

Interactive comment on “The influence of model grid resolution on estimation of national scale nitrogen deposition and exceedance of critical levels” by A. J. Dore et al.

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Received and published: 8 March 2012

Response to Reviewer # 3

- The title is not precisely reflecting the main subject of the manuscript which is addressed to exceedance of critical loads instead of critical levels. The title of the paper was corrected to: “The Influence of Model Grid Resolution on Estimation of National Scale Nitrogen Deposition and Exceedance of Critical Loads”

- On top of the page 12082 I would suggest to add point 3. with a definition what exceedance of critical load means to ecosystems according to (UBA, 2004).

C6006

The following definition is given: Critical loads of nutrient nitrogen can be defined as “the highest deposition of nitrogen (as NH_x and/or NO_y) below which harmful effects in ecosystem structure and function do not occur according to present knowledge.” (UBA, 2004).

- On page 12082 line 10 I would introduce a message that for all the following text the term nitrogen critical load will hold for experimental critical load of nitrogen only, for clarity.

The following statement was added: “This approach, based on experimental data, has been adopted to set the critical loads referred to in this study”

- I would suggest to revise the wording in line 23 of page 12094 to the following: “: : : for local studies on acidifying and eutrophying effects of nitrogen deposition : : :” The text was revised accordingly

Interactive comment on Biogeosciences Discuss., 8, 12079, 2011.

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