

## MARINE & COASTAL RESEARCH

# LAGOONS

### AT A GLANCE

**Title:** Integrated water resources and coastal zone management in European lagoons in the context of climate change

**Instrument:** FP7, Collaborative Project - Small or medium-scale focused research project

**Total Cost:** 3 338 591.60€

**EC Contribution:** 2 545 659.50 €

**Duration:** 36 months

**Start Date:** 1/10/2011

**Consortium:** 9 partners from 8 countries

**Project Coordinators:** Ana Isabel Lillebø (Univ. of Aveiro) & Per Stålnacke (Bioforsk)

**Project Website:** lagoons.web.ua.pt

**Keywords:** Lagoons, Climate change, Modelling, Ecosystem Processes, WFD, science-policy interface, river basins



### THE CHALLENGE

In the context of climate change, there is growing evidence that many ecosystems could reach the "tipping point," at which sudden and irreversible changes have important implications for human well-being ([www.maweb.org](http://www.maweb.org)). In this context, the environmental issue of concern of the LAGOONS project is the anthropogenic deterioration and climate change impacts - especially the effects of extreme weather events- on surface water and on the ecological services provided by lagoons ecosystems. Knowledge produced by different scientific disciplines will be combined and integrated with local knowledge and the views of stakeholders in order to produce integrated, participatory scenarios (by means of a qualitative-quantitative-qualitative scenario approach supplemented with the science modelling inputs) of future possible trends and conditions in coastal lagoons in the context of climate change.

### PROJECT OBJECTIVES

The main and overall objective of the LAGOONS project is to develop science-based strategies and decision support frameworks for the integrated management of lagoons, based on an increased understanding of land-sea linkages processes and the science-policy-stakeholder interface. To this end, the project will seek to contribute to interface between the EU Water Framework Directive, the Habitat Directive, the EU's integrated coastal zone management (ICZM) Recommendation, and the EU Marine Strategy Directive.



## METHODOLOGY

four case study lagoons have been selected to represent a set of "hotspot" coastal lagoons with a wide and balanced geographical distribution and different characteristics. The lagoons included are: Vistula Lagoon in the Baltic Sea (Poland/Russia); Tylygulskiy Lagoon in the Black Sea (Ukraine); Ria de Aveiro Lagoon in the Atlantic Ocean (Portugal), and Mar Menor in the Mediterranean Sea (Spain). These case studies will be the support for Pan-European integration through a bottom-up approach, showing that it is possible to enhance connectivity between research and policy-making in a lagoons context using a proactive approach to water issues, which assures more efficient use of existing research results.

## EXPECTED RESULTS

The integrated and participatory scenarios will be formulated to develop strategies and methodologies for integrated decision support for stakeholders, as well as with special focus on recommendations of suitable use of ecosystem services, foreseen eco-efficiency of the services and eco-innovation in solutions to overcome or mitigate the services losses due to the changing environment. In management terms, LAGOONS will contribute to the decision-support methodologies for a coordinated approach to the Water Framework Directive and the Marine Strategy Directive. In addition, LAGOONS will propose actions to tackle bottlenecks in the context of climate change, i.e., LAGOONS will propose actions foreseen in the goals of the Europe 2020 strategy - A strategy for smart, sustainable and inclusive growth.

PROJECT PARTNERS	
University of Aveiro	(PT)
Bioforsk- Norwegian Institute for Agricultural and Environmental Research	(NO)
Institute of Hydro-Engineering of the Polish Academy of Sciences	(PL)
Atlantic Branch of P. P. Shirshov Institute of Oceanology of Russian Academy of Sciences	(RU)
Sea Fisheries Institute in Gdynia	(PL)
University of Dundee	(UK)
Odessa State Environmental University	(UA)
Potsdam Institute for Climate Impact Research	(DE)
Universidad de Murcia	(ES)

