

MODELING SEASONAL EXPORT AND RETENTION OF NUTRIENTS IN EUROPEAN CATCHMENTS.

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ABSTRACT

In the abatement of eutrophication of standing waters management of sources and transport of nutrients in river catchments is crucial. However the transport of nitrogen and phosphorus can vary significantly among (sub) catchments as a result of different physical, chemical and biotic factors. Qualitative and quantitative differences in nutrient pathways within catchments hamper the application of common standards and reliable prediction of the effect of nutrient loads. The EU-project BUFFER is set up to provide a tool which describes the relation between catchment properties and activities resulting in nutrient loads on one hand, and the ecological state of the receiving lakes on the other hand. To support this a new model-concept is developed that describes the transport and retention of nutrients in running waters (De Klein, 2002). The calculation requires minimum input data and generates output on a seasonal basis. The model was so far applied to Dutch catchments. This paper presents the extension and verification of the model, based on data of intensively studied catchments within the BUFFER-project. This implies the method can be applied to a wider range of European catchments.