

## ***Interactive comment on “Nitrogen food-print: N use and N cascade from livestock systems in relation to pork, beef and milk supply to Paris” by P. Chatzimpiros and S. Barles***

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Dear Sanderine Nonhebel, Thank you for your comments on the revised version of the manuscript. Please find hereafter a point-by-point reply to these comments.

“First of all: the title is confusing. Suggestion: Nitrogen food-print: N-use related to French food consumption.”

Answer: We changed the title to ‘Nitrogen food-print: N use related to meat and dairy consumption in France’.

“The paper is still a bit confusing about whether it is analyzing the Paris footprint or the

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average France one. They use the average data so in principle it is the average France footprint, and the situation in Paris is only emerging at the end in the discussion. But then the remark that the footprint is twice as high as the discharge of urban waste water, which is an important finding is only mentioned but not worked out.”

Answer: We totally agree with your point. We recognize that our results primarily addressed average consumption in France and that applying these results to Paris was of no particular interest. Conformingly to the new title, the paper now focuses on average N food-print for milk and meat consumption in France. The text and figures are changed accordingly. Note that the figures 1 and 2 now show meat and milk production in France instead of the shares of these products imports to Paris. The remark that the food-print is twice as high as the N discharge in urban waste water is a general remark (not specific for Paris) and is therefore conserved.

“Further the last page of the discussion several options to reduce footprint are mentioned. However the paper only describes the present situation. Only when the emissions of these changed situations are calculated one can indicate options for change. Example in the discussion suddenly attention is paid to organic farming in the Seine river basin. However the paper never addresses the differences between organic and conventional farming, nor the emissions related to organic farming. Based on the result of the paper one can only say that options to reduce emissions are worthwhile studying.”

Answer: We recognize that the effectiveness of the options mentioned for N loss reduction is not supported by specific calculations. However, these options are discussed on the basis of information from literature. We choose not to draw specific conclusions from them. Organic farming is mentioned as an option but, we draw attention on the fact that practices other than organic farming are also likely to reduce N losses. Those options are worth it to be studied in detail.

“Further the paper is still a bit bulky: a part of the information can be left out without

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affecting the argument or the results. For instance on page 5: the discussion on the work of Billen does not contribute to the research at all. The heading with table 3 should be improved.Âž

Answer : The new version of the paper is shorter. In the Methods section, we removed the discussion on the work of Billen et al concerning the localization of urban imports. Some paragraphs in the discussion/conclusion section are also shortened and simplified. The heading with table 3 is changed to : 'Table 3: NUE in feed production and NCE of livestock for beef, milk and pork production. All numbers are in %.' We hope that this heading is adequate.

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