

Interactive comment on “Groundwater nitrate concentration evolution under climate change and agricultural adaptation scenarios: Prince Edward Island, Canada” by D. Paradis et al.

M. Crucifix (Editor)

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I would like to thank the two reviewers for their thoughtful assessments of this manuscript, as well as the authors for this interesting contribution. The conclusions of the referees largely bisect with my own assessment, that is:

1. This is an original and overall well designed contribution, which will be acceptable for publication in Earth System Dynamics. Both reviewers confirm the relevance and quality of the material presented here.
2. The GCMs used here are not quite the latest generation. Reviewer A. Shepherd
C687

also notes that crop data are rather old. I do not see any of these being a major issue, but possible shortcomings should nevertheless be discussed, and this discussion requires somehow an inspection of the most recent available datasets.

3. The study unavoidably requires a number of subjective decisions about scenario and other hypotheses. Uncertainties associated with these decisions should be better discussed.
4. The challenge is to address these comments without increasing the manuscript length. In other words the barycenter of the manuscript must be shifted towards the discussion and analysis sections. One solution is indeed to revise the number of citations (though it is not so overwhelming). Line-by-line edition targeting communication efficiency may substantially enhance the quality of the manuscript.
5. Abstract is sound and informative. Figures are well-designed and legible, except perhaps Figure 7, because the various shades of blue are not immediately recognisable on the Figure itself.

You may therefore proceed to the revision of the manuscript at your earliest convenience, and reply to both referees.

Sincerely,

Michel Crucifix
ESD Editor.

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