

## OBJECTIVES

The specific objectives of the project are:

- 1. to identify the coastal typologies** affected by flooding which will support the development of an integrated risk analysis methodology;
- 2. to improve the flood prediction** in different coastal typologies, through the integration of data from multiple sources;
- 3. to contribute to improve the emergency response capacity** of the institutions involved in its management and the affected communities.

## PARTNERSHIPS



## CONTACTS

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**FACT** Fundação para a Ciência e a Tecnologia

MINISTÉRIO DA CIÊNCIA, TECNOLOGIA E ENSINO SUPERIOR



## Multi-source flood risk analysis for safe coastal communities and sustainable development



<http://mosaic.lnec.pt>



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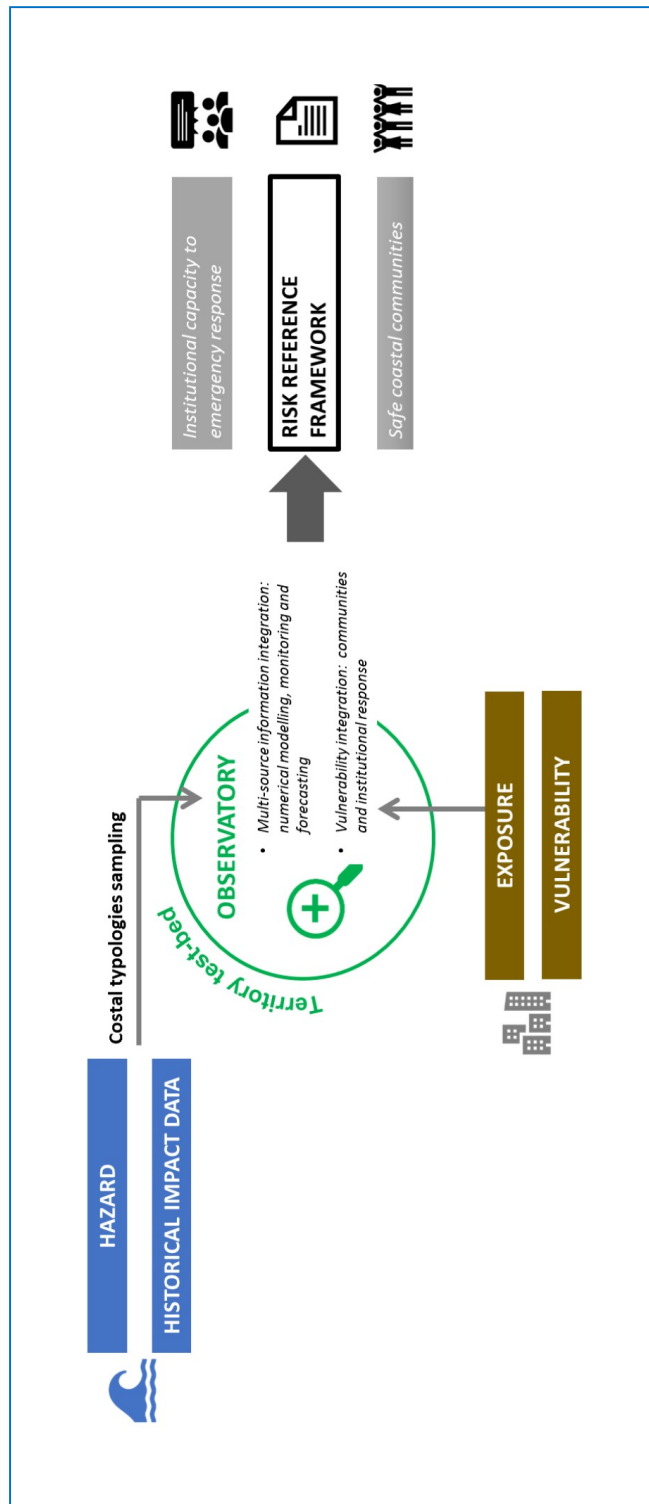
## SUMMARY

The MOSAIC.pt project aims to develop an innovative flood risk management framework for coastal zones, including estuaries, based on the integration of predictive models and real-time monitoring data, and taking into account the different dimensions of the vulnerability.

## METODOLOGY

The approach followed in the project includes a preliminary evaluation of the most critical coastal typologies in the Portuguese west coast, the most exposed to extreme events in Portugal, based on historical information. This evaluation allows the selection of an observatory that will be used as testbed for development and validation of the predictive, monitoring and data integration methodologies, and where the different dimensions of vulnerability will be evaluated.

The observatory context will provide guidelines for the development of an integrated risk analysis framework, supported by different hazard scenarios vulnerability and exposure. A real-time emergency response component will also be conceptualized, taking advantage of the forecast system developed at LNEC (WIFF- <http://ariel.lnec.pt/>).



## EXPECTED RESULTS

The main expected results are:

- A database representing the historical conditions of past flood events at the West Portuguese coast;
- The identification of the coastal typologies, connecting flood hazard and impacts, that characterize the West Portuguese coast;
- A multi-source methodology for flood hazard prediction;
- The conceptualization and operation of a real-time flood emergency system;
- The assessment of communities' resilience gaps and adapted good practices; proposal of validated tools for improving preparedness, mitigation, response and rehabilitation.

