

# Review of: "The Spatial Politics of the Tonle Sap: A Multi-Scale Analysis of Conservation and Development Challenges"

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Potential competing interests: No potential competing interests to declare.

The paper presents the unique ecological complexity of the Tonle Sap Lake (Cambodia), a biodiversity hotspot of global relevance and unique hydrology characterized by the pulsing flows to and from the Mekong River. Despite international recognition of its uniqueness and importance, the lake ecosystem and local communities' livelihoods are under threat, particularly due to the huge hydropower developments of the Mekong River Basin. The paper well describes the situation and is very interesting.

The latest version offers many improvements compared to an initial draft I had read, and the issues are laid down with more clarity. Figures and tables help present the situation. I would suggest a few more improvements to the latest version to further clarify the paper and, hopefully, increase its impact.

1) A crucial point in the conclusion is the following. The paper outlines how hydropower is highly impacting the TSL, and how the vagueness of the MRC Agreement is identified as a key issue in its management. Therefore, instead of stating this is 'only rhetoric, and that ensuring the reverse flow will never happen', the author should urge action from all actors, particularly at the international scale, in defining the hydrological needs for the return flow to happen. Clearly, the MRC has data that could and should be used for this, and downstream countries, particularly Cambodia and Vietnam, should fight for this, as not only the TSL but all downstream Mekong River ecosystems, including the very important delta, are impacted. Hydropower impacts are not simply 'inevitable'; good and coordinated management can preserve basic ecosystem functioning and should be pursued to save the Mekong biodiversity jewels and the communities that live on them. This message should be better conveyed in the conclusions of the paper.

2) The too many acronyms impair the readability of the paper. Acronyms are difficult to understand for an outsider; they are often used without being initially defined. For example, PDoE (which is likely a department of the Cambodia Ministry of Environment) is never defined. MRB, MoE, FiA, SSRS, etc., they are used in the text but defined only later (if at all). To improve this, please check all acronyms and spell them out the first time they are mentioned in the paper – do not assume a reader would necessarily know what RDC stands for, for example.

Additionally, I suggest adding a table in which the main stakeholders are defined: the table should present the full name, the acronym, and their main role/responsibility/in interest in the management of the TSL. I suggest organizing the table from international to local actors (or vice versa).

Also, check if an acronym is needed or not: if the acronym appears only once or twice in the text (e.g., land based community LBC), then probably the acronym is not needed and can be removed

3) In the text, I was not clear on some institutions and their role:

- For example, Dai fishery is mentioned at least twice but I cannot grasp what this means.

- What are Community Protected Areas (CPAs)? In what do they differ from Fishery Conservation Areas (FCAs)?

Furthermore, are fish sanctuaries different from FCAs? This section 4.3 needs some refinement and clarification.

4) In the methods section, interviews and workshops are mentioned; however, in the results, I cannot find reference to these activities. If not relevant, they should be removed, or results should be more clearly presented.

5) Section 2 should remain a presentation of political ecology theoretical concepts (e.g., narratives, space, etc.). I suggest moving references to the Mekong and Tonle Sap case (e.g., in the narratives paragraph) to later, as a section or in the results. In Section 2, in fact, the case of TSL has not been introduced yet, so the reader cannot understand these references.

6) In section 4.1, I suggest moving paragraphs introducing neak leu and rice cultivation to earlier, after having introduced the neak tonle people but before talking about the exchanges between the two communities. I also have a comment/question: there is no mention of impacts on land-based communities. Is that true, or a too minor issue to be mentioned?

7) Section 4.2.3 should come before section 4.2.2 to complete the biodiversity context and reduce some repetitions. The population living in the core areas should also be mentioned in Table 1.

8) In Table 1, I believe the totals of core areas and Ramsar sites have been switched; please check.

9) There are several repetitions that should be deleted, e.g., at the beginning of section 4.2, 'First, space comprises [...]' till the end was already indicated in section 2, please delete here. At the beginning of page 9, the UNESCO designation of TSBR is repeated in 3 sentences – not necessary. In Section 4.3, there are many repetitions on the change of designation in 2012; this section should be thoroughly revised and simplified. There is no need to mention which fishing lot was used for what since the reader has no idea of where fishing lots number X was.

10) At page 12, the article 5 of MRC Agreement should be reported in quotes as exact text. The way it is portrayed now is unclear and sounds like a re-interpretation. The shortcomings may be indicated later, but the reader should be given the opportunity to read the original text.

11) At page 13, numbers are given about dam constructions; however, there seems to be some repetition, e.g., first dams are presented along the main Mekong and then in tributaries, then presented by countries. I think here a table indicating by country how many dams are operational, planned, etc., on the main river or tributaries would help a lot in reducing the text and clarifying the message.



What is PNCA?

Good luck!