



Bases para la planificación sostenible de áreas marinas en la Macaronesia

Setting the basis for sustainable Maritime Spatial Planning in Macaronesia

Andrej Abramic



Secretaria Regional
do Ambiente e Recursos Naturais

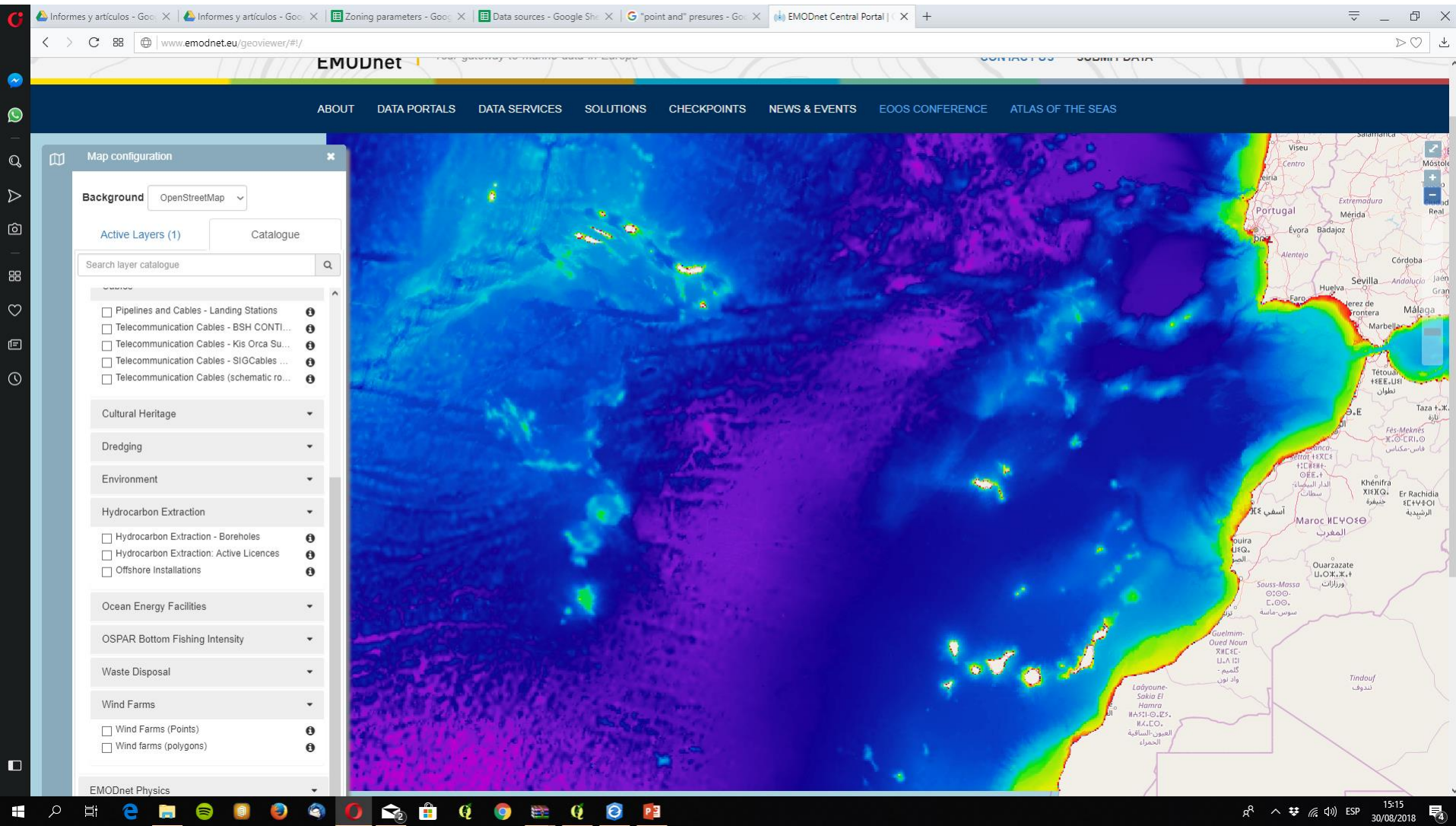



Consejería de Agricultura,
Ganadería, Pesca y Aguas



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Maritime Spatial Planning kick-off in the North of Europe





