Ref.: Ms. No. FISH12511R1  
Using mechanistic models to assess temporary closure strategies for small scale fisheries  
Fisheries Research  
  
Dear Dr. Wulfing,  
  
The Editor has now studied the revised version of the manuscript FISH12511R1: Using mechanistic models to assess temporary closure strategies for small scale fisheries.  
  
However, before it can be reconsidered for publication, the comments below have to be taken into account. Please explain in the Revision notes how and where the comments have been incorporated in the text.  
  
To submit a revision, please visit <https://www.editorialmanager.com/fisheries/> and log in as an Author. You will see a menu item called Submission Needing Revision. The revised manuscript and the Revision notes can be submitted there.  
  
When submitting your revised manuscript, please ensure that you upload the source files (e.g. Word). Uploading a PDF file at this stage will create delays should your manuscript be finally accepted for publication. If your revised submission does not include the source files, we will contact you to request them.  
  
You are kindly requested to submit your revised manuscript within 4 weeks. If your revision is received after that deadline, it may be treated as a new submission.  
  
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I will look forward to receiving the revised version of your manuscript.  
  
Kind regards,  
  
Felshiya Samuel  
Journal Manager  
Fisheries Research  
[fish@elsevier.com](mailto:fish@elsevier.com)  
  
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Editor's comments:  
  
  
  
Reviewer's Responses to Questions

Note: In order to effectively convey your recommendations for improvement to the author(s), and help editors make well-informed and efficient decisions, we ask you to answer the following specific questions about the manuscript and provide additional suggestions where appropriate.  
  
1. Are the objectives and the rationale of the study clearly stated?  
  
Please provide suggestions to the author(s) on how to improve the clarity of the objectives and rationale of the study. Please number each suggestion so that author(s) can more easily respond.

Reviewer #1: Objectives and rationale are clear yet those objectives and rationale are excessive for the data available for the study.

Reviewer #2: See comments to authors below

2. If applicable, is the application/theory/method/study reported in sufficient detail to allow for its replicability and/or reproducibility?  
  
Please provide suggestions to the author(s) on how to improve the replicability/reproducibility of their study. Please number each suggestion so that the author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:  
Yes [X] No [] N/A []  
Provide further comments here:

Reviewer #2: Mark as appropriate with an X:  
Yes [] No [] N/A []  
Provide further comments here:

3. If applicable, are statistical analyses, controls, sampling mechanism, and statistical reporting (e.g., P-values, CIs, effect sizes) appropriate and well described?  
  
Please clearly indicate if the manuscript requires additional peer review by a statistician. Kindly provide suggestions to the author(s) on how to improve the statistical analyses, controls, sampling mechanism, or statistical reporting. Please number each suggestion so that the author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:  
Yes [] No [X] N/A []  
Provide further comments here:  
The method employed did not yield measures of statistical uncertainty such as standard errors, confidence intervals, or Bayesian credible intervals. This is because there was no likelihood function defined as objetive function during optimization.

Reviewer #2: Mark as appropriate with an X:  
Yes [] No [] N/A []  
Provide further comments here:

4. Could the manuscript benefit from additional tables or figures, or from improving or removing (some of the) existing ones?  
  
Please provide specific suggestions for improvements, removals, or additions of figures or tables. Please number each suggestion so that author(s) can more easily respond.

Reviewer #1: Yes. The ms. would be complete as a methodological innovation article if it added two more applications: one to a data-rich fishery and another to simulated data where the true values of parameters are known.

Reviewer #2: No, this is good

5. If applicable, are the interpretation of results and study conclusions supported by the data?  
  
Please provide suggestions (if needed) to the author(s) on how to improve, tone down, or expand the study interpretations/conclusions. Please number each suggestion so that the author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:  
Yes [] No [X] N/A []  
Provide further comments here:  
The data are very old and limited in scope yet authors make statements about management measures that they claim need to be implemented.

Reviewer #2: Mark as appropriate with an X:  
Yes [] No [] N/A []  
Provide further comments here:

6. Have the authors clearly emphasized the strengths of their study/theory/methods/argument?  
  
Please provide suggestions to the author(s) on how to better emphasize the strengths of their study. Please number each suggestion so that the author(s) can more easily respond.

Reviewer #1: No. Authors need to expand the analysis to more cases to understand the scope and limitations of the method proposed.

Reviewer #2: This is vastly imporved on the first version. See comments to author section below

7. Have the authors clearly stated the limitations of their study/theory/methods/argument?  
  
Please list the limitations that the author(s) need to add or emphasize. Please number each limitation so that author(s) can more easily respond.

Reviewer #1: No. Authors need to expand the analysis to more cases to understand the scope and limitations of the method proposed.

Reviewer #2: The limitations of the stufy are now much better explained

8. Does the manuscript structure, flow or writing need improving (e.g., the addition of subheadings, shortening of text, reorganization of sections, or moving details from one section to another)?  
  
