



## **Development of a flood index for Ireland**

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Anthropogenic greenhouse gas induced climate change is expected to intensify the global hydrological cycle, leading to increased magnitude and frequency of floods; hence increasing the physical hazard component of flood risk. However, at regional scales the influence of natural large-scale climate variability often dominates and has been linked to periods of enhanced/reduced flooding. This is problematic for assessing trends in flood time-series as observed data at daily/sub-daily resolution are often too short and hence detected changes reflect a snap-shot of climate variability rather than evidence of long-term climate change. This study presents initial results extending a flood index developed in the UK to the Irish domain. First, areas that reflect similar extreme precipitation generating mechanisms are identified in order to group streamflow stations into a number of distinct regions. An objective weather classification scheme is then used to reconstruct the atmospheric drivers of fluvial flood occurrence over multi-decadal time-scales; allowing for the analysis of which weather types are relatively flood-rich/flood-poor. This index can then be used to place short term fluctuations in flooding in context of longer term variations.