

Reply to reviewer comments - Major Revision 2nd round

We want to thank the editor and the two reviewers for their helpful comments on our manuscript.

We greatly appreciate that the reviewers acknowledged the significant improvements made since the initial submission. Nevertheless, we have taken into account their remaining concerns regarding the methods, their robustness, their purpose, and the presentation of the results. We believe that many of these concerns derive from the fact that the manuscript has been presented as a Literature Review, despite our original intention to develop it more as a Perspective Paper.

Following the suggestion of one of the reviewers (endorsed by the Editor and approved by the Editorial Board), **we are now submitting the revised manuscript as an Invited Perspective**, as reflected in the new title: *"Invited Perspective: Advancing knowledge co-creation in drought impact studies."*

The paper is built on the perspective that, although many drought impact studies involve stakeholders through a variety of participatory approaches, **the bottleneck in current transdisciplinary drought impact research lies in the breadth and depth of knowledge integration**. Most studies either limit co-creation to specific phases of the research process, such as problem definition, scenario development, or result validation (breadth), or fail to meaningfully incorporate non-academic knowledge within those phases, for instance by using such knowledge only to validate predefined scientific assumptions rather than to shape core research questions, methodologies, or models (depth). This leaves room for improving knowledge co-creation with the implementation of more "mature" transdisciplinary work. Drawing from five diverse bodies of literature on transdisciplinarity, we argue that drought impact studies would benefit from the development of a transdisciplinary framework that enables more integrated, power-sensitive, inclusive, situated, and reflexive approaches.

Based on the change in manuscript type and in response to the comments received, we have made **major revisions to the paper**. Specifically, we have:

- **Reshaped the research gap and the rationale for our perspective**, and reflected these changes in the Abstract and the Introduction, including drought-specific literature to support.
- In light of the manuscript's reclassification, we have restructured **the section** previously titled *"Methodology"*. It is now presented as *"An interdisciplinary perspective on knowledge co-creation"*, focusing on conceptual exploration rather than methodological procedures. This section offers background on the five selected bodies of literature and discusses how each can enrich transdisciplinary approaches in drought impact studies.
- **Enriched and refined the description of several dimensions** by focusing more closely on the specificities of drought impact studies and by addressing specific comments received during the review process. Table 1, which links each study to the key dimension it informs and to its corresponding body of literature, has been updated to incorporate these new references. In light of the revised format of the manuscript as a Perspective, the table has been moved to the Appendices.
- **Reorganized the Discussion and Conclusion sections** to enhance clarity and coherence. Section 4 addresses the limitations of current transdisciplinary approaches in

drought impact studies, while Section 5 offers insights into how the key dimensions presented in this paper can support the development of more structured and holistic transdisciplinary practices. This includes a **revised version of Table 2 (now Table 1)**, which synthesizes our perspective by highlighting the breadth (key process dimensions) and depth (practical actions for the meaningful inclusion of non-academic knowledge within each dimension) aspects.

Moreover, we revised the entire manuscript to **place less emphasis on introducing a framework** and instead present the dimensions more simply as key elements that, we argue, can support more integrated, power-sensitive, inclusive, situated, and reflexive approaches to drought impact studies. We have also relaxed the **focus of our perspective on drought impact studies, and not only assessment studies**, to include all those studies which work on understanding or investigating these impacts, but without necessarily performing an assessment.

We have addressed the editor and reviewers' feedback. A detailed, point-by-point response to each of their concerns is provided below. We have also **attached the revised manuscript with changes tracked**.

Line numbers referred to in our responses below are from the revised manuscript (without changes tracked).

EDITOR

Comment 1

Thanks for revising the manuscript. The two reviewers have evaluated your revisions and although they both agree that the manuscript has improved significantly, they also still have doubts about the methods, their robustness, their purpose, the intended audience, and the presentation of the results. They specifically question how your analysis is specific for drought.

One of the reviewers suggested a third reviewer, but I do not want to delay the process further, therefore I have done a review of the manuscript myself. I agree with the points made by the reviewers, especially about the paper not being specific to drought. For example, in Sect. 3.2 you did not include any reference to drought literature, when you discuss how that aspect of the framework is relevant for droughts (l.231-233).

Response 1

We sincerely thank the Editor for taking the time to personally review our manuscript.

