

Home

Online Library HESS

- Recent Final Revised Papers
- [Volumes and Issues](#)
- Special Issues
- Library Search
- Title and Author Search

Online Library HESSD

Alerts & RSS Feeds

General Information

Submission

Review

Production

Subscription

Comment on a Paper

Impact
Factor
2.270

ISI
indexed



[Volumes and Issues](#) [Contents of Issue 3](#)

Hydrol. Earth Syst. Sci., 6, 315-324, 2002
www.hydrol-earth-syst-sci.net/6/315/2002/

© Author(s) 2002. This work is licensed
under a Creative Commons License.

European nitrogen policies, nitrate in rivers and the use of the INCA model

R. Skeffington

Aquatic Environments Research Group, Dept of Geography, University of Reading,
PO Box 227, Reading RG6 6AB, UK

Email: Richard.skeffington@virgin.net

Abstract. This paper is concerned with nitrogen inputs to European catchments, how they are likely to change in future, and the implications for the INCA model. National N budgets show that the fifteen countries currently in the European Union (the EU-15 countries) probably have positive N balances – that is, N inputs exceed outputs. The major sources are atmospheric deposition, fertilisers and animal feed, the relative importance of which varies between countries. The magnitude of the fluxes which determine the transport and retention of N in catchments is also very variable in both space and time. The most important of these fluxes are parameterised directly or indirectly in the INCA Model, though it is doubtful whether the present version of the model is flexible enough to encompass short-term (daily) variations in inputs or longer-term (decadal) changes in soil parameters. As an aid to predicting future changes in deposition, international legislation relating to atmospheric N inputs and nitrate in rivers is reviewed briefly. Atmospheric N deposition and fertiliser use are likely to decrease over the next 10 years, but probably not sufficiently to balance national N budgets.

Keywords: nitrogen deposition, nitrogen fertilisers, nitrogen budgets, nitrogen balance, nitrate leaching, INCA Model, environmental legislation, EU directives, air pollution, water pollution

[Final Revised Paper](#) (PDF, 673 KB)

Citation: Skeffington, R.: European nitrogen policies, nitrate in rivers and the use of the INCA model, Hydrol. Earth Syst. Sci., 6, 315-324, 2002. [Bibtex](#) [EndNote](#) [Reference Manager](#)

Copernicus Publications
The Innovative Open Access Publisher

Search HESS

Library Search [»](#)

Author Search [»](#)

News

- [New Service Charges](#)
- [Financial Support for Authors](#)
- [ISI Impact Factor: 2.270](#)

Recent Papers

01 | HESSD, 17 Mar 2009:
A general real-time
formulation for multi-rate
mass transfer problems

02 | HESSD, 16 Mar 2009:
Calibration of a crop model
to irrigated water use using a
genetic algorithm

03 | HESSD, 16 Mar 2009:
A Bayesian approach to
estimate sensible and latent
heat over vegetation

04 | HESS, 13 Mar 2009:
Soil moisture retrieval
through a merging of multi-