

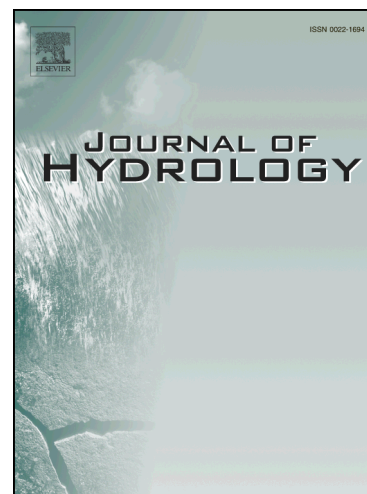
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Declines in the dissolved organic carbon (DOC) concentration and flux from the UK

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Abstract

Increased concentrations of dissolved organic carbon (DOC) have been reported for many catchments across the northern hemisphere. Hypotheses to explain the increase have varied (eg. increasing air temperature or recovery from acidification) but one test of alternative hypotheses is the trend over the recent decade, with the competing hypotheses predicting: continuing increase; the rate of increase declining with time; and even decrease in concentration. In this study, records of DOC concentration in non-tidal rivers across the UK were examined for the period 2003 to 2012. The study found that:

- i) Of the 62 decade-long concentration trends that could be examined, 3 showed a significant increase, 17 experienced no significant change and 42 showed a significant decrease; in 28 of the 42 significant decreases, a significant step change was apparent with step changes being a decrease in concentration in every case.

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