An event classification approach to the identification of hydrological change

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There are many model studies of the change in catchment hydrological reponse to change in land use or management, but very few where change has been demonstrated in the observed record. This is partly because of errors and inconsistencies in the hydrological data, and partly due to natural variability in the hydrological forcing. In looking for change in catchments in the UK (75 - 1134 km^2) we have found that it is difficult to identify significant long term trends in discharges, and that year to year variability dominates any trends in model parameters. It is possible that only certain combinations of antecendent condsitions and rainfall patterns might be sensitive to changes. Thus rather than analysing complete time series we have classified events and analysed groups of similar events. The resulting model parameters for the different groups remain uncertain, but for some of the classes of events, do seem to show some changes.