Dear Editors,

I am submitting the manuscript “What data to use for forest conservation planning? A comparison of coarse open and detailed proprietary forest inventory data in Finland” for your consideration for publication as a research article in PLOS ONE. I have prepared the work with the co-authors, who have all read the final version and given their consent on submitting the manuscript. We have permission to publish the work presented in the manuscript, which has not been submitted elsewhere and has no prior interactions with PLOS ONE.

Many countries around the world collect and maintain national forest inventory (NFI) databases primarily meant for forest management planning. In contrast, we are severely limited in terms of available biodiversity data that is needed as the basis of informed conservation decision-making [1–3]. This paucity of data is made worse by the fact that only a fraction of the potentially useful data is openly available. In the submitted manuscript, we demonstrate how forest inventory data collected primarily for forestry planning can be used as a basis for informative spatial conservation prioritization. Furthermore, we compare how well an openly available NFI data compares against more detailed, but proprietary data. Multiple authors have recently called for more open data sharing in ecology and conservation [e.g. 4,5,6] and we hope to contribute to this discussion with work presented in this manuscript. While our work concentrates on a specific region in Finland, the results and methods should be applicable to other countries with similar data and planning needs. Finally, while previous studies in Finland [7–10] and elsewhere [11,12] have studied the utility of forest inventory data for conservation purposes, validation of the results has often received less attention. In the submitted manuscript, we demonstrate an approach to spatial conservation prioritization using forest inventory data and validate the results against known locations of high conservation value. Finally, as we believe that the spatial conservation prioritization approach described in the manuscript forms a basis for more detailed prioritization studies or practical planning applications, we make the implementation of the analyses openly available as well.

As for a suitable PLOS ONE Academic Editor, I would like to suggest one of the following: Kamal Bawa, Regina Lindborg, or Rob Slotow. I would like to suggest the following reviewers based on their field of expertise:

* Dr Bronwyn Rayfield, [bronwynrayfield@gmail.com](mailto:bronwynrayfield@gmail.com)
* Dr Lars Gamfeldt, [lars.gamfeldt@bioenv.gu.se](mailto:lars.gamfeldt@bioenv.gu.se)
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* Dr Nathalie Pettorelli, [nathalie.pettorelli@ioz.ac.uk](mailto:nathalie.pettorelli@ioz.ac.uk)

We look forward to hearing from you in due course!

Sincerely,

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References:

1. Maeda EE, Torres JA (2012) Open environmental data in developing countries: who benefits? Ambio 41: 410–412. doi:10.1007/s13280-012-0283-4.

2. Pressey RL (2004) Conservation planning and biodiversity: assembling the best data for the job. Conservation Biology 18: 1677–1681. doi:10.1111/j.1523-1739.2004.00434.x.

3. Grantham HS, Pressey RL, Wells JA, Beattie AJ (2010) Effectiveness of Biodiversity Surrogates for Conservation Planning: Different Measures of Effectiveness Generate a Kaleidoscope of Variation. PLoS ONE 5: 1–12. doi:10.1371/journal.pone.0011430.

4. Soranno PA, Cheruvelil KS, Elliott KC, Montgomery GM (2015) It’s good to share: Why environmental scientists' ethics are out of date. BioScience 65: 69–73. doi:10.1093/biosci/biu169.

5. Turner W, Rondinini C, Pettorelli N, Mora B, Leidner AK, et al. (2015) Free and open-access satellite data are key to biodiversity conservation. Biological Conservation 182: 173–176. doi:10.1016/j.biocon.2014.11.048.

6. Costello MJ, Michener WK, Gahegan M, Zhang Z-Q, Bourne PE (2013) Biodiversity data should be published, cited, and peer reviewed. Trends in Ecology & Evolution 28: 1–8. doi:10.1016/j.tree.2013.05.002.

7. Kallio AM, Hänninen R, Vainikainen N, Luque S (2008) Biodiversity value and the optimal location of forest conservation sites in Southern Finland. Ecological Economics 67: 232–243. doi:10.1016/j.ecolecon.2008.05.005.

8. Luque S, Vainikainen N (2008) Habitat quality assessment and modelling for forest biodiversity and sustainability. In: Lafortezza R, Sanesi G, Chen J, Crow TR, editors. Patterns and Processes in Forest Landscapes. Dordrecht: Springer. pp. 241–264.

9. Juutinen A, Luque S, Mönkkönen M, Vainikainen N, Tomppo EO (2008) Cost-effective forest conservation and criteria for potential conservation targets: a Finnish case study. Environmental Science & Policy 11: 613–626. doi:10.1016/j.envsci.2008.05.004.

10. Lehtomäki J, Tomppo E, Kuokkanen P, Hanski I, Moilanen A (2009) Applying spatial conservation prioritization software and high-resolution GIS data to a national-scale study in forest conservation. Forest Ecology and Management 258: 2439–2449. doi:10.1016/j.foreco.2009.08.026.

11. Chirici G, Mcroberts RE, Winter S, Bertini R, Bra U, et al. (2012) National Forest Inventory Contributions to Forest Biodiversity Monitoring. Forest Science 58: 257–268.

12. Corona P, Chirici G, Mcroberts RE, Winter S, Barbati A (2011) Contribution of large-scale forest inventories to biodiversity assessment and monitoring. Forest Ecology and Management 262: 2061–2069. doi:10.1016/j.foreco.2011.08.044.