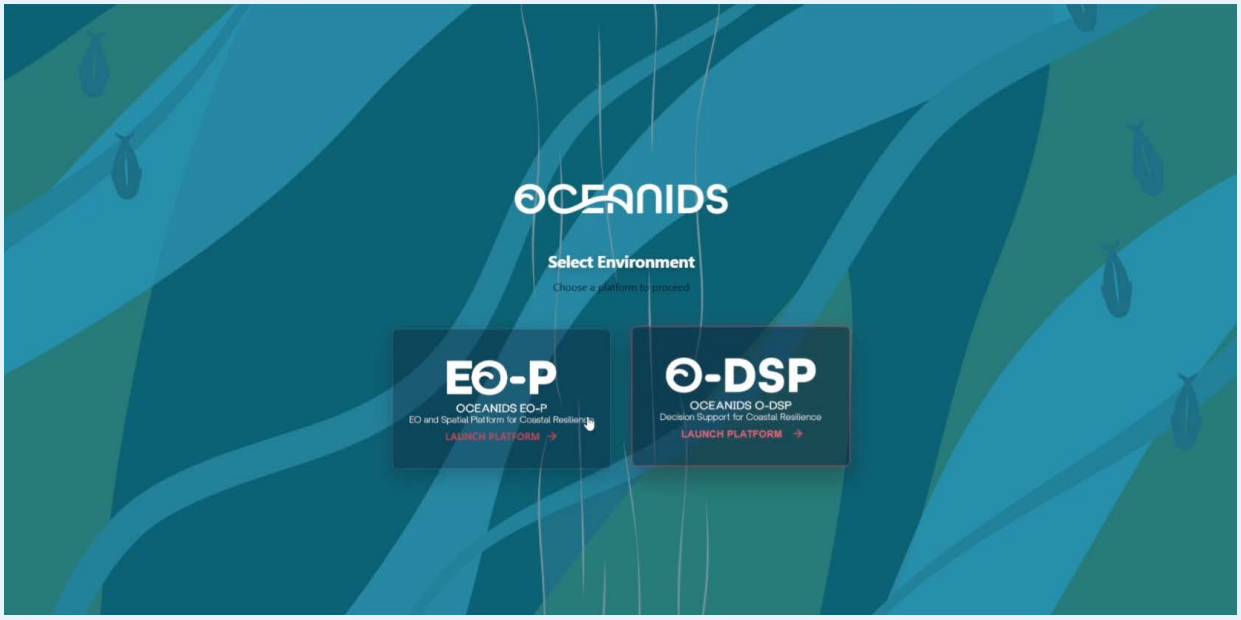
USER MANUAL

How to Use the OCEANIDS Platform

A short visual guide for coastal resilience users

OCEANIDS combines Earth Observation data, Climate information, Spatial analytics and AI to help coastal and port stakeholders understand risk, assess vulnerabilities and support better-informed operational and strategic decisions.

Platform visual



- **Who can use it**
  Port authorities, Port operators, Municipal and Regional planners, Environmental agencies, Civil protection actors and Technical experts supporting coastal governance.
- **Main components**
  EO & Spatial Platform (**EO-P**), OCEANIDS Decision Support Platform (**O-DSP**), & the OCEANWISE **AI Chatbot**

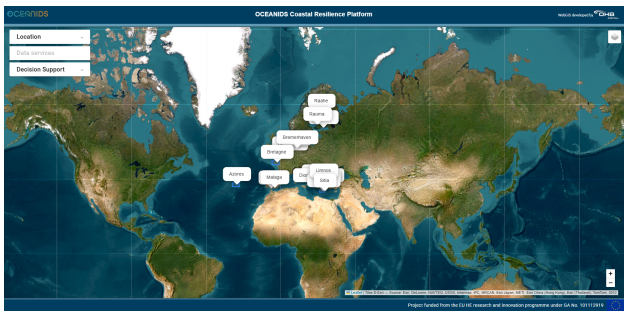
Coastal resilience | Decision support | EO-driven insight

Project funded from the EU HE research and innovation programme under GA No. 101112919

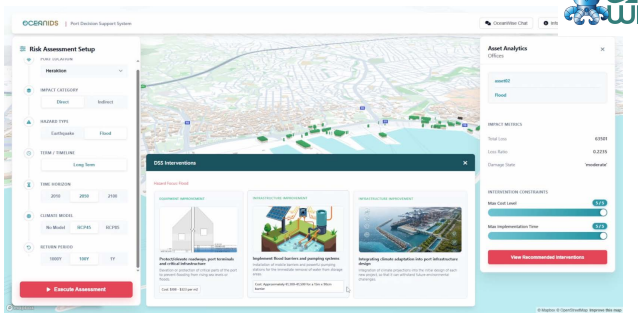
Main components at a glance

1. **EO-P:** access to coastal data services and geospatial layers.
2. **O-DSP:** structured risk assessment and comparison of mitigation options.
3. **OCEANWISE:** natural-language assistance for faster retrieval of information and scenario exploration.

