

Interactive comment on “Regional analysis of groundwater nitrate concentrations and trends in Denmark in regard to agricultural influence” by B. Hansen et al.

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Received and published: 29 June 2012

Author response to Anonymous Referee #1

First off all we want to thank for your valuable and positive comments to our paper.

Here come responses to specific section and figures:

Section 2.6: More information on the regional N surplus is now given by adding the following sentence in the end of section 2.6: “In this way an approximately N surplus in each geo-region is found. However, this might differ from the “true” N surplus in the geo-region for example due to different distribution of livestock and individual farming

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practices in each region.”

Fig. 2.: The 3 figures in Fig.2 a-c has been enlarged og are now in colours in order to make them more readable.

Fig. 3.: We think it is important to show all the lines in Fig. 3. Therefore the figure is now in colours in order to be able to recognize all the lines.

P 5323 r 18: The “polemic “sentence has been changed to: “The production of nitrogen fertilizers has been the main reason for the increase in world crop productivity, thus supporting the human population growth”

P 5331 r 9: The following sentence is now included in section 2.2 in order to define the redox interface: “The redox interface divides the upper nitrate containing zones from the reduced zone.” In section 3.1 “nitrate interface” has been corrected to “redox interface”. The last sentence has been improved and changed to: “Widespread pollution of groundwater with nitrate is therefore likely to be found where the redox interface has penetrated deeply into the soil layers (see Fig. 1.)”

P 5332 r 7: “Mowing average” has been changed to “moving average”.

P 5334 r 15: “reduced nitrate leaching” has been changed to the more correctly “reduced N surplus ...”

P 5335 r 9-11: “evidenced” has been changed to the more correctly “strongly indicated”.

All the changes are included in the revised version of the manuscript shown in “Figures” and “Supplement”.

Please also note the supplement to this comment:

<http://www.biogeosciences-discuss.net/9/C2191/2012/bgd-9-C2191-2012-supplement.pdf>

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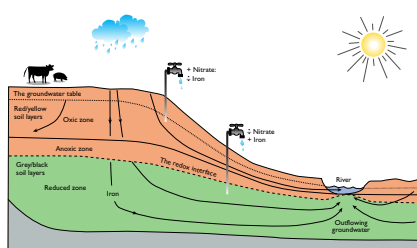


Fig. 1.

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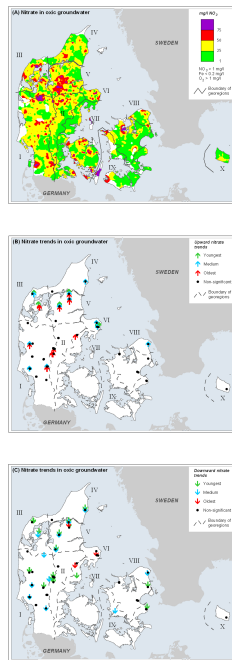


Fig. 2.

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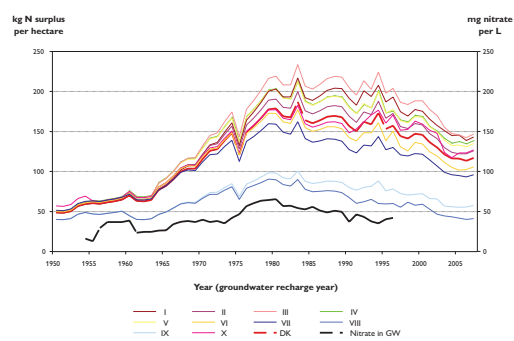


Fig. 3.

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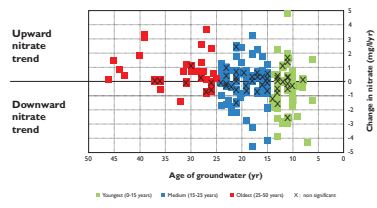


Fig. 4.

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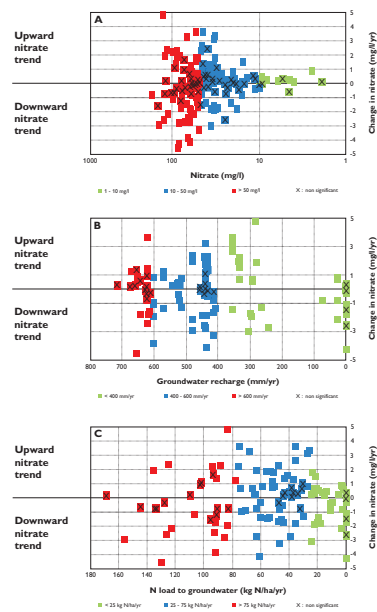


Fig. 5.

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