



**SPRING EDITION**

**2021 Brokerage event**

**22-26 March 2021**

**Horizon EU**



**WKE2021**

**Water Knowledge  
Europe  
Spring edition**

**Working  
Groups  
meetings**

*\*only for WE members*

**Webinars on  
Preparatory  
HEU**

**Calls for  
Proposals**

*\*free access*

**Starting  
02/02**

**Thematic  
Workshops**

*\*all participants*

**Starting  
15/03**



**Digital Water and  
Cybersecurity**

**Water  
Projects  
Europe**

**3<sup>rd</sup> edition**

# The untapped potential for satellite-based applications in the water management domain: a market and users' benefits perspective (Part 1)



EuroGEO Showcases: Applications Powered by Europe

European Association of Remote Sensing Companies (EARSC)



The e-shape project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 820852

24<sup>th</sup> of March 2021

## Digital Water and Cyber-security & Presentations of market scenarios & trends





The water market includes many obvious and less obvious applications:

Renewable and conventional energy, agriculture, recreational diving, water quality assessment, aquaculture etc...

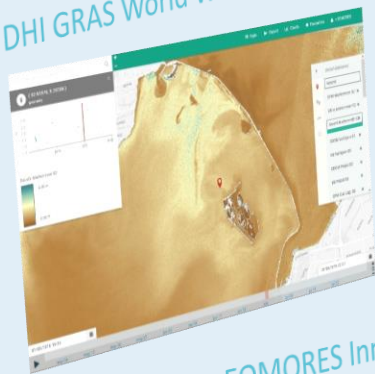




Earth Observation services can play a role in many of these markets with market integration and services:



DHI GRAS World Water project



EOMORES Innovation Project



### 1 POLAR ENVIRONMENT MONITORING



The Copernicus Marine Service polar environment products allow users to **assess environmental safety** in both poles. These products are used by national sea ice services to serve many user groups like:

- National authorities
- Shipping companies
- Research institutes

### 2 MARINE CONSERVATION & POLICIES



We provide public authorities and governments with key parameters to support the **monitoring of habitats within conservation areas**.

Many variables can be monitored by each European Member State using the Copernicus Marine Service, such as:

- Sea water eutrophication
- Ocean noise

### 3 SCIENCE & CLIMATE

We provide scientists with many products to **conduct their environmental, climate and oceanographic research**. They can rely on:

- The Ocean Monitoring Indicators (OMIs)
- The Ocean State Report, a flagship scientific publication



### 4 NATURAL RESOURCES & ENERGY

Our ocean models provide **key inputs to estimate ocean energy resources** to:

- Monitor offshore sites
- Evaluate ocean energy resources

These data are used by businesses researchers and decision-makers.



### 5 WATER QUALITY



Using our products, each European Member State can:

- Monitor **sea water quality** in line with the European Marine Strategy Framework Directive (MSFD)
- Notably sea water **eutrophication** in areas impacted by harmful algae blooms

### 6 COASTAL MONITORING



The modelling method called **"Downscaling"** allows the Copernicus Marine Service data to be used to develop **high resolution coastal models**, useful for coastal management.

### 7 SOCIETY & EDUCATION

We develop **ocean literacy tools** for the general public, teachers, decision-makers etc. They are used to raise awareness about the multifaceted environmental pressures on the ocean:

- Climate change
- Overfishing
- Plastic pollution



### 8 MARINE FOOD

Our products and services are used to model fish habitats with variables like **chlorophyll** and **sea surface temperature**, for example. These contribute to the sustainable management of:

- Fisheries
- Aquaculture farms



### 9 MARINE NAVIGATION



We provide products contributing to **safer ship routing** (can reduce fleet navigation risks in ice-covered areas) and **more ecological and efficient marine navigation** (by lowering fuel consumption):

- Ocean current
- Sea ice

### 10 SAFETY & DISASTER

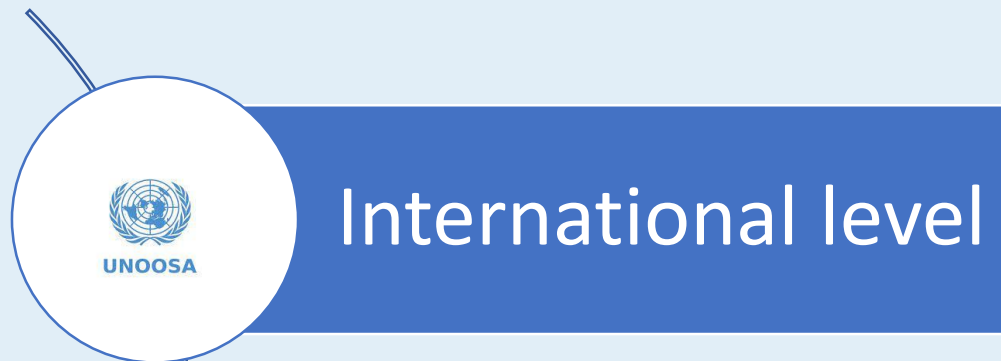


Our daily forecast ocean model provides inputs for:

- Search and rescue software
- Meteo-ocean dashboards

The ocean current model can be used for drift forecasting of oil spills that help government agencies to **better**

