# Climate change: impacts on extreme hydrological phenomena in Portugal

**Summary**

Climate change is expected to result in increased frequency and magnitude of extreme hydrological events (e.g., droughts and floods) and exacerbate their respective impacts. Regions such as Continental Portugal, characterized by pronounced hydrological irregularity, are particularly sensitive to these phenomena. Therefore, the project aims to assess the effects of climate change in Portugal by studying the behavior of extreme precipitation, analyzing the performance of regional models of short-duration precipitation, and studying floods under climate scenarios, as a way of contributing to the management of surface water resources.

The project will utilize statistical analysis to identify trends, Intensity-Duration-Frequency (IDF) curves to validate regional models, machine learning algorithms, and Geographic Information Systems (GIS) tools for flood analysis under climate scenarios. It is anticipated that this project will contribute to decision-making regarding climate change.

**Keywords**

Climate indices, trends, regional models, machine learning.


**PhD student**
Carla Larissa Fonseca da Silva

**PhD program**
Civil Engineering (IST, University of Lisbon)

**Supervisor**
Manuela Portela (CERIS, IST, University of Lisbon)

**Co-supervisor**
José Pedro Matos (CERIS, IST, University of Lisbon)

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