Setting the basis for Sustainable Maritime Spatial Planning in Macaronesia



- Project is running with the support of the **European Union, co-financed by the European Regional Development Fund** through the Operational Programme of Territorial Cooperation Madeira-Azores-Canary Islands (started 2017, three years);
- PLASMAR will **define and propose robust scientific methodologies** in support of **Maritime Spatial Planning and Blue Growth** taking in consideration the **biogeographic characteristics of the Macaronesian Region** and searching for a **balance between the diverse maritime sectors and the conservation** of the natural marine heritage.

Project partners

Collaboration research institutions & administrations:

1. ECOAQUA Institute @ ULPGC (Canarias)
2. Agência Regional para o Desenvolvimento da Investigação, Tecnologia e Inovação (Madeira)
3. Secretaria Regional do Ambiente e dos Recursos Naturais (Madeira)
4. Direção Regional dos Assuntos do Mar (Azores)
5. Gestión del Medio Rural de Canarias, S.A.U. (Canarias)
6. Dirección General de Pesca (Canarias)
7. Direção Regional de Pescas (Madeira)
8. Dublin Institute Of Technology (Ireland)

- What is developed within the project will be used by partners (responsible for MSP)



UNIVERSIDAD DE LAS PALMAS
DE GRAN CANARIA



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tecnológica e inovação



GMR Canarias



Gobierno
de Canarias

Consejería de Agricultura,
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PLASMAR



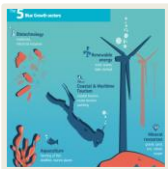
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Interreg

Theoretical part



- Macaronesia **Blue Growth Projection**
- **Environmental legislation implementation VS/4 MSP**
- **Mapping environmental issues & solutions**

Data collection– development of MDDI



- **Development of the data infrastructure**
- **Local/regional data sets:**
MSFD, INSPIRE, research projects
- **European data initiatives:**
EMODnet, COPERNICUS, EIONET, Natura 2000, CDDA...

Monitoring



- **Monitoring methods development + campaigns:**


1. Micro-plastic
2. Habitat
3. Non-indigenous species
4. Commercial fish & food webs
5. Sea floor integrity

Blue Growth state, trends and projection


ANALYZED SECTORS	EU State / World prospect	MADEIRA State / Prospect	AZORES State / Prospect	CANARIES State / Prospect
Aquaculture	 	 	 	 
Blue biotechnology	 	 	 	 
Renewable ocean energy	 	 	 	 
Deep-sea mining	 	 	 	 
Coastal & maritime tourism (incl. cruises)	 	 	 	 
Fisheries	 	 	 	 
Maritime transport	 	 	 	 
Shipbuilding & shipgear	 	 	 	 
Offshore oil & gas (in deep water)	 	 	 	 
Desalination	 	 	 	 

Legend:


EU State (EU, 2018):


 RD&I Pre-commercial


 Established

 Emerging

World prospects (OECD, 2016):

