

Coastal Erosion from Space



Annex 3 – Barcelona and Tordera

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Signatures

	Name	Company or Institute	Date
Prepared by			
Authorised by			



Applicable and reference documents

Id	Description	Reference
AD-1	Product Validation Plan	SO-TR-ARG-003-055-009-PVP



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1. Previous development / study

Organisation	Product	Description
SGPS – Sub-directorate general for the Coastal Protection	flood risk management tool	It mainly consists in risk-vulnerability maps at national scale. Information related to coastal vulnerability to flooding is already available in a web viewer (http://sig.mapama.es/snczi/visor.html?herramienta=DPHZI)
SGPS	Coastal evolution evaluation	Evaluation through topo-bathymetry surveys according to the needs.
IGN – National Geographical Institute	PNOA – Plan for Aerial Orthophotography	Systematic data collection for the development of DEM for the whole Spanish territory or other maps. <ul style="list-style-type: none"> • PNOA-imagen: updated every 3 years with variable resolution (25 and 50 cm). • PNOA-LiDAR: updated every 6 years with variable coverage (minimum current resolution 0.5 points/m2)
SGPS	Ecocartografías	Development of maps which include several assessments of biological communities, water quality, cultural heritage, land use and shoreline or topo-bathymetry mapping.

2. Expectation regarding CE EO products

Development of Coastal Vulnerability Index (CVI) for Spain:

- GIS layer that identify coastal areas susceptible to flooding and erosion would enhance the management capabilities of coastal areas.
- Development of a data set from remote sensing information for the assessment of coastal erosion derived through an erosion susceptibility assessment for various types of coastal features would be the core of the CVI.

Special attention will be paid to develop a Spanish CVI comparable with existing CVI in other European countries, to facilitates its use in the framework of transnational European coastal management.

Second objective is to obtain products and services that allow to stablish action plans for coastal protection in different time horizons (short-medium-long term):

- Development of a tool for the analysis of the efficacy of past coastal protection actions and for the monitoring of recently implemented measures based on satellite information.
- Development of methods for the monitoring of land use in coastal areas from satellite data in the past and in the current situation.
- Development of an operational system based on satellite imagery and automatic detection of impacts on the coast from both natural and anthropogenic causes (coastal structures, dredging operations...) to improve the capabilities of SGPC to implement the required actions that effectively mitigate the impacts on the coast. The system will be based on systematic coastal monitoring and data processing tools to prompt knowledge and forecasting of coastal evolution trends for different scenarios.
- To stablish a transnational system for interchange of sensible data such as mean sea level, oceanic current pattern and other relevant parameters. These data shall be mainly focused on those that have relevant impacts in human and natural life.

Finally, the obtention of systematic and yet affordable observations of coastal morphology to provide further insight and a better understanding on coastal systems evolution (beaches and, particularly,



deltas). By understanding how coastal systems evolve, the SGPC will be able to better manage sustainable beaches and deltas.



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