



Space2Waves

Space2Waves project: using Earth Observation technologies to help solve marine environment issues

Using a variety of continuous sources, Earth Observation (EO) data can be numerous but sometimes difficult to manage and exploit. Today, EO represents an important source of information in an unsteady and unpredictable world. Blue Growth, and more precisely the marine environment, is currently facing significant challenges that we need to understand and overcome in order to prevent destruction and disappearance of an ecosystem vital to human life and the planet.

There are several sectors at the intersection of EO and the marine and coastal environment, such as marine resources, design, installation, management and maintenance of marine renewable energy installations, fisheries management, deployment, operation and maintenance of aquaculture, adaptation of coastal zones to climate change and maritime transport.

EO technologies are one of the most available, feasible and cost-efficient technologies to explore, monitor, control and study the exploitation of the oceans and their resources. In addition, EO technologies are suited to be used in environments such as oceans since they have wide coverage, the installation of in situ infrastructures is not easy and solutions to be developed for it can be replicated.

EO data mainly comes from satellites. However, other technologies are able to provide secure and reliable data such as stratospheric balloons or aerial drones.

Stratospheric balloons can be used as an alternative to satellite imagery for the observation of specific areas in oceans and seas. The advantages of such balloons are the lower costs, a good resolution and a short response time. The combination of maritime and space-based technologies will also allow the launch of equipment into near space with potential applications like accident response or marine traffic monitoring. It is also interesting for research on marine life migration, environmental monitoring and algae bloom development.

Drones represent an alternative as well, as they can efficiently fly over several tens of kilometres. These are solutions that can control large areas by day and night, collect data over long distances, provide a comprehensive and accurate picture of a crisis situation (accidental maritime pollution, coastal floods, ...) and a fast, accurate and productive method for monitoring coastal conditions in the face of marine erosion.

Technologies in the EO sector are quite mature and have great potential to overcome the identified challenges. The issue is now to match the right technology with the needs.

The Space2Waves project believes that an important growth potential for EO lies in the Blue Growth sector. Indeed, new value chains are expected to be developed in this emerging industry. The capability for the European EO Industry to grow is based on their capability to export their services. But, in this relatively new sector, the companies are generally small and not able to deploy significant commercial focus abroad and obtain knowledge from the “end-users” needs at international level. The internationalisation programme of Space2Waves, implemented by the project, aims to enhance the

technology potential of EO and the European skills in order to develop new business and alliances overseas.

[Space2Waves project](#) is an EU funded project that brings together six European clusters from France, UK, Portugal, Greece, and Italy, with experience in the blue economy and space sectors. coordinated by [Pôle Mer Méditerranée](#), a French maritime innovation cluster, it aims to implement an internationalisation programme to accelerate the global deployment of EO technologies in the Blue Growth sector and to support European SMEs' competitiveness.

The programme has initiated a number of steps. The 1st step was the selection of the 30 European SMEs working in the use and/or development of Earth Observation data for the maritime sector, with the highest potential.

The 2nd step is the implementation of the internationalisation programme. This programme delivered online training packages and individual consultancy, enabling the creation of a Space2Waves community and the sharing of experiences and best practices for internationalisation. Then, a number of international missions have been organised both digitally and physically in Australia, Canada, South Africa and United Arab Emirates; the 4 target countries that have demonstrated needs in terms of use of Earth Observation data applied to the maritime sector and thus high market potential for our SMEs. During the missions, SMEs have been able to visit key partners and infrastructure organisations in the target countries and to meet companies and potential partners for business opportunities.

As a result, 30 SMEs have benefited from these activities. More than a hundred meetings have been organised either digitally or in the target countries, enabling the SMEs to demonstrate the potential of their technologies and build some concrete relationships for further collaboration.

The 6 clusters partners have also initiated a number of collaborations to develop cooperation and development of relationships that will support to the protection of the marine and coastal environment through the use of Earth Observation technologies.



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