

# ASIMUTH

Applied simulations and Integrated modelling for the understanding of toxic and harmful algal blooms

## COUNTERING HARMFUL ALGAL BLOOMS

Harmful algal blooms (HABs) make shellfish toxic and can sometimes kill farmed fish throughout Europe. Part of nature, they cannot be prevented but with the right technology and knowhow they can be predicted. The project ASIMUTH takes on this forecasting challenge.

These blooms occur periodically along EU shores, and cause devastation for Europe's aquaculture industries. However, in the future reliable predictions of where and when such blooms might occur is set to help mitigate their negative impact, enabling aquaculturalists to take preventive measures, e.g. planning protective harvesting operations or altering husbandry practices at finfish sites temporarily while a HAB passes through a particular area. Using a combination of both modelling and satellite image analysis, the ASIMUTH project is set to respond to the demand for short-term forecasts of harmful algal events along the European Atlantic coasts. The project foresees to deliver such forecasts directly to aquaculturalists by means of mobile phone and internet technology.

Using remote sensing satellite data, monitoring images of chlorophyll and water temperature, the project is set to track the origins of algal blooms, since knowing the conditions that bring about algal blooms are essential to successfully forecasting such blooms in the future, not only along the Atlantic shores of Europe, but potentially along the shores of all of Europe.

Bringing together a consortium of scientific institutions and businesses from along all of Europe's Atlantic shore, this project is set to develop services that foster the competitiveness of the European fish-shellfish industry, and demonstrate the potential of downstream services in the GMES marine domain.



**JULIE MAGUIRE**  
IS PROJECT COORDINATOR



Aerial view of red tide off the Portuguese coast © ASIMUTH

**ASIMUTH is set to develop short-term forecasts of harmful algal blooms along Europe's Atlantic coast.**

## QUESTIONS & ANSWERS

### What do you want to achieve with this project?

We would like to have an operational early warning system for harmful algal blooms. This will allow fish and shellfish farmers to adapt their culture and harvesting practices in time, in order to reduce potential losses and in turn increase their productivity.

### Why is this project important for Europe?

The impacts of harmful algal blooms are felt across the European wide aquaculture industry. Blooms do not respect borders therefore success of the project very much depends on co-operation between countries.

### How does your work benefit European citizens?

The project will have a positive socio-economic impact for aquaculture in peripheral coastal regions where jobs have historically been lost due to a decrease in fishing effort. For the consumer, the project may stabilise price fluctuations of fish.

# ASIMUTH

Applied simulations and Integrated modelling for the understanding of toxic and harmful algal blooms



## LIST OF PARTNERS

- Daithi O' Murchu Marine Research Station Ltd., Ireland
- Marine Institute, Ireland
- FREMER, France
- Instituto Español de Oceanografía, Spain
- The Scottish Association for Marine Science, United Kingdom
- Instituto Superior Técnico, Portugal
- Instituto Nacional de Recursos Biológicos I.P. INRB, Portugal
- Hocer SAS, France
- Nowcasting International Ltd., Ireland
- Starlab Barcelona SL, Spain
- Numerics Warehouse Ltd., Ireland

## COORDINATOR

**Daithi O' Murchu Marine Research Station Ltd.,  
Ireland**

## CONTACT

**Dr. Julie MAGUIRE**  
Tel: +353 27 61276  
E-mail: [Julie.maguire@dommrc.com](mailto:Julie.maguire@dommrc.com)

## PROJECT INFORMATION

Applied simulations and integrated modelling for the understanding of toxic and harmful algal blooms. (ASIMUTH)  
Contract no: 261860  
Starting date: 01/12/2010  
Duration: 36 months  
EU Contribution: € 2.485.244  
Estimated total cost: € 3.237.137

