



living planet BONN 23-27 May 2022

Agora GEMINI Atlantic Regional Initiative

TAKING THE PULSE OF OUR PLANET FROM SPACE









Atlantic Cities, smart sustainable and secure ports and protecting the ocean

> **ATLANTIC CITIES, PORTS &** PROTECTING THE OCEAN

David Petit

23/05/2022

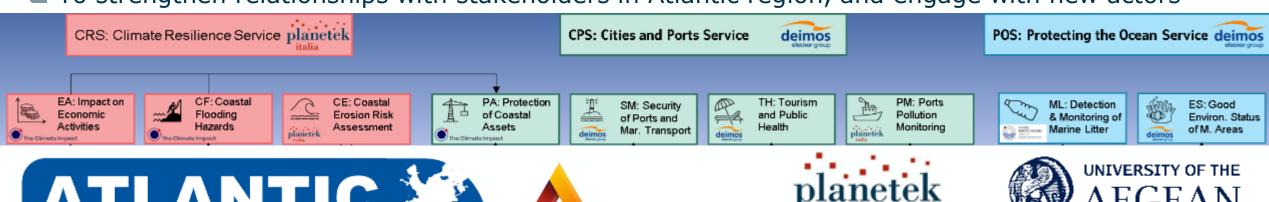
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Goals of Atlantic cities



- To embed EO-derived information into pre-operational regional monitoring, assessment and planning activities, covering 3 domains
- To strengthen relationships with stakeholders in Atlantic region, and engage with new actors













- ☐ Funded by the ESA Atlantic Regional Initiative within Future Science for Society ESA programmatic line, under the reference AO/1-10030/20/I-DT.
- ☐ Started in August 2020 and is expected to be concluded in November 2022

Service portfolio and users



ARIA3 EO-based Services, Users & EO data Historical Analysis MARINE REMOTE SENSING GROUP **IMBITUBA** NRT/Forecast +Alerts EA: Impact on PA: Protection 基 A P PM: Ports CF: Coastal CE: Coastal TH: Tourism ML: Detection ES: Good SM: Security Economic Flooding Erosion Risk of Coastal and Public Pollution & Monitoring of Environ, Status of Ports and Monitoring Activities Hazards Assets Mar. Transport Health Marine Litter of M. Areas planetek Sea Level NRT planete Waves & Current Mon. Detection of Oil Spill Detection of Marine Chlorophyll Time Sediment Coastal Exposure Monitoring & Forecast & Forecast Disturbance Incidents Historical Sea Waves Sewage Plumes SST Time Series Significant Height photosis Primary Productivity Algal Mats Advanced Bathymetry Sea Level Rise Near Shore Detection of Meth. Atm. Pol. and Carbon sentinel-2 sentinel-2 Copernicus sentinel-sp Copernicus Marine Service Marine Service Marine Service sentinel-2 sentinel-3 sentinel-1

Curent status of the project

- 8 workshops with different stakeholders
- 106 user requirements collected and selected
- Developed into a unique web platform
- Evaluated within 6 pilots
- Demonstrations in progress until September 2022

















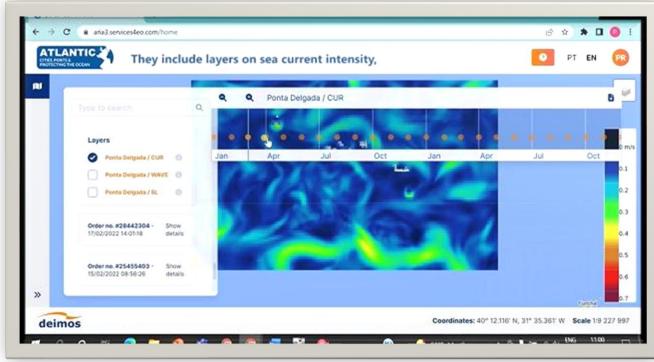


Union for the Mediterraneon Union pour la Méditerranée الانتخاد من أجل المتوسط











Marine litter aggregation

Waste water in coastal areas



Looking ahead



- ☐ Continue (so much more to be done) and engage further
- New pilots
 - □ New cities around the Atlantic: Africa, islands (more at risk, people leaving)...
- New services and applications
 - Monitoring environmental impact of brine from desalination plants
 - Monitoring more critical infrastructure (bridges, airport, urban...)
 - Monitoring archaeological and cultural heritage
 - Monitoring fishing activities, a topic on its own?
- New stakeholders
 - Coastal water desalination power plants
 - Coastal cities infrastructure management, real estates
 - □ Urban Heritage Climate Observatory