



Decadal variability in Floods and Extreme Rainfall

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Decadal variability in climate extremes associated with floods is of particular interest for infrastructure development and for insurance programs. From an analysis of US data we note that changes in insurance rates and in the construction of flood control infrastructure emerge soon after a period where there is a high incidence of regional flooding. This leads to the question of whether there is clustering in the incidence of anomalous flooding (or its absence) at decadal scales. The direct examination of this question from streamflow data is often clouded by the modification of flows by the construction of dams and other infrastructure to control floods, especially over a large river basin. Consequently, we explore the answer to this question through the analysis of both extreme rainfall and flood records. Spectral and time domain methods are used to identify the nature of decadal variability and its potential links to large scale climate.