ERABrazil Biodiversity Methodology for Keystone Species Stewardship

Regen Network Internal Review

July 11th, 2022

Reviewers: Ned Horning, Gisel Booman, Sam Bennetts

Summary of Internal Review Process

The intent of the Regen Registry Internal Review is to ensure methodologies submitted to the Regen Registry meet the integrity expected by our community and ensure the document is sufficient to warrant review by Expert Peer Reviewers.The task of an Internal Reviewer is to act as an ally to methodology developers by providing critical feedback to help facilitate an understanding of how to improve the methodology to best serve Earth Stewards while maintaining scientific and community integrity.

The Regen Network Science Team has reviewed the ERABrazil Biodiversity Methodology and Jaguar Species Guideline to facilitate the creation of a strong methodology which can be submitted to External Peer Reviewers. Our feedback has been provided in three ways:

1) **Direct Comments**: To provide targeted constructive feedback to specific sections of your methodology, our team commented directly in your methodology document on what we found confusing, thought needed more definition, or what we thought was out of scope for this methodology. The comments can be found in the following document: ERA Biodiversity Methodology (18.06.2022) Internal Review.docx

2) **Overall Reflections**: To provide more generalized feedback to your methodology as a whole, our team provided the additional reflections in this document. Reflections were categorized by reviewers, each of whom had different thoughts on how to improve the methodology. A final combined summary of comments, feedback and suggestions is found in the Combined Summary section.

Reviewer 1 - Ned Horning

General Comments

This is an improvement over the previous methodology. It is definitely going in the right direction. The main criticism I have is that you are trying to create a general methodology for all mammal and bird keystone species and that is very, very difficult if not impossible. I strongly suggest focusing on a Jaguar Keystone Species Stewardship methodology. That is what you have experience with and it can be used as a model for other keystone species methodologies without having to acknowledge and address the tremendous variability in ecosystems that keystone species can exist in. After you have a jaguar methodology you could consider writing something more general.

It seems like the methodology is somewhere between practice-based and outcome based. To be practice-based it is necessary to have a well defined practice that will have a positive or stabilizing impact on ecosystem function. The work is focused on monitoring which is important but some content is needed to explicitly define how monitoring data will be used and how that will contribute to improving or maintaining ecosystem function. Again, this will be much easier if the focus is on jaguars as a keystone species.

Regardless of how you decide to proceed, you will need to improve the Ecosystem Health section (section 5).

Sections 8 and 9 need input from Regen Registry folks. I do not understand why you mention "Biodiversity tokens, as per the guidelines of this Methodology, are not credits". This needs to be explained.

Comments by Sections

Most of my comments are in the text.

Methodology Overview:
This section gave a good overview of the methodology but there could be a little more (a couple sentences) about data collection/analysis and how that can/should fit into land management.

Project Eligibility:
I made minor comments in the document.

Project Area Boundary:
Some explanation about why it's necessary to define a project and habitat area would be helpful.

Evaluating Keystone Species Health And Developing A Monitoring Plan:
I made some comments in the document. In general it is difficult to develop broad keystone species health indicators. Developing indicators for jaguars will be easier.

Evaluating Ecosystem Health And Development Of The Remote Sensing Monitoring Plan:
This section needs more work. Focusing on jaguars will make the task easier but more thought needs to go into selecting ecosystem health metrics that are important. I put several comments in the document.

Keystone Species Guidelines Assessment And Application:
Biodiversity Tokens Issuance:
I made minor comments in the document but in general I think it would be best to narrow the focus to the case of jaguars as a keystone species and perhaps provide overall guidance to help methodology developers adapt a jaguar methodology to another species.

Validation And Verification:
This needs input from Regen Registry.

Biodiversity Claims And Token Retirement Rules:
This needs input from Regen Registry. I think it needs to be clear that when we talk about biodiversity credits or tokens that is an umbrella term. Biodiversity is simply a label for the type or class of credit/token.

Final Decision: - I do not think this is ready for external review. Major revisions are needed before this goes out for expert review.

Reviewer 2 - Gisel Booman:

General Comments:

Well written, well thought out. Really good work here. Well done! In terms of the general scope and titles, I would focus on the keystone species and delete the “biodiversity” part, as biodiversity is not being assessed through this methodology.

Comments by Sections:

Methodology Overview: minor corrections in doc.

Project Eligibility: ok , comments on the text

Project Area Boundary:ok.

Evaluating Keystone Species Health And Developing A Monitoring Plan: I added some comments where I think there needs to be more clarity in the text. For instance, it's not easy to understand how the changes in the population size would be accounted for and scored, given the score of 0.25 seems to be a fixed value. I wonder how this checks up, is it that if SP increases over time (supposing the SP is low in the baseline) then this score is 0.25 , but if at any point in time it stops increasing and still below the optimal threshold then it scores 0? I believe some examples to run the math would also be useful for the final formulas.

Evaluating Ecosystem Health And Development Of The Remote Sensing Monitoring Plan:
This section looks ok, I would just suggest that the values for NDVI should be set depending on the ecosystem type at least. Also, EVI or other RS products could also be considered as alternatives for NPP proxies. My main takeaway is that this section is appropriate for the jaguar but not as general as would be required for a general methodology for the different keystone species from different ecosystem types.

Keystone Species Guidelines Assessment And Application:
Biodiversity Tokens Issuance: I would benefit from some examples (hypothetical) to check the math here.

Validation And Verification:ok

Biodiversity Claims And Token Retirement Rules:-not my area-

Final Decision: - Pass with minor revision, potential shift to become specific for jaguars

Reviewer 3 - Sam Bennetts:

General Comments:

Great job guys! Overall I found the methodology well written and I enjoyed learning more about your approach, which I think makes a lot of sense. When it comes to review, I focused most of my attention on the programmatic elements of the methodology, leaving the scientific review to Ned and Gisel. These included direct comments on the token economics, monitoring, and verification requirements which I think could mostly just benefit from some more detailed explanations.

Combined Summary/Feedback/Suggestions

General Comments:

The Methodology seems to be well thought out, and is well written. Given the simplicity and versatility of the overall approach, we encourage ERA to leverage most of this development for the future generation of a general framework that could be used for the development of Methodologies for any keystone species from any biome type.

Nonetheless, understanding that achieving the right level of generality might take a while, the RND Science team recommends as a next (more immediate) step that this Methodology is set to be specifically targeted to the jaguar, which would unlock the creation of a specific Jaguar Credit Class. Otherwise, the scope could be large Central American felines, for example. A special attention should be given to the ecosystem health indicators so that they hold for any of the potential species to be assessed.