

## ***Interactive comment on “Localising the nitrogen imprint of the Paris food supply: the potential of organic farming and changes in human diet” by G. Billen et al.***

**Anonymous Referee #2**

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### 1) General comments:

This paper provides a great look at the potential of sustainable food systems to provide food for an area. More specifically, it analyzes whether local food, organic food, and/or dietary changes would still allow a region to be productive enough. Additional parameters measuring the environmental impacts (nitrogen surplus and water quality) show the environmental benefits of these sustainable systems. Overall, this paper is a useful contribution to science and provides the basis for similar calculations to be completed for other regions.

### 2) Specific comments/questions:

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1. What agricultural system was used for these calculations? Is it assumed that there is average conventional food production throughout the Seine watershed, or is the variation in food production systems considered?

2. Is food waste at the consumer level considered? If not, it could be mentioned that reducing food waste would reduce the amount of food required by Paris, allowing for more exports from the Seine watershed.

Page 10983, Line 12 – A definition of départements would be useful

Page 10985, Lines 10-13 – More information on the N surplus calculation would be useful, including data sources and assumptions. Additionally, it would be helpful to have a statement saying that all N used in food production that is not in the crop product is lost to the environment.

Page 10988, Lines 18-22 – What is the N surplus of the scenarios?

Page 10998, Figure 2B – It is mentioned that data for organic farms are shown as open symbols, but I do not see any of these on the graph.

### 3) Technical corrections:

Page 10981, Line 7 – “Food-miles” should be “Food-Miles” for consistency with the rest of the paper

Page 10981, Line 21 – Remove “the” before “the North America”

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Interactive comment on Biogeosciences Discuss., 8, 10979, 2011.

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