Please provide suggestions to the author(s) on how to improve the manuscript structure and flow. Please number each suggestion so that author(s) can more easily respond.

Reviewer #1: The ms. is generally well written.

Reviewer #2: No this is fine

9. Could the manuscript benefit from language editing?

Reviewer #1: No

Reviewer #2: No

Two reviewers have provided their updated feedback on the revision.  
One had indicated some improvement, though still in need of considerable revision, reviewer #1 still finds the presentation of the paper in regard to the life history information insufficiently decoupled from the conclusions of a stock assessment and thus management implications.  
Please consider all of these detailed comments in a revision, as it will be important for these reviewers to see substantial improvement in the next revision to continue to move ahead.  
  
  
Reviewer #1: See the attached file.  
  
  
Reviewer #2: This is a vast improvement on the previous version of this manuscript that I reviewed and presents the available data in a much more useful format.  
Please revise the penultimate sentence of the abstract "indicating a need for further research into the effectiveness of these fishing closures" the Oliver et al paper documents the fisheries benefits of the closures quite clearly. Either remove this part of the sentence or revise to focus on the population/stock benefits of the closures needs more research.  
e.g. having reviewed the earlier draft of this manuscript I am still struggling with the lack of refences to larval dispersal rates/distance in the abstract and claims that closures can restore the local octopus populations. This is well integrated into the body of the article now but warrants a mention in the abstract.  
I actually think the discussion is much strong er than the abstract in highlighting the utility of the research presented here, and the abstract would benefit from further review to make it clear.  
Line 58-60 I appreciate the addition of more information on LMMAs preceding this sentence as that is the common management measure in the southwest but I still question this link to temporary fishing closures as MPAs. I think this sentence could be deleted as the sentence start on line 61 is much more clearly phrased.  
Line 89 first reference to Andavadoaka. Think this needs more context, eg a small fishing village in southwest Madagascar?  
Line 92 Andavadoaka is not a region. It is a village. A regional reference would be Morombe, or better Toliara.  
Line 93 missing the word closures after temporary  
Line 94. I would prefer stocks instead of populations in this sentence  
Line 104-110 Great I love this reference and wasn't aware of it and that is super exciting . Please revise your use of beyond Moz channel to beyond Madagascar as that is what the article states, and worth mentioning that genetic studies indicate limited genetic flow beyond southern Madagascar even as you note in line 158.  
Line 114 change institution for instituting.  
Line 123 missing a space between be and a  
Line 131-137 there is still some confusion that I can hopefully clarify and I am sorry that the literature you have found is not clear on this. There are 2 types of temporary closure in sw Madagascar. A regional closure for 6 weeks in December and january which covers the entire southwest fishery, so no octopus is bought at all during this time period (does not necessarily mean it isn't caught but certainly the fishing effort will decrease significantly….). And then the community led rotating closures which is where the 25% of the fishing area figure comes in. These have varied from 6 weeks to 7 months, and are now usually held between June-August for a period of 2-3 months with exact dates reviewed every year by the CGP (octopus fishery management committee) depending on buyer availability, tides and community choice. Lines 266-271 seem to capture this much better!  
Line 235 this is super interesting and does add to research around the ideal cadence of closures  
Lines 244-245 Oliver et al show the economic benefits to the communities of the closures, and the management regime including the closures includes price negotiations for open day catch where the buyer is guaranteed a large volume of octopus so they are willing to pay more as their costs are lowered because of the scale of the catch. The current phrasing of 'recovery of the population has been shown to result in economic gains from fishers in the community' does not capture all of this nuance I think  
Line 251-253 this is correct. We assume that they are not selling undersized octopus and would just eat it at home so it does not get recorded in the dataset  
Line 274-276 as noted above there is a need for clarity on the closure types. The regional 6 week closure is the whole fishery. The community led 2-3 month closures are approx 25% of a village's fishing grounds.  
  
  
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At Elsevier, we want to help all our authors to stay safe when publishing. Please be aware of fraudulent messages requesting money in return for the publication of your paper. If you are publishing open access with Elsevier, bear in mind that we will never request payment before the paper has been accepted. We have prepared some guidelines (<https://www.elsevier.com/connect/authors-update/seven-top-tips-on-stopping-apc-scams> ) that you may find helpful, including a short video on Identifying fake acceptance letters (<https://www.youtube.com/watch?v=o5l8thD9XtE> ). Please remember that you can contact Elsevier s Researcher Support team (<https://service.elsevier.com/app/home/supporthub/publishing/>) at any time if you have questions about your manuscript, and you can log into Editorial Manager to check the status of your manuscript (<https://service.elsevier.com/app/answers/detail/a_id/29155/c/10530/supporthub/publishing/kw/status/>).  
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