 modest growth

 High long-term growth

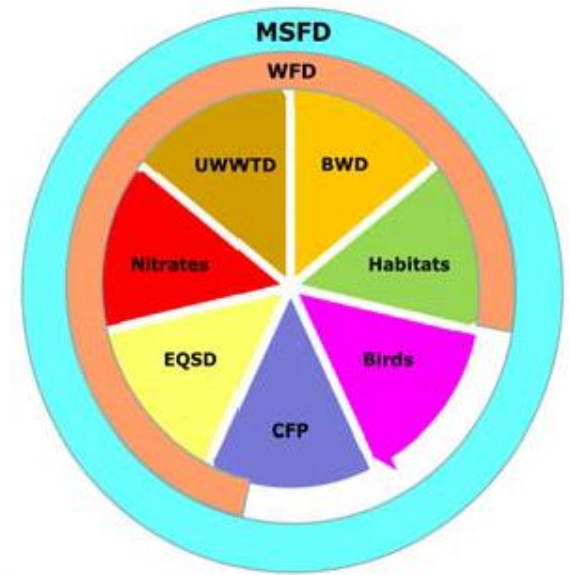
 Long-term potential but not yet at commercial scale



(Results under revision)

MSP & Environmental Legislation

- Analysis of environmental legislation Implementation that applies on the sea/ocean
- To understand **what is already done within environmental policies/directives implementation, so that can be considered and potentially reused** in the MSP process.
- **Marine Strategy Framework Directive 2008/56/EC** as Integrated Marine (environmental) Management
- **European Environment Information and Observation Network (EIONET) & REPORTNET**, by EEA
- **(in)Compatibility** of sustainable maritime sectors development with implementation of the MSFD
- **Marine data, monitoring, programmes of measures, assessments** regarding the 1st MSFD cycle 2012-2018



Mapping environmental issues/solutions per identified maritime sectors

To analyze **marine aquaculture; maritime transport; offshore wind energy; fisheries; sand extraction; maritime tourism** for **environmental issues/solutions/monitoring**

**How do you define marine Environment ???
....how do you define marine biodiversity ???**



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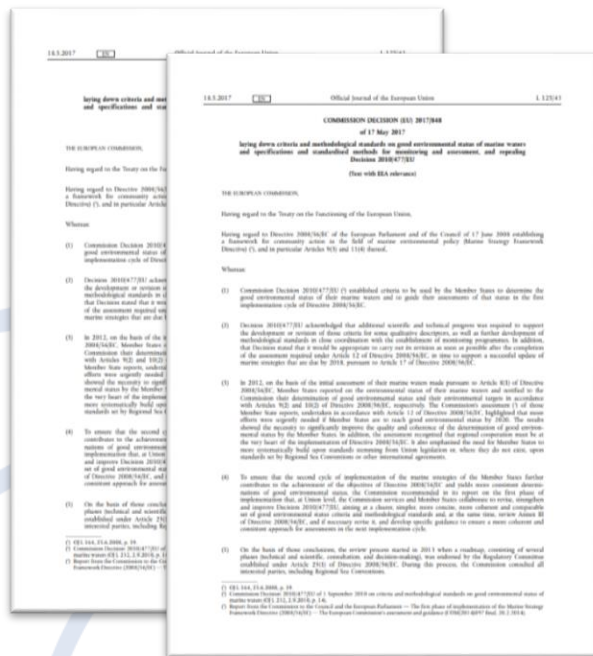


Mapping environmental issues/solutions per each maritime sector

To analyze marine aquaculture; maritime transport; offshore wind energy; fisheries; sand extraction; maritime tourism for environmental issues/solutions/monitoring

How do you define marine Environment ???

Used **Good Environmental Status** given by MSFD defined with **COM 2017/848/EU**



