

# **Multidisciplinary expertise of historical information for the characterization of water levels during storm and coastal flooding events**

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Characterization of coastal water level reached during extreme events is a strong societal concern for a better coastal risk management. Historical archives related to storms and floodings are still not often considered whereas they could be used to improve knowledge on extreme sea levels. In this context, the French Working Group (WG) “Historical Storms and Floodings” performs a multidisciplinary expertise of historical information.

A big challenge in such an approach is the management of information coming from various scientific contexts and practices, e.g. historical tide gauge observations, local press, scientific essays, eye-witness testimonies. These issues, the way there are addressed and the tools created within this working group are presented.

The database “Historical Storms and Floodings” aims at inventorying qualitative and quantitative information on extreme events that occurred on the Channel and Atlantic coastlines. Currently, over 1500 sources describing more than 750 events are outlined for the period from the 16th century up to now, the DB is continuously enriched by new information.

Also, water and surge levels are important variables of interest for the WG members. Often not directly available in historic sources, a multidisciplinary expertise of the information is performed to estimate extreme water levels reached. For this purpose, the information in the database is expanded with complementary data, such as historical city maps, profiles of the flooded dikes etc. All this data is then used to reconstruct historical water levels and resumed in storm sheets.