

Response to R1, Larissa van der Laan

General comments:

The authors describe an interesting, interactive method of involving high school students in learning more about the natural and anthropogenic water cycle. The paper describing the project and first iteration, with 200+ students, is well written, bar some linguistic issues (see specific comments). I recommend this manuscript for publication in *Geoscience Communication* with minor revisions.

Thank you very much for your constructive feedback! Please find below a point-by-point reply to your comments and our intended changes to the manuscript.

The prologue could use a more descriptive title, adding in whether it was used in the method as part of the storytelling emphasis, or is added in here as background information, considering it is placed before the introduction. As an illustration of the importance of water, and the effects of climate change in a specific region, it is very effective, but more context as to how it fits into the project would be useful.

We agree that more background is needed here. To this end, we will move this prologue after the methods, so that we will actively refer to it in the main body of the paper as an example of storytelling related to water and climate change. Thus, the necessary background will be provided.

All in all, the methodology and project description are very sound. It is obvious the authors have put much thought into developing *Water and Us*, and its aims and set-up are compelling. As outlined below, section 4 needs work integrating the lessons learned into scientific context, but it is otherwise well-rounded.

Thank you!

Specific comments:

- L3: to contribute to advancing education
- L5: revolves instead of resolves
- L40: add 'a' before reality
- L45: 'precipitated' does not fit here. Depending on what the authors want to convey, use 'began' or other word
- L58: change 'by' to 'from'

Noted. We will fix all the above in the revised manuscript.

- **L62: would be good to have a more recent reference, to include scientific and societal development over the past 20 years**

Noted. We will add a more updated reference.

- **Good recurring metaphor of the elephant - works very well here**
- **L71: add more recent reference, e.g. Immerzeel et al. (2020)**
- **L77: remainS anchored in, not anchored to**

Noted. We will fix all the above in the revised manuscript.

- **L82: the authors here take the words by Kirsten von Elverfeldt out of context, in my opinion, saying climate change is an implausible risk. Von Elverfeldt argues that climate change seems implausible to non-science aligned people, not that it is. That should be clarified.**

We agree and we will clarify this in the revised manuscript.

- **L84: change 'for example' to also**
- **L88: educating THE next**

Noted. We will fix all the above in the revised manuscript.

- **L94: please define 'high school students', as it is an ambiguous term, and very dependent on the country. A definition of age and/or subject it is tied to (as many high school students have a set directional curriculum) would be good.**

We agree. In Italy, high-school students are generally between 14 and 19 years old, while elementary-school students are between 6 and 11 years old. Water and Us is not tied to a specific subject or directional curriculum. We will clarify this in the revised manuscript.

- **L108: I'm assuming the authors mean role playing games, rather than role games?**

Correct. We will fix this.

- **The second pillar could use more elaboration: e.g. which roles are played in the role playing games? Those of stakeholders, affected people, decision makers, or all three? Especially compared to the**

description of the other pillars, this seems very short and lacks necessary detail

We agree and we will clarify this in the revised manuscript. Students play the role of various water stakeholders (agriculture, ecosystem services, tourism, industry, etc). They formulate their needs about water and then compare needs across stakeholders to identify potential synergies and emerging conflicts.

- **L125: intuition is a peculiar choice of words here. I would suggest 'builds on the Premise'**
- **L136: archetype is, again, a word that doesn't quite fit. I would suggest 'case study' or simply 'example'.**
- **L141: parallels instead of parallelisms**
- **L141: concurrent is not the right word here, because these events happened at different points in time. I suggest omitting it**
- **L145: 'laboratory' in English refers to a building rather than an activity. Please revise**
- **L157: see comment L145**
- **L172: take part IN**
- **L174: 'may apparently be challenging' is strangely worded. Please revise. I suggest simply 'is challenging'**
- **L174: associate WITH**
- **L175: replace 'regards' with 'conveys'**
- **L188: remove 'are the'**
- **L191: 'hammer down' is not correct. I suggest 'in order to both integrate'**
- **L192: 'proximal' is not the correct word here. I suggest simply 'close'**
- **Section 2.5 is very clear and well-written, I am very impressed**
- **L222: inTO**
- **L238: replace 'it strikes' with 'it is striking'**
- **L238: add 'the' to IPCC**
- **L241: I'm not sure 'diffusion' is the right word here, as it implies randomness. I personally (but of course the authors can disagree) would prefer 'dissemination' or 'transfer'.**
- **L242: 'has been' is the wrong tense to use here, replace with 'were'**
- **L248: replace 'on' with 'in'**
- **L252: 'suggestive' is not the right word here. Please revise**

- **L266: replace 'in' with 'of'**
- **L268: 'youngsters' too colloquial**
- **L281: change 'make' to 'making'**

Noted. We will fix all the above in the revised manuscript.

- Overall, I find section 4 lacking depth, as it tries to very broadly cover the lessons learned, and the authors attempt to connect their personal findings to previously done research and its conclusions. An example is the 'breakdown of youngsters' by Kuthe et al. (2019), which is applied, then not further addresses in its methodology of application to the Water and Us students, the ratios within the groups, or how these categorizations are helpful, and what specific needs each group has. This could have been tied into the second part of the section very well, which speaks about audience priorities. The categorizations could be used as groups to address different priorities. Finally, when discussing the future integration of Water and Us into future national and European projects, it would be good to know whether this will still be located in Italy, or whether the project will expand. If the latter, this would require at least some brief communication of how the project will then be (as expressed L279-281) tailored to the geographic location and socioeconomic circumstance.

This section will undergo major revisions according to comment from you and reviewer #2. It will likely be merged with the Impact section and heavily summarised.

- **L308: change 'to' to 'in'**
- **L314: at AN international**
- **Overall, conclusion is very short, but to the point, and I think it fits here.**

Noted. We will fix all the above in the revised manuscript.