Good Environmental Status

Efficient monitoring methods & campaigns

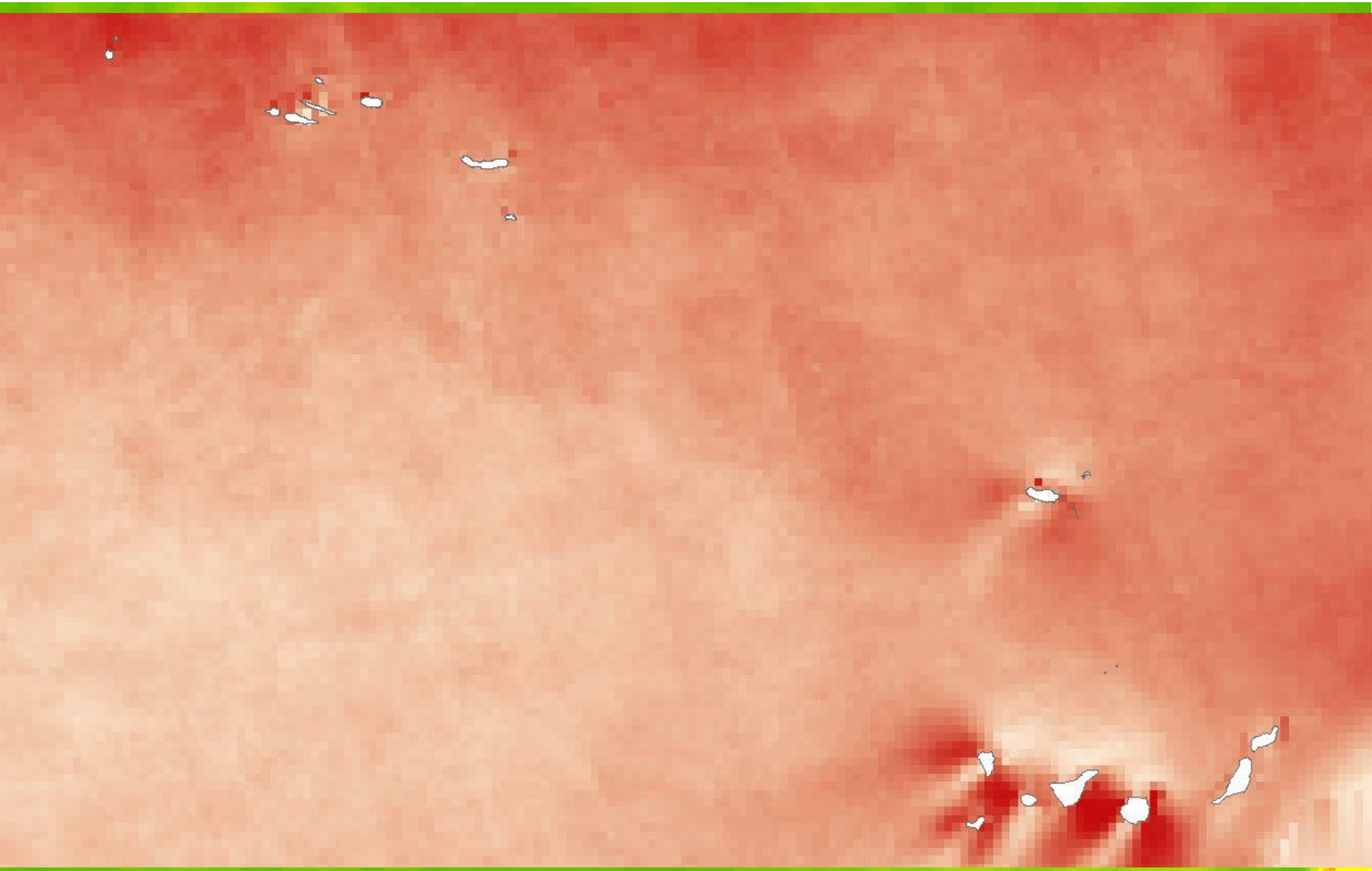
- For identified parameters (**MSFD GES criteria elements**) development of monitoring protocols & campaigns
- Should be **studied before** maritime activity is operational & **monitored during the operational** & (decommissioning) phase
- **Habitat** (QD1) - side sonar campaigns, strategy development
- **Non-indigenous species** (QD2) – Rapid assessment survey & image recognition
- **Commercial fish & food webs** (QD3&4) – EcoPath with EcoSim modeling
- **Sea floor integrity** (QD6)
- **Micro-plastic** (QD10) - surface layer microplastic with manta net