Regarding the concern that the paper is not sufficiently specific to drought, we have made further efforts to enhance its focus. In particular, we enriched and refined the description of several dimensions by more closely highlighting the specificities of drought impact studies. We added and discussed drought-specific references in all five dimensions (Sections 3.1-3.5), especially to support statements that emphasize drought-related aspects or point out existing gaps in the drought literature concerning those dimensions. These revisions also include the lines in Section 3.2 referenced by the Editor in this comment, where we included references from Rossi et al. (2023) and Hagenlocher et al. (2023) - see **lines 243-246** of the revised version.

However, we would like to clarify that drought-specific literature was not made central in each dimension by design, as the objective of the manuscript is not to deliver a literature review on drought per se, but rather to draw from other bodies of literature to support transdisciplinary thinking and enrich the understanding of drought impacts.

Comment 2

In the introduction you state that: "Drought occurrences and impacts are generally considered hydrological extreme phenomena and, thus, are conceptualised and modelled with a hydrological process approach" (l. 36-38) I don't agree with this statement. Most drought impact studies focus more on the social, economic, health-related, or political consequences of drought. And I feel that you are mixing two different things. One: that disasters are not natural and social aspects need to be included in drought impact analysis, and two: that more transdisciplinarity and co-creation is needed. I think the former is well recognised in drought impact research and there are a lot of examples. The latter I feel is done, but not mentioned as such. The literature that you mention in this paper mostly discusses the former and not the latter (for example lines 137-146), which is not in line with the main aim of your paper.

Response 2

We thank the Editor for this constructive comment. We agree that the research gap was not clear and may have been misleadingly stated that social aspects were not sufficiently considered, or that transdisciplinary studies were absent in the field. We have now revisited the rationale of our perspective to better reflect our original objective and to more clearly highlight the initial research gap that guided our investigation:

Although many studies involve stakeholders with a variety of participatory approaches, the limitation of current transdisciplinary approaches in drought research lies in the depth and breadth of knowledge integration. Most studies either limit co-creation to specific phases of the research process, such as problem definition, scenario development, or result validation (breadth), or fail to meaningfully incorporate non-academic knowledge within those phases, for instance by using such knowledge only to validate predefined scientific assumptions rather than to shape core research questions, methodologies, or models (depth). This leaves room for improving knowledge co-creation with the implementation of more "mature" transdisciplinary work, building on a full engagement and integration of different stakeholders (and knowledge holders) in all the phases of the research process. Also, and very important, is the attention to power dynamics through the process, which is largely analysed within social sciences, and which can substantially advance socio-hydrological modeling within transdisciplinary research. (lines 84-93)

Comment 3

These different angles also become clear in Sect. 4, where you write: "This framework directly addresses three critical aspects, which are currently overlooked in hydrological approaches to drought impact assessment: the underrepresentation of socio-political factors, the exclusion of local knowledge, and the insufficient attention given to the politics of knowledge production." (l.401-403). Here again you assume that drought impact assessment is always based on hydrological approaches. This is not the case. Therefore, the first two points you made here are not valid. "Traditional drought assessments often fail to consider the socio-political contexts that influence vulnerability and impacts." (l.404) and "Moreover, many drought impact assessment studies overlook the knowledge and experiences of local communities, leading to assessments that are disconnected from the perception and expectations of those impacted." (l.411-412) There is no justification of these statement or references to drought literature. The same holds for the conclusions.

Response 3

In response to this concern, we have revisited the rationale of our perspective. The main gap we aim to address is that most available studies either limit co-creation to specific phases of the research process or fail to meaningfully integrate non-academic knowledge within those phases, thereby limiting the overall breadth and depth of these studies. The partial inclusion of local knowledge is particularly relevant in the socio-hydrological literature dealing with co-modeling and the implications of decision-making on model components and assumptions.

Moreover, we focused on the insufficient attention given to the politics of knowledge production. This aspect is emphasized in other bodies of literature, such as hydrosociology, which are often overlooked by socio-hydrologists due to their grounding in different scientific traditions. This further supports our decision to engage with diverse disciplinary perspectives.

In line with this shift in focus, the section discussing the three main gaps (formerly Section 4) has now been completely rewritten to better reflect this updated perspective and to avoid overgeneralizations regarding hydrological approaches to drought assessment.

Comment 4

In the introduction and methods you state that: “Given the limited literature on transdisciplinary approaches specifically focused on drought ...” (l. 97-98) and “Due to the limited literature available in the socio-hydrology field, specifically related to drought, ...” (l.118-119) I don’t agree that there is not enough literature on socio-hydrological aspects of drought and its impacts. Maybe you need to look beyond Global North publications or go back in time. Key drought researchers like Wilhite, already discussed how drought is interwoven with social processes in the 1970s and 1980s, for example Wilhite & Glantz (1985). Scholars in Africa focus on societal drought impacts and include aspects of transdisciplinary research by design, by building their work on interviews and surveys and by engaging with local experts. For example, Mpandeli et al. (2015) included personal communication of experts.

