

Towards 2010 strategy: operational coastal oceanography system in the Basque Country

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Abstract

This contribution sets out progress of the projects that constitute the oceanographic and meteorological modelling and tools strategy undertaken in the Basque Country region towards 2010. This strategy, included within the Framework of ETORTEK Programme, funded by the Department of Industry, Trade and Tourism of the Basque Government, brings together climatological, oceanographic and meteorological institutions, in order to improve the way in which these services are working presently and merge the products in a unique operational system. At the present time, the Basque Country marine observation system keeps 6 coastal stations, measuring oceanographic (temperatures, currents, tides and waves) and meteorological parameters; 2 deep sea (between 450 and 550 m depth) buoys, measuring oceanographic parameters (currents, temperatures, salinities, and waves) and meteorological parameters; and an HF Radar array. Models are being validated with real data and the future system will provide hindcast, nowcast, and forecast of oceanographic and meteorological conditions at several time-scales, together with systematic and long-term routine measurements of the sea and atmosphere. The established strategy will allow to obtain products in order to monitor several phenomena and routine activities such as: atmospheric pollution, storm and surge warnings, high waves, sediment transport, oil spills, main river plumes, aerial and maritime traffic, design of marine structures, or coastal water quality. Moreover, preliminary results of the operational system show the suitability of numerical models to explore the physics of ocean and atmosphere.