MSP Data collection

- Complex task within the Macaronesia, **huge EEZ + archipelagos**
- Established **simple & efficient data infrastructure** (open source) - data flows + **2 capacity buildings session** in collaboration with MarSP project
- **Following INSPIRE Directive 2007/2/EC principles**
- Collected data **form local, national, regional data infrastructures + European Data Initiatives**
- **PLASMAR data framework** including env. parameters, MPA's, Oceanography, Coastal land use, Maritime activities >60





PLASMAR



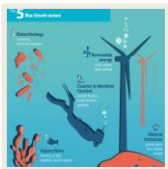
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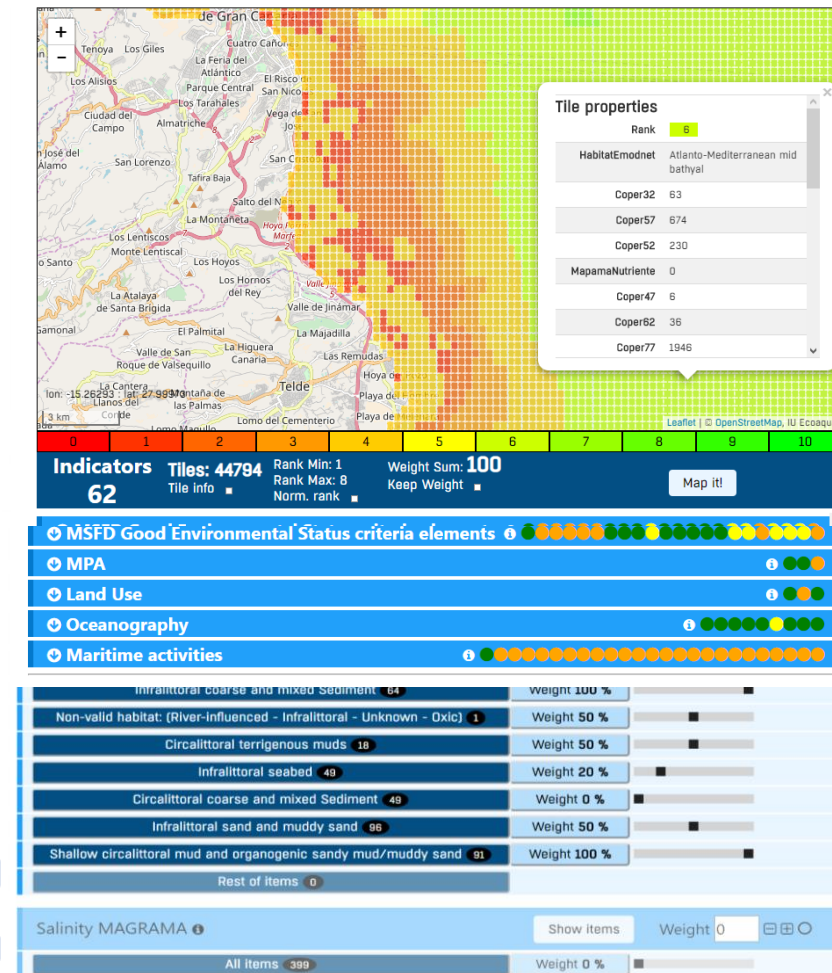
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Novel Maritime Spatial Planning zoning methodology + Pilot zoning of Macaronesia
- Based on available scientific knowledge + collected data

MSP Zoning methodology

- **Defining novel MSP methodology**, still in process, workshop on Friday – will be tested on the level of the project
- Use **web application tool**, that will be used by each partner independently, for each sector
- Web application tool is **feed by data (collected and monitored) and obtained knowledge**, converted in algorithms
- Within the project **for each of parameter (>60) we need to establish “weight”** (project, experts and stakeholders) – iterative process - this can be adjusted on the level of the archipelago
- Will **provide maps** on location for the studied maritime activities where **env. impact is minimized, conflict with other activities reduced**
- Will define **Environmental trade-off within development of maritime activities**



Thank you for your attention

....and patience