## EO for Blue Market Access



- UNOOSA Space4Water Portal
- DHI GRAS (SDG 6)



Copernicus Land and  
Maritime (CMEMS)

ESA Thematic Exploitation  
Platforms



Horizon2020  
innovation projects:  
e-shape

EU Water Framework  
Directive

# ..and Market Value

## Overview of End User Benefits - 2018

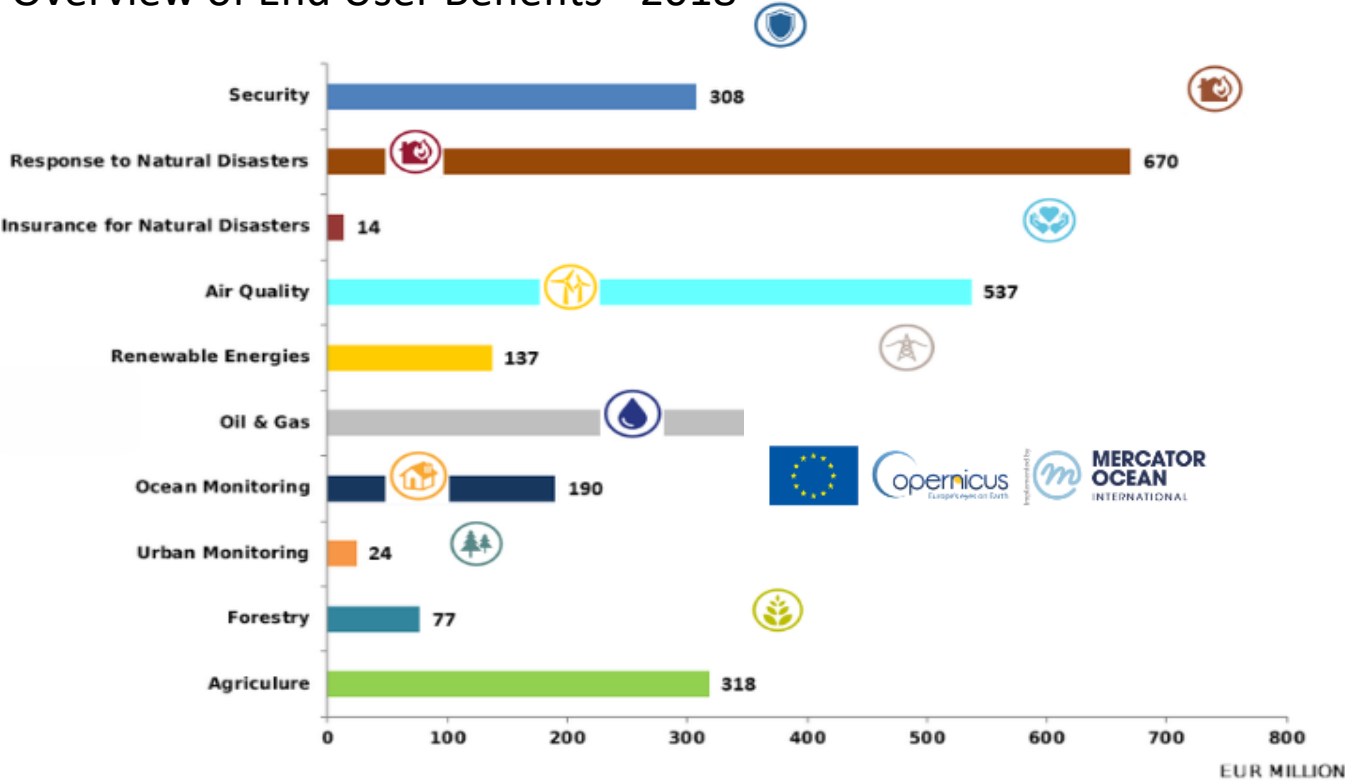


Fig.1 Source: PwC Market Report - issue 2 - feb. 2019 - P7; The Copernicus Marine Service contributes mainly to Ocean Monitoring but also contributes to the growth of other transverse segments such as Renewable Energy and Oil & Gas.

## Economic benefits for end users in Europe (EUR million)

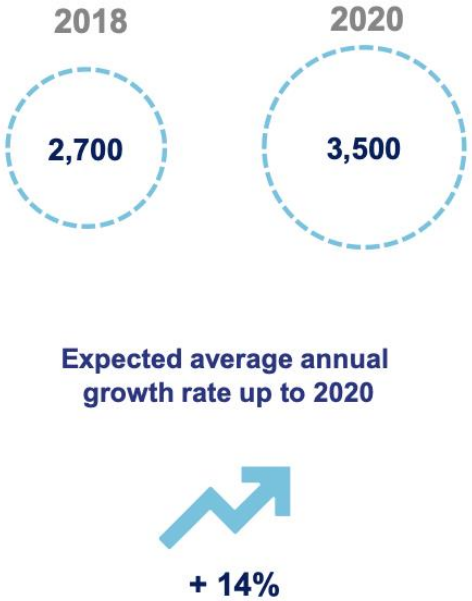


Fig.2 Copernicus Market Report | Issue 2, February 2019 | Prepared by PwC |



# European Marketplace for EO Services






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