Marine Environment and security for the European Area (MERSEA)

Results in Brief

DE EN ES FR IT PL

Robust ocean monitoring and forecasting

The world's oceans are vast and changing. Undaunted, European researchers have taken on the challenge of collecting and processing these vast amounts of ocean data so we can learn more about ocean physics, biochemistry and ecosystems.

CLIMATE CHANGE AND ENVIRONMENT

© Shutterstock

Developing robust ocean monitoring and forecasting systems calls for a broad range of research and development (R\;&\;D) activities to ensure that they operate on firm scientific and technical grounds. At least this is how the 'Marine environment and security for the European area' (Mersea) project approached the challenge back in 2004 when it started with EUR 14 million of EU funding in hand.

The Mersea project tackled the full range of tasks, from ocean data collection, R\;&\;D and systems development to user products, applications and even outreach programmes. For example, on the data side, Mersea focused on improving the retrieval algorithms required to determine geophysical parameters, such as ice concentration and drift and levels of suspended matter

concentration and drift and levels of suspended matter.

The FP6 integrate project included nearly 40 partners from all over Europe, among them the UK's MET Office, technology firms and leading academic centres. It was led by the French Research Institute for Exploitation of the Sea (Ifremer). The data and results they produce help shed light on a number of important changes taking place in and around the world's oceans, from seasonal weather forecasting to longer-term climate and ecosystems indicators (biogeochemical analyses). Its work also contributes to the EU's Inspire Directive for more informed environmental policy.

Mersea put in place a network of monitoring and forecasting centres (MFCs) and thematic assembly centres (TACs). Today, the MFCs cover the global ocean and the main European seas (Arctic, North East Atlantic, Baltic and Mediterranean), while the TACs process the data from satellite remote sensing (sea ice, ocean colour, altimetry, and sea surface temperature), and from global networks in the field.

At present, the centres offer these data as a standardised service to a range of end-users. The partners invested a lot of effort into upgrading the monitoring and forecasting centres using, for instance, better software models, and providing faster and more frequent analyses which boost overall performance. Maritime operators can use Mersea's ice drift forecasting, for example, to improve their ship routing, while the petroleum industry can use the data to predict oil spill drift.

Where accurate ocean data is needed, systems like Mersea's are highly valued. Further research and development would help keep the systems up to date and in tune with the target users' potentially changing needs.

Project Information

MERSEA

Grant agreement ID: 502885

Start date
1 April 2004

End date
30 September 2008

Funded under
FP6-AEROSPACE

Overall budget
€ 24 320 809

EU contribution
€ 13 997 699

Coordinated by
INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER
France

This project is featured in...

RESEARCH*EU MAGAZINE

Results Supplement No. 030 - Science, technology, materials and the nano-...

NO. 30, DECEMBER 2010 / JANUARY 2011

Discover other articles in the same domain of application

RESULTS IN BRIEF

Microbes' response to climate change offers a glimpse into the future of the Arctic

30 October 2020

ASSEMBLE

ASSOCIATION OF EUROPEAN MARINE BIOLOGICAL LABORATORIES EXPANDED

NEWS

SCIENTIFIC ADVANCES

Save-the-date for the online ASSEMBLE Plus Conference

30 September 2020

Blue-Action reveals new tools to combat the ripple effects of a warming Arctic

20 October 2020

Last update: 1 November 2010
Record number: 85787

Permalink: https://cordis.europa.eu/article/id/85787-robust-ocean-monitoring-and-forecasting