



EGUsphere, author comment AC2
<https://doi.org/10.5194/egusphere-2022-604-AC2>, 2022
© Author(s) 2022. This work is distributed under
the Creative Commons Attribution 4.0 License.

Reply on RC2

Kirk B. Enu et al.

Author comment on "Review article: Potential of nature-based solutions to mitigate hydro-meteorological risks in sub-Saharan Africa" by Kirk B. Enu et al., EGU Sphere, <https://doi.org/10.5194/egusphere-2022-604-AC2>, 2022

We would like to appreciate Referee #2 for their time and effort in reviewing our manuscript and providing insightful feedbacks. These insightful comments have helped to improve the manuscript. We carefully considered each comment and tried our best to address them. Details are presented below.

Referee #2: Page 3 line 15 – here biodiversity is mentioned, but why not say something more specific about flora and fauna?

Authors: This comment is well appreciated, however, since we were only noting the principles of NBS in urban areas in this section, we thought a generalized term was more appropriate.

Referee #2: Page 3 line 23-24 – I suggest to mark the number of categories as follows: (i) green, (ii) blue, (iii) hybrid....

Authors: This is well noted, and the numbering has been included in the revised manuscript.

Referee #2: Page 4 line 7 – Go a bit deeper on Ecosystem Services (ES) theme.

Authors: This is well noted and has been addressed accordingly. We have included a definition of ecosystem services. We have also provided examples of the three ecosystem service types such as food and fuel, erosion control and heat mitigation and recreation and aesthetic value respectively for provisioning, regulatory and cultural ecosystem services (page 5 lines 13-16).

Referee #2: Page 4 line 23-24 – I suggest to integrate Evans et al. (2022) "Ecosystem service delivery by urban agriculture and green infrastructure – a systematic review" as citation.

Authors: This citation has been included in the revised manuscript.

Referee #2: Page 5 line 1-6 – please, check if paper answers all questions.

Authors: The paper does answer all four research questions. To help make the reading clearer, we have repeated the research questions (objectives) in the Conclusions and re-

organized the study conclusions in the order of appearance of the study objectives.

Referee #2: Page 10 line 6 – How many SSA States are there in which there is not even a studio? Are they particularly concentrated in a specific area? If yes, why?

Authors: The number of SSA countries that did not report any NBS at all were 14 since there are 48 SSA countries in all according to the World Bank. In terms of the sub-regional concentration of the NBS, these were explained in page 10 lines 6-9. Of the reported NBS, 30 were in West Africa, 18 in Southern Africa, 30 in East Africa and 6 in Central Africa. We note, however, that most of the papers were from only four countries (South Africa, Kenya, Nigeria and Tanzania). We explain that these countries are among the biggest economies in SSA, have been forerunners in incorporating concepts like green infrastructure and NBS in urban planning and have the best research institutions in the sub-region. This perhaps, is the reason why they produced many studies on the concept.

Referee #2: Page 12 Figure 4 – Is part of this caption not transferable into the text?

Authors: Indeed, the explanation of the different scales of NBS were initially part of the text but we thought that it was better to include it in the figure caption so that it is easier to interpret the figure and still maintain so.

Referee #2: Page 22 Figure 7 – Define ESS acronym.

Authors: Thanks for this comment. It has been addressed accordingly.

Referee #2: Page 23 Line 9 – What about some regulatory services on water cycle?

Authors: This comment is well acknowledged however, we were taking stock of what ecosystem services have been reported and as such, were limited to only that. Unfortunately, none of the included papers reported on how land cover can regulate water flow.

Referee #2: Page 27 Line 12 – please deepen the part about Global North, also included in the conclusions.

Authors: The comment is well appreciated and the discussions in the Global North has been increased accordingly in the revised manuscript (page 28 lines 12-17).

Referee #2: Supplementary Table 4 – typo, it should be "open spaces" instead of "opens paces" to define parks as NBS practice.

Authors: The comment is well acknowledged, and the correction has been made in the revised supplementary materials document.

Referee #2: I also suggest a whole review of the paper to improve communication effectiveness and, for the future, to work on on research activities that can overcome the study limitations set out in sub-chapter 2.5.

Authors: These comments are well acknowledged. We have thoroughly reviewed the manuscript accordingly and suggested future studies that could overcome the identified study limitations in the revised manuscript. This includes proposing for future studies to use surveys and/or interviews as well to reduce full dependence on only reported NBS to be able to assess the success or failure of projects to document lessons by collecting empirical data. This is available on page 31 lines 30-32 and page 32 lines 1-5. Many thanks once again.