Response 3

We agree that the sentence may have been phrased in an unclear way. Our intention was not to say that there is limited literature on socio-hydrological aspects of drought, but rather that the limitation lies in the rarity of truly transdisciplinary approaches to the investigation of these aspects, which is precisely the motivation behind our perspective. We have now rephrased the introduction, focusing less on the idea of “limited literature” and more on the lack of a deep and comprehensive approach to co-creation of knowledge, integration across disciplines, and the need for greater self-reflection on the process of knowledge production, including attention to power imbalances.

Mpandeli et al. (2015), for example, provide an important early attempt to include non-academic perspectives in drought impact assessments. However, their study still builds on a top-down quantification of drought using hydroclimatic thresholds. We have now included this reference in Section 3.3 (**lines 264-265**) to support our point that engaging in a transdisciplinary research process involves more than including personal communication from local experts—it requires a more structured and integrated approach. This justifies our decision to explore other domains with a longer tradition in knowledge co-creation to learn from them.

Regarding the work of Wilhite & Glantz (1985), we cited it in the text at the beginning of the Introduction (**lines 31-33**), to better explain that socioeconomic and environmental impacts of drought have long been studied, and this does not represent a current gap. However, the actual gap lies in the fact that these impacts and their socio-ecological consequences have traditionally been evaluated and understood primarily as outcomes of a drought hazard conceptualized as a hydrological process. Adopting fully transdisciplinary approaches would allow for a more comprehensive understanding of drought hazard and impacts, including how they are perceived and experienced.

Comment 5

What keywords did you use for the literature search? Only starting from a few papers and then using snowballing is strongly limiting your reach. There are many drought impact / vulnerability / risk studies that have been developed (partly) based on stakeholder input, but these do not

often mention the words co-creation or transdisciplinarity. You need to include also a few key drought papers and also snowball from there and see if you can add more specific drought-related examples. I also agree with one of the reviewers that maybe your paper should in hindsight be classified as perspective paper, rather than review paper. I will suggest this change to the editorial board, but also want to hear your opinion.

Response 5

Following your suggestion and that of another reviewer, we have reclassified the paper as a perspective rather than a review article and have accordingly removed the detailed explanation of our previous review methodology from the main text.

However, to clarify our original approach, we initially focused our literature search on drought-specific studies that explicitly referenced transdisciplinary or co-creative approaches. We found that relatively few of these works implemented fully transdisciplinary processes, particularly concerning iterative feedback loops and considerations of power dynamics. This observation led us to broaden our scope and explore literature from other domains that more thoroughly addressed these aspects.

In response to your feedback, we have now added a section in the Introduction that highlights current transdisciplinary approaches in drought research. This provides a clearer rationale for the shift in focus and strengthens the context for our perspective.

Comment 6

I think you can still make the argument that drought impact research needs more co-creation and transdisciplinarity, but you cannot do this without reviewing the drought impact literature itself. I would be happy to publish a paper in which you first review the drought impact literature (or at minimum, summarise the excellent drought impact reviews that already exist) and then discuss what needs to be changed (based on the other research fields that you have studied and examples from drought studies that have implemented this or examples from drought studies showing how it can be implemented). For example, in Sect. 3.1, you would need to discuss which stakeholders would be specifically important for drought impact studies (beyond the generic category of “marginalised groups”, l.191-198), based on drought literature.

Response 6

We have now further improved the overview of available transdisciplinary approaches in drought impact studies in the introduction (**lines 61–83**), adding five additional works, summarising what already exists, and highlighting their contribution to the field.

We have also made a further effort to include more drought-specific elements in each dimension. Specifically, in Sect. 3.1, we have now included a discussion about which types of stakeholders are currently involved in transdisciplinary drought studies, how they are involved, and the limitations of their involvement (**lines 163–175**), including nine drought-related citations.

Comment 7

Also, in Sect. 3.3 you argue that “there is no single, universally accepted definition of drought (Krueger and Alba, 2022)” (l.273-274). This is actually precisely related to the fact that drought often is defined from the impacts instead of from the hazard. Because the impacts of drought

are so diverse, also the hazards that lead to these impacts are diverse and therefore there is no universal definition. This has already been argued by Wilhite & Glantz (1985), Lloyd-Hughes (2014), AghaKouchak et al. (2021) and many others. This needs to be considered a pro instead of a con. So, in Sect. 3.3 you need to review and discuss the body of literature that investigates and discusses how “drought may be experienced and conceptualised” (l.282).

