

Reviewer Report

Title: LAGOS-NE: A multi-scaled geospatial and temporal database of lake ecological context and water quality for thousands of U.S. lakes

Version: Original Submission **Date:** 7/2/2017

Reviewer name: Birgitta Koenig-Ries

Reviewer Comments to Author:

The compilation of LAGOS-NE is truly impressive work and I am really excited that the data is made publicly available now. I am sure this is a great resource for future work by you and by others. Overall, I liked the manuscript and was impressed by the care that went into creating and describing the database. Besides a few smaller comments (see remarks below and the comments in the attached pdf), I have only one more fundamental critique: I believe that usability and value of the database would be considerably improved, if the concepts were linked wherever that is possible to concepts grounded in ontologies. I know that not all concepts are modeled in ontologies yet, but at least for those that are, it would be good to provide that link instead of creating your own definitions. For those that are not in ontologies yet, it would be great, if you worked towards their addition. In the long run, this would ease the integration of LAGOS-NE with other upcoming databases and would contribute to a common understanding of the domain. [I don't see this linkage as a prerequisite to publication of the paper, but would really like to see it in the future]. You write in the introduction that you provide the water quality files, however, that URL is missing. I thus was not able to have a look at these files. Here are the smallish remarks: * I found a number of typos in the manuscript and marked them directly in the pdf. Please refer to the attachment. * I had a look at the datasets and found some minor issues there: * The metadata about the LAGOS-LakeID says that this is a float and a ratio. Is that really correct? * In LAGOS_LIMNO the limno definition (YYYY-MM-DD) and Format: mm/DD/YYYY of sample date are inconsistent. * In LAGOS_GEO both min and max values of county_pct_in_nwi are 100%. Is that correct?

Level of Interest

Please indicate how interesting you found the manuscript: An exceptional article

Quality of Written English

Please indicate the quality of language in the manuscript: Needs some language corrections before being published

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