

Floods in future climates - process and statistical issues

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Abstract:

The subject of resolving whether floods in future climate will change in frequency and magnitude is discussed. Changes in climate are likely to affect the driving forces particularly precipitation, the flood processes themselves as many flood processes are temperature sensitive changing the frequency of rain on snow and snowmelt events, and the landscape upon which these take place - changes which are difficult to incorporate adequately in hydrological models. There are three central themes to this issue: detecting changes in extremes; detecting changes in flood processes; and modeling floods processes in future climates. The paper will present both a process view and a statistical view of these issues.