

Dear Editor,

Enclosed please find our manuscript "A user-friendly tool to evaluate the effectiveness of no-take marine reserves" submitted as a research article to PLOS ONE.

Our manuscript describes and validates MAREA, the first open-access online tool that standardizes the evaluation of no-take marine reserves. Previous work by Pomeroy and colleagues¹ provided biological, socioeconomic, and governance indicators that can be used to evaluate the performance of these important conservation areas. However, our work is the first one to use state-of-the-art causal inference methods to evaluate reserve performance and provide a user-friendly tool that automates the evaluation. Our work provides resource managers, policymakers, and citizens with an open-access, user-friendly tool to evaluate marine reserve effectiveness -which allows replicability of the analysis.

With current targets set to increase ocean protection, it is important that we understand the effects of our interventions so we can better inform management. We validate MAREA (Marine Reserve Evaluation App) by evaluating the biological, socioeconomic, and governance performance of a marine reserve implemented in 2006 in Isla Natividad (Mexico) over a 10-year period. (This reserve has been studied before^{2,3,4}, and thus provided us with a point of comparison.) We use examples from the case study to build on the utility of MAREA and discuss ways in which results can be interpreted to inform management and further our understanding and support of effective marine conservation and management.

The subject addressed in our work is of major relevance to policymakers, conservation organizations, resource managers, and scientists across a range of disciplines. Publication in PLOS ONE will allow us to effectively reach this broad audience, supporting much-needed actions to inform marine resource management and incentivize evidence-based conservation.

This is the first time that our manuscript is submitted for consideration of publication to PLOS ONE or any other journal, and we do not oppose any reviewers. All authors have read the manuscript, and agree with the journal's data deposition requirements and to our submission. After a careful review of potential Academic Editors, we believe that any of the following would be a good fit for our manuscript. Their order does not reflect our preferences:

- Benjamin Ruttenberg
- Mariana M. P. B. Fuentes
- Julian Clifton
- David Mark Bailey

Please feel free to contact me as the corresponding author to discuss any questions you may have about our team's research or this manuscript.

Best regards,

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¹ Pomeroy et al., 2005: <https://doi.org/10.1016/j.ocecoaman.2005.05.004>

² Micheli et al., 2012: <https://doi.org/10.1371/journal.pone.0040832>

³ Munguia-Vega et al., 2015: <https://doi.org/10.1016/j.gecco.2015.07.005>

⁴ Rossetto et al., 2015: <https://doi.org/10.1139/cjfas-2013-0623>