

Peer Review Report

Review Report on Exploring Cross-sectoral Implications of the Sustainable Development Goals: Towards a Framework for Integrating Health Equity Perspectives with the Land-Water-Energy Nexus

Review, Public Health Rev

Reviewer: Dominik Dietler

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EVALUATION

Q 1 Please summarize the main theme of the review.

The authors cover a very relevant and timely topic of the significance of the interconnections of the different goals under the 2030 Agenda for Sustainable Development. More specifically, the review sheds light on the nexus between land, water and energy and its significance for health equity.

Q 2 Please highlight the limitations and strengths.

The manuscript outlines in detail the current literature on the land-water-energy nexus in the context of the SDGs. The topic of what the trade-offs and co-benefits between the different SDGs mean for practical policy making is highly relevant. The authors identify striking gaps in existing approaches. However, there is a strong focus on the land-water-energy nexus while it is unclear how health equity aspects were considered systematically. The focus of the manuscript seems to pertain to the nexus themes rather than the integration of health therein. I'm missing the clear link between the recommendations given in the final figure 3 and the contents presented in the results section. As such, the division of the different sections of the manuscript (introduction, methods, result, discussion) is not systematically structured so the distinction between the findings of the present study and of those of other studies is challenging.

The manuscript is still highly relevant for the environmental health community. To further strengthen the manuscript, please find some options for your consideration below.

Q 3 Please provide your detailed review report to the authors, structured in major and minor comments.

Major comments:

- Abstract: I could not find in the main text where aspects related to how the SDGs allow for accounting for negative health externalities, and results from this review related to household impacts, marine and coastal regions, bi- or multi-regional relations. These aspects could either more specifically presented in the main text. Alternatively, you could consider revising the abstract to more adequately reflect the findings of the review.
- Line 129: For the methodology to be replicable it would be good to see the full list of search terms and how they were combined (AND/OR, etc.) here or in an appendix. If applied as presented, the selection of search terms may have missed relevant publications. For example, the term "resource nexus" may have not used in all titles or abstracts of publications concerning the land-water-energy nexus. Further, SDG may also have been used in its unabbreviated form.
- The paper focuses on health equity in the context of the land-water-energy nexus. However, the inclusion criteria do not specifically mention any health-related aspects. Many of the summaries of included papers in Table 2 do not cover any health aspects. Hence, it is unclear how the methodology ensured health equity aspects are sufficiently covered in the included publications.
- Section 3.1: In line with the previous comment, the presentation of the results in this section reverts mainly to the nexus itself. Aspects to health equity are rather indirectly implied. As the title of the manuscript

suggests, it would be interesting to see how health equity perspectives specifically have been integrated in the nexus rather than setting the focus on the land–water–energy nexus itself.

Minor comments:

- Lines 49–91: The first part of the introduction presents a myriad of concepts and frameworks and terminology. It was difficult to identify the concepts that are most relevant for this topic. You could consider further streamlining this part, potentially by providing examples of how the land–energy–water nexus is connected with health equity.
- Lines 73–91: It's nicely shown how watersheds serve as good examples where the interplay between land, energy and water are crucially important. However, to me it remained unclear why watersheds in particular are a good setting for studying the nexus in connection with health equity. Instead or in addition to introducing additional concepts and frameworks (e.g. Ottawa Charter or the triple bottom line) you may consider providing further explanations and examples of the connection between watersheds and health equity.
- Line 104: The term "underscore" in the aim of the study suggests that the aim was to identify evidence to support a predefined conclusion. Alternatively, you could rephrase to something more neutral, e.g. "...test the assumption that the SDGs are useful as integrative tool...".
- Line 126: Because of the different search algorithms, often a very large number of publications are found on Google Scholar. It could be helpful to provide additional details on how the literature search on Google Scholar was conducted in a systematic manner.
- Line 131: More details on how grey literature was searched and selected could be provided.
- Line 137: You may want to consider moving the aspects related to the identified and selected number of publications to the results section and focus only on the methodological aspects of study selection in the methods section.
- Line 179: The number of studies presented here equals 31.
- Line 321: In this section, I found it challenging to differentiate between findings that come from the review and findings that were taken from other studies. You could consider summarizing the main results from your study in the beginning of the discussion.
- Line 354: Personally, I see the second point not as a limitation of the study but as a gap in the existing literature.
- Line 359: The inclusion of grey literature could also be seen as a strength of your study since, as you explain, much information can be expected not to be included in the peer-reviewed literature.
- Section 4.3: The conclusions present new evidence including a new table and figure. You could consider integrating the identified gaps in the results section to make it more clear that they are derived through your research (unless I understood something wrong). This approach would also avoid presenting new findings in the conclusion section.
- Line 398: The title suggests a new framework for integrating health equity consideration in the nexus theme. Therefore, the sentence on lines 398–400 could be a central part of the manuscript in terms. It would be interesting to read what specific impacts and indicators could be considered for integration of health equity aspects. Figure 3 presents nicely starting points for integration, but they are not as extensively discussed in this section as the focus and the aim outlined in the manuscript title may suggest. For example, (de-)colonial aspects are previously only mentioned once in the text under the limitations section. You may consider putting this figure and its elements further into focus.
- In the discussion, you could include a reflection on whether the findings relate only to the watershed context or whether they can be generalized to the nexus in other contexts.

- Table 1: The inclusion criteria "Includes articles from anywhere in the world" and "Include both qualitative and quantitative studies" seem to be not necessary since they are non-exclusive.
- In Figure 1, it seems like "other sources" were consulted for identifying relevant literature. What these other sources entail is however not specified in the methods section.
- Figure 1: In the text, the different levels of the screening are nicely explained. This could be reflected as well in the figure. Further, you could consider specifying the reasons for exclusion both in the figure and the text.
- Figure 1 (this may be because of how the Figure is displayed on my screen): On the left, the "&" was replaced by "&" in "Title&Abstract Screening".
- Table 2 (this may be because of how the Table is displayed on my screen): the numbers in the notes are missing.

- All captions include "(Narrative mapping review, local/rural/indigenous contexts, 2016-2021)." I'm unclear what this means.
- Figure 2 is quite loaded with information. You may want to consider splitting it into two (upper and lower part) since the two parts are not obviously connected.

PLEASE COMMENT

Q 4 Does the reference list cover the relevant literature adequately and in an unbiased manner?

yes

Q 5 Does this manuscript refer only to published data? (unpublished data is not allowed for Reviews)

Yes.

Q 6 Does the manuscript cover the issue in an objective and analytical manner

Yes.

Q 7 Was a review on the issue published in the past 12 months?

No.

Q 8 Does the review have international or global implications?

yes

Q 9 Is the title appropriate, concise, attractive?

The title is concise and attractive. However, the health equity aspects and the proposed framework could be put more in the focus of the manuscript to reflect the ambitions put forth in the title (see suggestions above).

Q 10 Are the keywords appropriate?

yes

Q 11 Is the English language of sufficient quality?

The language is excellent and likely to be written by native speakers. Though for the paper to be more accessible to a wide audience the authors may consider simplifying the language and shortening the sentences.

Q 12 Is the quality of the figures and tables satisfactory?

No.

QUALITY ASSESSMENT

Q 13	Quality of generalization and summary	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q 14	Significance to the field	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Q 15	Interest to a general audience	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Q 16	Quality of the writing	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

REVISION LEVEL

Q 17 Please take a decision based on your comments:

Major revisions.