Response 7

We agree that the lack of a unique, universally accepted definition of drought is not a disadvantage. Indeed, it was not our aim to assess whether this is positive or negative. Rather, we mentioned this aspect to highlight that, since no universal definition exists, it becomes essential in a co-creation process to build a shared understanding of drought and its impacts among the relevant knowledge holders. This shared understanding can also involve the recognition of multiple perspectives, derived from different conceptualisations and knowledge systems.

We have now clarified this point in Sect. 3.3 (**lines 261-264**): that *“It is well recognised that there is no single, universally accepted definition of drought (Krueger and Alba, 2022). While hydrological sciences are often rooted in positivist paradigms, there is growing recognition that drought is a complex phenomenon arising from the interplay between biophysical and socio-economic factors (AghaKouchak et al., 2021; Wilhite and Glantz, 1985).”*

Comment 8

Finally, in Sect. 5, the challenges are formulated very broadly, but also here you should discuss how this is relevant specifically for drought (by citing drought literature that discusses these challenges).

Response 8

Given the change in the manuscript type, we have fully revised the final part of the manuscript, which no longer includes discussion and conclusion sections. Additionally, the three challenges mentioned previously are no longer discussed in the current version of the manuscript.

Reviewer 1

Comment 1

Despite the authors' clear and striking efforts to address the comments, I still have strong doubts about the methods, their robustness, their purpose, the intended targeted audience, and the presentation of the results.

There are many aspects I fail to understand. I still do not see how the central five dimensions were deduced or how they are more innovative than common knowledge. I also struggle to grasp the utility of this framework. It is unclear to me what kind of knowledge it aims to produce, and I find terms such as 'knowledge' and 'modeling' too open-ended, and the definition of 'risk impact assessment' too broad

This broadness clashes with the framework's highly ambitious goals. If the terms are so general, it becomes difficult to see how they can effectively address the vast and complex field of risk impact assessment the way the authors define it. Moreover, claiming that this framework can help create 'any knowledge' or support 'any type of modelling' feels overly aspirational, especially when the foundational elements lack specificity and rigour.

Below are some comments regarding the authors' responses, which evoked my previous arguments.

Response 1

We thank the Reviewer for acknowledging our efforts. We believe that, by changing the manuscript type from Perspective to Review and introducing substantial revisions, including a more clearly framed explanation of the study's goal, we are now better able to clarify why some parts of our discussion may appear “broad” or not strictly “drought-specific.”

Our work aims to improve the comprehensiveness of current transdisciplinary approaches to drought impact assessment, by drawing inspiration from other bodies of literature in which certain aspects—such as self-reflection on the knowledge creation process, the use of iterative processes to ensure the participation of all relevant stakeholders including underrepresented and marginalized groups, and attention to power imbalances—are more explicitly addressed.

These elements, while perhaps more common in other scientific traditions, are still underexplored in many participatory drought-related studies. This justifies our broader perspective and supports the relevance of the proposed framework, even if it may appear ambitious at first glance.

Comment 2

Page 1, response 1

“As a result, we identified a first set of recurrent themes among these disciplines, which can be considered as key dimensions to define a cocreation process for drought impact assessment”

There is a dissonance with the table that follows—what recurring themes? How do they lead to the five dimensions, or are they the same? I do not understand whether the authors developed these five pillars *based on lessons and analysis of the papers and their similarities*, or if these five dimensions *are* the similarities the authors observed in these papers. To me, these are two different things.

Response 2

We understand that the methodological process we presented might not have been clear enough, and that the choice of the expression “recurring themes” was possibly misleading. To clarify, the “recurring themes” indeed were exactly the five key dimensions we identified. These dimensions were derived from our analysis of shared elements and practices, and insights across the relevant five bodies of literature we investigated.

Now that the paper is presented as a perspective, we have removed the potentially confusing methodological explanation. In any case, the five key dimensions represent essential elements that should be further emphasized and explored in transdisciplinary drought impact studies, particularly to *“support hydrological and socio-hydrological modellers and practitioners in developing more structured, power-sensitive, inclusive, situated, and reflexive co-created drought impact studies.” (lines 94-95).*

Comment 3

Page 2 response 1, 2): How many articles were analysed? It is mentioned, “the individual article contributing to the conceptualisation of each dimension to to their respective body of literature.” Is there a typo here, with an “S” missing from “articles”? If it is only one article per dimension and per field (totalling 25 articles), can a solid argument that it is a robust sample size to deduce a dimension, be added?

