

New Climate services to coastal communities in Galicia (NW Spain)

J.J. Taboada and MarRISK group

MeteoGalicia - Xunta de Galicia - Spain

Introduction

RAIA Observatory is a consolidated transnational coastal observatory which provides marine data services and products (marnaraia.org) in the NW of the Iberian Peninsula (Euroregion Galicia-Spain and N of Portugal) initiated in 2009 with the support of Interreg-Poctep Spain-Portugal.

Methods

Marrisk, based on RAIA, focuses on developing climate services and early warning forecasts for coastal populations in the Euroregion. Floods, intensification of extreme events, episodes of toxic algae or coastal erosion are examples of risks analyzed in Marrisk for improving the resilience of traditional economic sectors (aquaculture) and of coastal populations. To mitigate these impacts, the project has implemented different services based in indicators from in situ data combined with results of oceanographic and wave models in a process of co-creation with stakeholders.

Results

The project has provided support to coastal communities to estimate coastal flooding and increase in erosion or to estimate physical-chemical changes that can impact sectors such as fishing, aquaculture or harbour authorities in the area. For harbours, a resilience index to climate change was computed and early warning systems of levee overruns or long-wave resonance were demonstrated.

Conclusions

The co-creation of some climate services to port authorities has demonstrated the usefulness of operational coastal oceanography in launching useful climate services for the community. Moreover, the exploitation of results of the dynamic downscallings of climate projections with wave and biogeochemical models will allow the building of new services for providing climate advice to final users: in order to help them in the design of mitigation and adaptation plans