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: 2 Date: 21 Dec 2017

Reviewer: Christina Pollard

Reviewer's report:

This research explores and important questions, that is the impact of adjustments of current habitual dietary patterns of high GHG consumers to improve diet quality and at the same time reduce GHG emissions. The methodology is rigorous and the assumptions for cut offs appropriate. The findings are of interest and demonstrate plausible improvements in GHG emissions with dietary changes consistent with dietary recommendations.

I agree that there should be a comment about the difficulty of achieving dietary change. I think the authors should include a statement regarding the potential of strategies to communicate coupling the benefit to the health of the planet and the individual as they are likely to have some merit as they may appeal to different segments of the population. The future sustainability of the food supply is an important consideration for dietary guideline recommendations. The authors could recommend that dietary guideline committees consider including a dietary guideline that advices that following the advice of the dietary guidelines is beneficial to the health of the individual and the planet or something to this effect.

The iron finding is curious for the replacement of alcohol and soft drink with water. Perhaps the source of iron was vitamin waters and sports drinks supplemented with iron? I think that this source of iron is unlikely to be highly bioavailable either?

Given the increasing evidence for discouraging alcohol consumption, related to classification as a class one carcinogen by the AIRC and the WHO, I think that the authors should strengthen and include an additional comment regarding the inappropriateness of either alcohol or soft drink as sources of dietary iron and the need to source these foods from nutritious intact foods that also provide other essential nutrients.

The second sentence of the conclusion should include reference to health benefit. eg. these dietary changes are beneficial to health as they also lower SFA and sugar intake while protein intake remains adequate.
And the last sentence should read "For population subgroups whose TOTAL DIETARY ENERGY INAKE is below the recommended level as a result of the changes, additional low GHG nutritious foods are likely to be needed in order to meet DIETARY energy and iron requirements.

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.

Unable to assess

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

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
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