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TECHNOLOGY SPOTLIGHT

Jose Luis Villate, Chair of the Implementing Agreement for a Co-operative Programme on Ocean Energy Systems (OES), responds to questions about the recently-developed web-based Geographical Information System (GIS) tool and the future of marine technologies.



What is this new mapping tool and the history behind its development?

The primary purpose of this tool is to give interested website visitors access to detailed global information related to ocean energy in an easy to use yet visually striking way.

The OES, as the authoritative international voice on ocean energy, decided to implement this tool with the aim of providing high quality information to facilitate the acceptance and development of ocean energy systems.

What kind of information is contained in the online database and for whom is it likely to be useful?

Information comprises ocean energy facilities, resources, relevant infrastructures and general geopolitical and geographical information, on a global map. It is intended for anyone interested in getting more information about the world-wide development of ocean energy. Users are able to display any combination of the provided information, to zoom and move through the map, select items and download or print images of the displayed information as desired.

Given that the oceans cover more than 70% of the earth's surface why hasn't marine technology advanced more rapidly?

The oceans are an inexhaustible and enormous source of renewable energy but at the same time the oceans represent one of the hardest environments to work in. There is a lot of experience working in the oceans from other sectors but it usually means high-cost solutions for an increasing competitive energy market. The main challenge of ocean energy is to develop cost-effective technologies to harness the huge renewable potential of the oceans. To advance more rapidly, targeted R&D funding to advance

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promising technologies is much relevant as well as clear government commitments to create an environment that offers long term assistance to project developers and investors.

The oceans are already struggling with a variety of competing marine activities such as wind energy, transport, fishing, aquaculture and tourism. Do you see this as an impediment for the future development of ocean technologies?

Competing for ocean spaces is one of the factors than can affect the deployment of ocean energy, but I don't see it as a major impediment. The application of marine spatial planning approaches would be the solution for a consistent and environmental friendly use of the oceans. Some countries have started already to implement structured approaches to regulation and developed marine spatial plans. The rapid increase of offshore wind farms further contributed to the importance that this issue has been given in specific countries. It is important to develop objective means of measuring the (socio) economic value of different usages and consequently attributing priority usages for certain areas. This will be an important tool for future marine spatial planners. Another aspect that has been investigated is the synergetic co-existence between different usages based on their space use and technical characteristics.

What do you see as the greatest opportunities and challenges for the future of marine technologies?

The OES has the vision of ocean energy as a respected and critical source of green energy, recognised for its contribution to economic growth. Deployment of ocean energy can provide significant benefits in terms of jobs and global carbon savings. To this end, ocean energy technologies have to demonstrate that they are reliable and cost competitive but in the way of achieving these goals, the ocean energy sector will need public support for a sustainable use of our resources and long-term effective policies, legislation and implementation strategies, to provide security to private investors to develop marine energy on a commercial basis.

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Related material:

Free GIS mapping tool: http://www.ocean-energy-systems.org/ocean_energy_in_the_world/gis_map/
OES website: <http://www.ocean-energy-systems.org/>