

Review of: "Policy-Based Water Management Challenges at the Local Level Under Non-traditional Security Perspective: The Case of Hanoi City, Vietnam"

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Potential competing interests: No potential competing interests to declare.

Thank you for the paper. It is an interesting way of combining different disciplinary concepts together and utilises a very detailed database of information to create an comprehensive view of water security for Hanoi. I have a few short points to change and some longer comments.

The short ones include:

- "Because of its importance, environmental security, which includes water security (WS), has been recognised by the United Nations (UN) in 1994 as one of the seven new dimensions of human security." can you provide reference for this part?
- "management of non-traditional security (MNS) refers to transnational or international cooperation in the management of transboundary threats, particularly in Asia (Caballero-Anthony, 2016)." you should bring this point early on in your introduction. Because WS is a concept that has been in the research and policy practice for almost a decade and also part of national security agendas so it does not obviously seem "non-traditional".
- "Under the current wastewater crisis, we suppose a not higher treatment rate for Hanoi" you may want to reframe this sentence.
- Regarding the agriculture part in the WSM challenges section, how much agriculture is happening in Hanoi? can you share a percentage?

Long comment:

- Regarding the methodology, it is a great way to measure the Water security outcomes, specifically where data is patchy. However I am a bit lost if there was a baseline used to generate the scores for the different processes, i.e., against what are you measuring low or high functioning and drawing conclusion on the scores and also the timescale applied to draw conclusions. If you have used a baseline maybe it has to be made more clear because I did not easily find it, I even looked in the supplementary materials). Except for one or two processes none of the processes have a baseline against which you have scored. If you don't provide a baseline against which you provide the 1-5 scores, then it becomes a subjective rather than a more objective exercise. For example is there any indication of the ratio of investment between capex and opex in Hanoi as opposed to say another city for example Stockholm or Delhi?
- You have used a baseline for nature based solutions as indicated, but a similar baseline will also have to be shown for

the other processes. For example this quotes part of your paper gives a rational for global recommendations against which Hanoi shows low forest coverage. “Unfortunately, these phenomena continue. Hanoi has a green space of only 11.7% (nguoidothi.net.vn, 2020), with very low forest coverage of 5.67% and urban trees of less than 2 m²/person (nld.com.vn, 2021). Compared to recommendations and technical regulations (e.g., green space of 30% (Van Den Bosch et al., 2016), urban tree of 7 m²/person (national technical regulation QCVN 01:2021/BXD) and 9 m²/person (WHO, 2012), and 15 m²/person from UN’s Habitat (Data-Driven EnviroLab, 2022), Hanoi critically lacks green infrastructure”

- Regarding timescale, for example you have mentioned that the total investment in safe water has decreased from 2016 to 2018. Investment timescales have peaks and lows every 5-10 years with a decline and then rise again. Just a 3-4 years timescale of investment is not very sufficient to declare that there is a decreasing trend of investment.

Some suggestions for improvement:

For a comparative baseline, maybe you can use some comparative measures like the Environmental Performance Index provided by Yale university to create a benchmark from which you can extract the relative performance of Hanoi.

Although maybe there is another measure that can easily fit in.

In the recommendations you can be more clearer and specific. You have done a good detailed assessment of the different processes based on multiple indicators and you definitely can make more specific recommendation's with attention to consequences and potential benefits if changed. E.g. you can mention that --the investment structure is currently Capex heavy and this shows increase costs in other ...areas (consequences), it can be changed to X which can result in higher benefits Y

Similarly in the conclusion, while your research is focused on Hanoi, you can mention how it is performing compared too other cities to make a stronger case. It does not have to be a similar detailed WS measure but can be general trend of different cities so that Hanoi can at least see itself on a scale and know how much more it need to go to perform better.