Historical flash flood impact in Mallorca and its future evolution.

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Historical and current spatial flash floods distribution.

The evolution of floods patterns in Mallorca has changed historically, due to social and territorial changes. Factors such as the newest urbanized areas and the use of the coast for touristic activities are key for these changes. Factors as intensity, frequency and spatial location for historical and current floods have been analyzed. Flood typologies have been established and evolution factors have been studied. Impact of man activities is the key to the evolution of the location of the main flood locations since the 1960’s.

Identification of flood events from documentary sources (1229-1900)

Clustering of events into categories

Cartographical location of historical flood events

Comparison of historical and current distribution of flood-prone areas

Analysis of the causes of change in the territorial distribution of floods

The flood hazard has increased due to negligent building procedures, induced mainly by the tourism industry. The increase of population caused by the tourism has led to occupy flood-prone areas for building residential and leisure spaces.

Urban growth has occupied floodplains regardless of former overflow events and the construction of infrastructure such as roads also effects helping the flood of urban spaces (Grimalt, 2001). The continued development pressure will likely lead to increased risk cases in the near future.

Furthermore, the climatic change opens an uncertain future of flash-flood impact as an increase of precipitation of high intensity is expected, precipitation having a great influence in the generation of floods.

Future perspectives

In conclusion, recent flash-flood events and the future prospects lead to the perception that there will be an increase of the flooding cases in urban areas of Mallorca. Plans to act have been created by authorities but there are failures, specially as the population does not assume or know the existing risk (Rosselló, 2009).

References


Methodology

Identification of flood events from documentary sources (1229-1900)

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The poster analyzes the flood impact in Mallorca from an historical perspective with a focus on the latest events and its future evolution. A change in the location of the main flood events since the 20th century as well as a change on the impacts related to floods has been found. The impact has changed from low cost effects on agricultural areas to expensive damages affecting public and private buildings as well as roads, bridges and touristic resources, specially in the coast. The future evolution shows a possible increase of the flood events and its impact as the use of flood-prone areas has increased due to the population growth and the expansion of urbanized land.