

# **Enhancing Coastal Resilience**

# FROM SPACE TO SHORE

Earth Observation can be a game changer for coastal zone management. High-resolution, satellite-derived information supports sustainable planning, monitoring, and data-backed decision-making in coastal zones – globally, consistently, and without the limitations of in situ data. From erosion patterns to ecosystem health, we help you see the bigger picture, clearly and in real time.

For future-oriented coastal management, it is vital to understand the physical features of oceans and coastlines. Rely on our actionable insights into water depth, the distribution and health of ecosystems, and coastal changes. We empower you to master the major challenges in coastal management with scalable, science-based solutions.

# CHALLENGE ACCEPTED

- + Monitor shoreline change and erosion
- Map the seafloor and habitats in high detail
- + Track turbidity, sediment, and water quality
- + Support climate adaptation and resilience

# WHY BUILD ON EOMAP SERVICES

**Easy access** 

Custom data access, via web app or API - compatible with your existing systems.

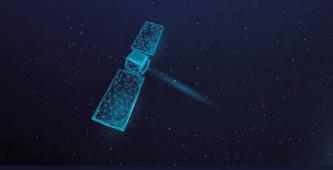
**Scalable solutions** 

From local projects to national-scale programmes with maximal flexibility via cloud processing capabilities.

- No mobilisation needed

  All algorithms run independently of in situ data.
- Proven expertise Science-driven and trusted by governments, industry, and research institutions.







#### **Bathymetry & Topography Mapping**

Use our Satellite-Derived Bathymetry (SDB) and combine it with digital terrain and surface models to a seamless Topo-Bathy Model to understand the topography and changes over time.

#### **Shoreline Monitoring**

Detect and track shoreline changes over time to assess erosion, accretion, and coastal dynamics.

#### **Digital Twins**

Attain a deep understanding of your area of interest by using our digital twin platform, for mapping, analysing and monitoring all available data.

### **Data Integration/API**

While not depending on in situ data, we can fully integrate all available datasets for your site – independent of their resolution. Your data can also be directly ingested into your system via an API.

#### **Water Quality Monitoring**

Continuous, large-scale monitoring of turbidity, chlorophyll, and ecosystem health.

#### **Habitat & Seagrass Mapping**

Identify and monitor sensitive habitats such as reefs and seagrass beds to support conservation and restoration.

# **USE CASES**



**Seagrass Mapping for ISPRA** | EO data enables large-scale, species-specific mapping of seagrass meadows in Italy. This will support restoration, blue carbon assessments, and coastal ecosystem monitoring.



**COASTS Project** | EO data is combined with in-situ data and advanced modelling to simulate coastal dynamics, forecast climate impacts, and support blue carbon resilience strategies.



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