Subject: RE: Conservation planning in the face of Anthropocene risk
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Date: 2020-01-09, 14:38
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Thank you Richard et al.,

This is very interesting and hugely ambitious. I have not comprehended all that I'd need to to comment in detail. However, I think the foundations of the analysis, spp selection and approach seems good to me, and the multi-level optimization using diverse costs is very interesting. I have offered some small marginal comments on framing early on.

I sense in particular that more care is need to carefully develop and define 'socio-political risk' because it is vague an not clearly quantifiable on first mention, and I was not able to see what World Bank indexes you used, or combined, in your pilot runs. My particular comment in Methods after looking at the link is: Whilst I do think one can re-name and define 'risk' in many ways appropriate to the problem generally described, as a reader I am unclear how that is being done here, how the 'units' of risk as envisioned are linked to 'costs' valued monetarily, etc.

I think all this can reasonably be done, but I suspect one will need to think a) carefully about this; b) offer a clear rationale for metrics selected, and c) estimate results over perhaps 3 semi-independent measures of human well-being/risk to be able to address inevitable questions on this account, and perhaps present a fuller view of the issue using 'risk' indexes compatible with those likely held by a range of inter-disciplinary planners. I'm also happy to help as Chris Barrett and I considered these indicators and others in modeling risk of conservation failures in Serengeti and ICDPs generally in the late 90's.

Regarding:
1) Is the current approach sound or do you think we need to tweak things?

I think it needs to be very clearly stated how the multi-level optimization values costs and benefits were derived, what specific indexes were used (and why), and I think given many view of risk in the Lit, that it may be advisable to develop 3-4 similar but independent estimates of 'risk' to ask how they may correspond or not.

In the economic/resource harvest lit, people calculate the Pareto Frontier, but often in 2D. However, this can also done for multi-dimensional problems, and I bet some reviewers will expect to see those here.

2) Do you have ideas on how to best present the results? (a summary table is included on Line 101, which shows how much land each approach would require; the attached csv file shows how many 100x100km cells were selected per country in each of the eight scenarios investigated)

Lots of options - one might be a 'star' diagram with countries listed in alphabetical order around edge of circle/star, and then have lines indicating current and necessary increase to reach 30%.

More dramatic/interesting might be to arrange countries vertically by GDP or CPP (consumer purchasing power) and use bars headed to right that show area protected, and increase necessary.

3) Could you express your interest in joining a group call to discuss this is more detail?

Yes, and happy to chat off-line anytime!

CHeers, p

Attachments:

global_risk_ms_pa.docx	46.9 KB