancements do you anticipate to impact ocean observations in the coming decade?

New launched satellites, as well as new type of instruments for in situ measurement, as low cost sensors, gliders, and build citizen science capacity. The use of artificial intelligence in processing and merging different data to provide added value information. |

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- ❑ Which governance frameworks are needed to address the challenge of cross-country and cross-border observing system of systems?

Dialog with EU, framework set in place by member States

- ❑ Main take home messages from your project

To address environmental threats and risks in the Mediterranean, we need to focus on the increasing international EO capabilities from space, in synergy with in-situ observations, citizen science, advanced modelling, new technologies and interdisciplinary research with an emphasis on exploring possibilities for collaborative research.