Response 3

We apologize for the confusion, and we confirm that there was indeed a typo in our previous response. The correct phrasing should refer to “articles” in the plural form. To clarify, we have reviewed more than 27 papers to inform the development of the five dimensions, as evidenced by the citations included in the main text of each dimension and the references compiled in the former Table 1 (now moved to the Appendix as Table A1).

Since the paper is now framed as a perspective article, the emphasis lies less on the sample size in a systematic sense and more on the conceptual richness and relevance of the literature selected. Nonetheless, in response to the reviewers’ and the editor’s feedback and as part of the revision process, we have further expanded our literature base. As of this revised version, a total of 86 papers have been analysed and cited across the dimensions, as documented in the updated table A1.

Comment 4

Page 2, Table:

The first column appears to present a result, but I don't believe we are at that stage yet. Here, it seems to imply the existence of these five dimensions upfront and then associate papers that fit

into these dimensions based on their field of study. This approach feels like validating a hypothesis or assumptions the authors already have, rather than elaborating on or deriving the dimensions from the data. While I agree that this structure might bring some clarity to the presentation of the results, it feels more like a band-aid solution to a larger problem. The same problem I highlighted in the previous round of review: What is the framework of analysis? On what basis is it deduced that these five dimensions are the pillars of an important transdisciplinary framework? If the first column is intended to present the rationale behind the dimensions, then these dimensions should emerge as the results. This would mean situating them within the cases, with the corresponding articles linked to the nexus of "field X similarity." Alternatively, if it is assumed that these five dimensions are the starting point (i.e., the first column), I would expect not just citations of the papers that fit into these dimensions, but also the content within those papers that supports the conclusion that each dimension is a pillar of a robust transdisciplinary framework applicable to drought impact assessment.

Response 4

Thank you for this important comment. We acknowledge the concern regarding the presentation of the five dimensions and the perceived lack of an explicit analytical framework.

Since the paper has been repositioned as a perspective, it does not claim to present empirical results derived from a systematic review or case-based framework. Instead, it aims to offer a conceptual contribution by proposing five interrelated dimensions that we believe are essential for advancing transdisciplinary approaches to drought impact assessment.

These dimensions were not pre-defined arbitrarily but were shaped through an iterative process of synthesising insights from a broad and interdisciplinary body of literature (now comprising 86 papers). The literature associated with each dimension was selected based on its conceptual contribution and relevance to the respective themes, rather than through a coding or categorisation process typical of empirical content analysis.

In this light, the first column of the table is not meant to present results in the traditional sense, but rather to summarise the proposed conceptual dimensions that structure our perspective. To address the comment and avoid confusion, we have clarified this purpose in the main text and adjusted the language in the table caption accordingly.

Comment 5

Page 7, response 4 "Therefore, it would be contradictory to presuppose in advance the specific knowledge we aim to create."

I see your point, but I do not entirely agree. This could be read as a justification for transdisciplinary research to start without a clear sense of what knowledge it aims to generate. Even in transdisciplinary research, there must be an overarching research question or problem statement guiding the process. If knowledge were to "emerge" entirely unpredictably, how would researchers ensure that the findings are useful, actionable, or aligned with the intended goals? Also, most transdisciplinary research is funded based on predefined objectives, expected outcomes, and impact assessments. If knowledge production were entirely open-ended, it would be nearly impossible to justify investments in research. Why, in the first place, would such actors be included in the "knowledge co-creation process" if their contribution to a presupposed topic were not expected? You make an argument in favor of that a few lines below, mentioning that you will specify which steps of modeling might benefit from a transdisciplinary approach. I am

not arguing in favor of assuming exactly what knowledge will be produced, but the way it is phrased suggests that any production of knowledge or connection in the process is entirely open-ended, which is not realistic.

Response 5

We agree with the reviewer that a preliminary research question is always necessary to initiate a transdisciplinary process. This initial question may stem from urgent needs, real-world challenges, or concerns about future risks carried on by researchers or other stakeholders, depending on the case. As discussed in the manuscript, the preliminary question can be revisited and refined through the integration of the interests, perspectives, and knowledge of the actors involved in the process.

