

WATER QUALITY TRENDS IN 17 EUROPEAN CATCHMENTS

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ABSTRACT

One major research challenge in the EU 5th FP EUROHARP project is to apply trend analysis to test for significant trends in measured concentrations of nitrogen and phosphorus at river stations in 17 European catchments. Trend analysis of water and nutrient concentrations is an integrated part of a pressure/impact analysis of river basins. Natural and anthropogenic trends in the data can be detected and related to any changes in climate or nutrient discharges from point or non-point sources. The applied trend method is based on the Kendall seasonal trend test, a robust non-parametric statistical method suitable for water quality data. The nutrient concentrations are adjusted for discharge before the analysis in order to minimise the impact from climate. Furthermore trends in discharge are analysed as well. This poster presents the results of the trend analysis of concentrations of nitrogen and phosphorus and of the discharge measured at several river stations in 17 European catchments involved in the EUROHARP project. These results will be discussed and related to catchment properties such as population density, land use, soil type etc.

KEYWORDS: Nitrogen, phosphorus, trend analysis, non-parametric statistical method, European catchments.