

## Drought Characterisation and the Application of Indices in UK Water Resource Management

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Drought is a complex phenomenon, occurring in most climatic zones, including both high and low rainfall regions. Recent drought events (2004-2006 & 2010-2012) in the UK have highlighted a continued vulnerability to this hazard. The period 2010-2012 was characterised by departures from typical seasonal climatic conditions, resulting in a severe drought, which had a significant impact on water resources in parts of the UK. Recent droughts highlight the need for better understanding of extreme drought events, particularly from a water resource perspective. The UK has a wealth of long climate series that are under used for water resource management planning. Standardised drought indicators offer a potential monitoring and management tool for operational water resource management. However, the application of these metrics for operational water resource management needs further investigation, particularly links between meteorological drought indices, streamflow, groundwater and water supply systems. This work uses standardised drought indices to investigate the propagation from meteorological drought to hydrological drought using observed data from rivers, aquifers and reservoirs 2013 within a 21,000km<sup>2</sup> water supply region serving 7.4 million people. In order to develop a better understanding of the links between drought indices and observed drought impacts. Exploring how meteorological drought indicators link to the water supply region helps build an understanding of their utility for water resource management.