PAN-19-05-070

Simple principles for engineering reproducible solutions to environmental management challenges.

October 16th, 2019

Dear Professor Rosemary Hails,

Thank you for the opportunity to revise this manuscript. We are super excited to potentially contribute to the discourse and ideas in People and Nature. We are confident that the revised version provides a better grounding for the reader in evidence-informed decisions and environmental management including scientific coproduction. We were hopeful that this manuscript would thrive in a shorter, punchier format similar to the 'Ten Simple Rules' papers pioneered and published in PLOS Computational Biology (i.e. over 100 papers now). However, in emulating that style of writing including a brief preamble, the rules or principles, and implications, we did make assumptions about the readership. We have now added the suggested wider scope in the implications section to better scaffold and frame how to use these ideas. We also added contemporary citations for the reader on these issues for those interested in a deeper dive into evidence-informed processes.

Thank you again for the opportunity and for the positive reviews.

Warm regards, Christopher Lortie.

List of revisions

Major revisions

Three major revisions were proposed.

- 1. Describe and cite current literature on coproduction of scientific knowledge.
- 2. Explain how principles can be translated into action.
- 3. Provide clear and easy text.
- > We have extensively revised the manuscript to address all three of these suggestions in full. Thank you!!

Minor revisions

Referee 1.

p2 line 92-93 explain that 'others' are not only recipients of scientific knowledge but relevant stakeholders in the knowledge production/dissemination processes

> Absolutely true. We have explained this now.

Revise implications section to include scientific co-production

> Agreed - we have added this idea and relevant citations for the reader. This is an important implication and alternative mode of knowledge production.

Mention social consequences of any/all interventions for environmental managers.

> Excellent point. We added a nice contemporary example to highlight this point.

Widen the scope (in implications)

> complete. thanks!

Referee 2.

Revise writing in spots to make more direct.

lines 9-11...generate meaningful leverage points or opportunities to induce change in coupled natural-human systems.

> revised

line 163 decisioning for natural resources

> OK - I love the word decisioning but ok we can change.

line 20 delete vast pool of

> deleted

line 29 how make your...

> revised to be more direct

General suggestion to edit

> thanks, and ok, we gave it a solid edit.

Thank you again for your suggested revisions! Best,

Christopher and Malory.