The research question is essential to start the process of knowledge co-creation. However, this knowledge does not need to exist a priori; rather, it should emerge as an outcome of the transdisciplinary process itself.

Comment 6

Page 7 response 4:

"Regarding the concept of co-modeling"

I am really not convinced. I do not see the link with modeling. The argument initially concerns the co-creation of "any knowledge" without presuppositions, but now it shifts to specific steps of modeling. Moreover, the authors use "co-modeling" too broadly—how is that different from "knowledge" in the argument above? To me, this feels off focus. If the claim is that transdisciplinarity could benefit any modeling process, then this argument should be made first. However, this is a separate practical gap from the one addressed in this study. The current approach takes the focus away. I would strongly recommend that the authors focus on one of the following themes: How transdisciplinarity can contribute to modeling, which 'might' have so far remained siloed in hydrology. OR How this review of different literature bodies on transdisciplinarity highlights five common dimensions of a strong co-creation framework applicable to drought risk assessment. At the moment, the paper moves in too many directions.

Response 6

We agree with the reviewer that in the previous version, the manuscript's focus may have been unclear, as the five dimensions were presented more as a literature review. The article is now clearly framed as a perspective that aims to explore how to enhance both the breadth and depth of transdisciplinary approaches in drought impact studies. Our objective is to contribute specifically to the advancement of drought impact research, where some form of modeling is always involved.

For this reason, one of the dimensions we explore is modeling, understood in a broad way that encompasses not only quantitative approaches but also more qualitative and interpretive ones. In this broader perspective, modeling is considered a major part of the co-creation of most knowledge related to drought impacts.

Comment 7

Page 8, Response 5

"In this paper, the term "drought impact assessment" is used to refer generically to studies and projects that not only evaluate the hazard dimension of drought but also assess its impacts and support the identification and planning of drought management or adaptation measures."

It is a bit contradictory to me when, in SC 15, it is mentioned that governance and policy issues are outside the scope of the study's focus.

Response 7

We believe there may have been a misunderstanding. We intended to clarify that the literature you suggested primarily addresses governance and policy issues related to water resources, but does not place a strong emphasis on studies assessing drought impacts. That said, we acknowledge that drought governance and policy can indeed emerge as outcomes of transdisciplinary drought impact studies, when this is among the study's aims. To reflect this, we have also relaxed the focus of our perspective on drought impact studies, and not only assessment studies, to include all those studies which work on understanding or investigating these impacts, but without necessarily performing an assessment.

Reviewer 2

Comment 1

The structure and readability of the manuscript has improved significantly. However, I still feel like the framework is quite general and fail to see how it applies specifically to drought. The authors have rephrased some of the dimensions so it now includes "drought", but in describing the framework it is still not clear how these different dimensions are specific for drought and how they should be addressed for drought specifically (as opposed to how they are addressed for another problem). It seems to me the framework could apply to any water problem.

Response 1

We thank the reviewer for acknowledging our effort in improving the manuscript. The description of the different dimensions might appear general, since it is mainly based on non-drought-specific literature. The reason for that is that our perspective is based on the analysis of other bodies of literature to learn how to address transdisciplinary drought studies with more breadth and depth.

Clarified that, we have now made a further effort to include more drought-specific elements in each dimension. See e.g., *lines 163–175, 234-238, 243-246, 264-268, 354-356, 362-363*.

Comment 2

In addition, while I acknowledge that examples have been added to the description of the different dimensions and this description has now significantly improved, I still believe that more concrete descriptions of the actions and how to go about implementing the framework is missing. The authors mention that "while it provides a conceptual foundation, it is not a predefined operational protocol or a linear, step-by-step guide. Instead, it highlights essential considerations for protocol development, offering a flexible structure that can guide the creation of tailored protocols." But I feel that without this, the manuscript doesn't make a substantial contribution to the existing literature.

Response 2

We thank the reviewer for sharing his valuable perspective. As mentioned, the original aim of the manuscript was not to provide a practical, predefined protocol, but rather to offer high-level guidance for improving transdisciplinary approaches to drought impact studies. We intentionally avoided proposing a fixed set of actions to encourage reflection and offer a flexible perspective that can be adapted to diverse contexts and situations. Indeed, given the need for adaptability across multiple settings, we believe it is appropriate not to include specific descriptions of concrete actions.

Nonetheless, we believe our perspective still provides a valuable contribution to the literature, particularly by reflecting on the current limitations in depth and breadth of current transdisciplinary drought impact studies, especially the lack of attention to power imbalances and self-reflection on the knowledge co-production process.