Reviewer's report

Title: Reducing GHG emissions while improving diet quality: exploring the potential of reduced meat, cheese and alcoholic and soft drinks consumption at specific moments during the day

Version: 0 Date: 06 Jun 2017

Reviewer: Rebecca McLaren

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I disagree with the wording throughout that these are relatively small dietary changes. Eliminating 50 to 75% of red and processed meat at dinner and replacing 50 to 100% of most drinks with tap water are large dietary changes.

The scenarios specified what drinks and cheese would be replaced with but red and processed meat were just eliminated. If people are eating large amounts of meat at dinner, they are not going to just eliminate it but will instead replace it and what they replace it with will determine the change in GHG emissions. Therefore, presenting the change as a pure elimination is overstating the impact. The discussion does mention this but it would be better to make this clearer. It might also be useful to have a few alternatives with the resulting changes in GHG emissions such as what it would be if red and processed meat were replaced with chicken or tofu.

GHG emissions are not synonymous with water and land use. This was mentioned in the discussion but the paper would benefit from expanding upon this.

There are often trade-offs between the environment and nutrition. The paper looks at very broad categories of calories and macronutrients but does not discuss micronutrients at all. People are eating enough meat even in the meat75 scenario to get sufficient protein but what about micronutrients like iron and zinc?

What are the other effects of these substitutions and eliminations? What is the cost difference between cheese and peanut butter, nuts, or cherry tomatoes? What about food preferences? Do people in the Netherlands like and eat these alternatives? Also there is a big difference in nutrition between nuts and cherry tomatoes, how is that taken into account?

The paper stresses that the substitutions and eliminations are only for specific time periods such as between meals or at dinner. However, this might lead to people shifting consumption to other times such as eating more meat at lunch. This could decrease the impact.
The issue of behavior change is a big one. The paper acknowledges this and states that it is meant to be informative for what changes should be recommended but with the discussion about people not wanting to change their diets, how willing will they be to reduce or eliminate soda, cheese, and meat?

The paper suggests possibly extending these recommendations to the entire population. This should be done with caution in case people in the lower groups aren't getting enough calories, protein, or micronutrients in which case eliminating 50 to 75% of their red and processed meat consumption might be a problem unless it is replaced with something with sufficient nutritional value.

For the group demographics, income would be useful to include if possible. Also I may have missed it, but I didn't see a definition of low education.

Are the methods appropriate and well described?  
If not, please specify what is required in your comments to the authors.  
Yes

Does the work include the necessary controls?  
If not, please specify which controls are required in your comments to the authors.  
Yes

Are the conclusions drawn adequately supported by the data shown?  
If not, please explain in your comments to the authors.  
Yes

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