Choose EO-P



Choose O-DSP & OceanWise



Step 1 - Select the location

Choose the **pilot site**, **coastal area** or **region of interest**.

Step 2 - Explore available data

Use the **EO-P** to review Shoreline trends, Vertical land motion, Atmospheric conditions, Sea level, Wave climate and other relevant information.

Step 3 - Define a scenario

Use the **O-DSP** to define the **hazard** or **risk scenario** to be assessed. This may involve pre-event short-term, pre-event long-term or post-event assessment.

Step 4 - Review results

The platform **analyses the selected scenario** and presents results through maps, indicators and structured visualisations.

Step 5 - Compare options

Review proposed **mitigation or adaptation measures** together with indicative effectiveness and implementation cost.

Step 6 - Support action

Use the **outputs** to support preparedness, infrastructure protection, adaptation planning and communication with decision-makers.

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Key outputs and access conditions

Key outputs

- Maps and time series of **shoreline change**
- **Atmospheric forecasts** and climate projections
- **Vertical land motion** indicators
- **Wave climate** and **sea-level** information
- **Hotspot** visualisations
- **Risk** and **vulnerability** assessments
- **Mitigation** and **adaptation recommendations**

Access conditions

The platform follows interoperable and standardised practices, including **STAC-compliant metadata structures** where applicable, to support discoverability, transparency and reuse.

However, not all information is openly accessible to all users. Certain datasets and outputs - especially those related to risk, assets, fragility or other operationally sensitive information - may be available only under **controlled access** to authorised experts or relevant stakeholder communities.

Replication

Although some outputs are access-restricted, the methodology can still be replicated by others using equivalent EO datasets, tools, and documented processing steps.

Use with care

The OCEANIDS Platform is a **decision-support tool**. Its outputs are intended to support decision-making, not replace expert judgment, local knowledge, institutional procedures or field-based observations.

Operational use

Preparedness, infrastructure protection and scenario review

Planning use

Adaptation planning, prioritisation and resource allocation

Communication use

Support clearer discussion between technical teams and decision-makers

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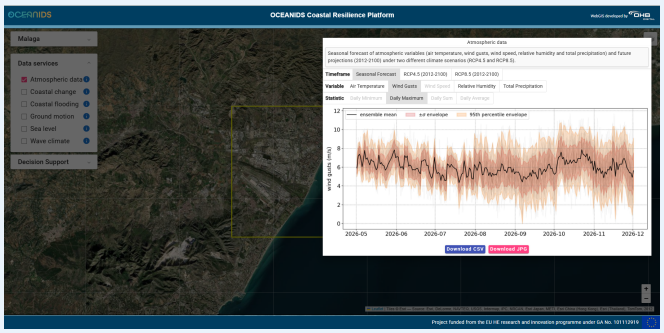
What information the platform brings together

ATMOSPHERIC DATA

EO-P
OCEANIDS EO-P
EO and Spatial Platform for Coastal Resilience

Atmospheric data

Seasonal forecasts and longer-term projections for air temperature, wind, humidity and precipitation.



GROUND MOTION

EO-P
OCEANIDS EO-P
EO and Spatial Platform for Coastal Resilience

Ground motion

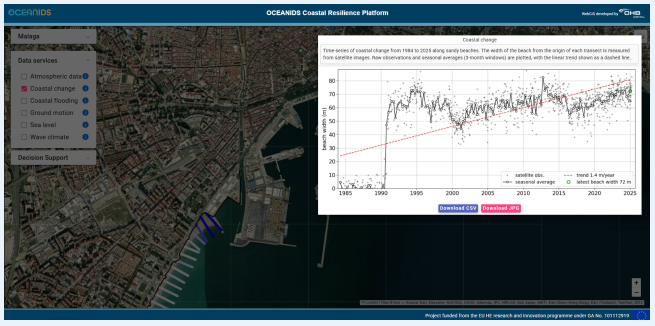
Vertical land motion time series derived from SAR interferometry to detect subsidence and uplift.

COASTAL CHANGE

EO-P
OCEANIDS EO-P
EO and Spatial Platform for Coastal Resilience

Coastal change

Shoreline analysis derived from optical EO imagery to detect erosion, accretion and long-term beach-width change.



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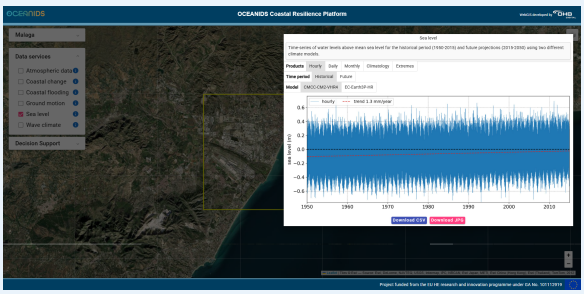
What information the platform brings together

SEA LEVEL AND WAVES

Sea level and waves

EO-P
OCEANIDS EO-P
EO and Spatial Platform for Coastal Resilience

Historical and projected marine indicators supporting resilience planning for ports and coastal infrastructure.

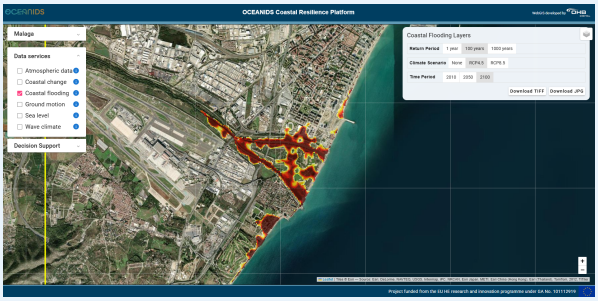


COASTAL FLOODING

Sea level and waves

EO-P
OCEANIDS EO-P
EO and Spatial Platform for Coastal Resilience

Historical and projected marine indicators supporting resilience planning for ports and coastal infrastructure.



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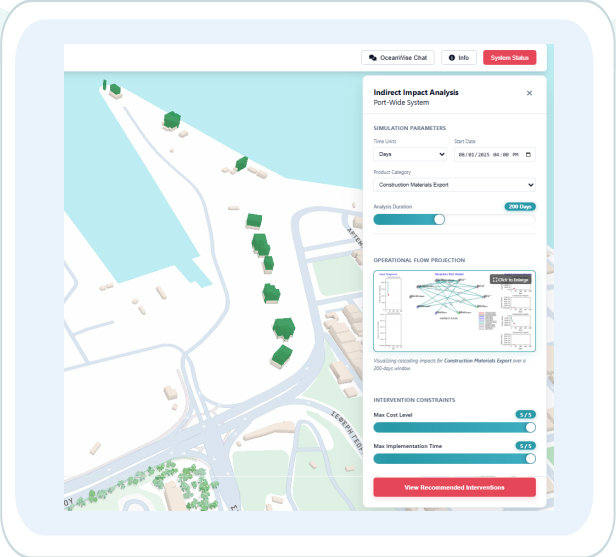
What information the platform brings together

RISK LAYERS

O-DSP
OCEANIDS O-DSP
Decision Support for Coastal Resilience

Risk layers

Hazard, asset and fragility layers combined in the O-DSP for short-term, long-term and post-event assessments.

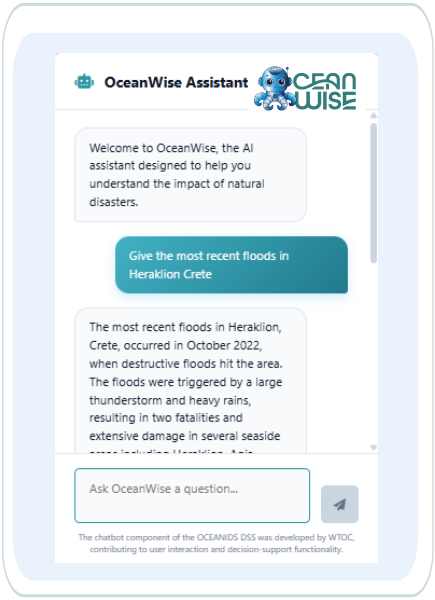


AI ASSISTANCE

O-DSP
OCEANIDS O-DSP
Decision Support for Coastal Resilience

AI assistance

The OCEANWISE chatbot retrieves evidence, summarises information and supports scenario exploration in natural language.

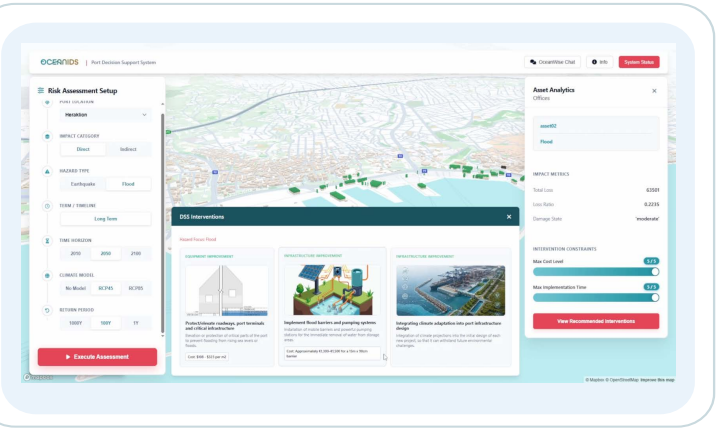


RECOMMENDATIONS

O-DSP
OCEANIDS O-DSP
Decision Support for Coastal Resilience

Recommendations

Suggested adaptation and mitigation measures, supported by risk analysis, to strengthen the resilience of ports and coastal infrastructure.



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OCEANIDS at a glance

An integrated platform for coastal resilience, combining Earth Observation, climate data, spatial analysis and decision-support tools to help stakeholders better understand risks and take informed action. Through the integration of satellite data, spatial analytics and risk-based decision support, OCEANIDS helps transform fragmented information into actionable intelligence.

To access the OCEANIDS Platform please visit:

https://oceanids-platform.gr/

Further information

www.oceanids-project.eu | Public deliverables, publications and contact channels are available through the OCEANIDS website.

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