Comment on essd-2022-75
Anonymous Referee #1

Referee comment on "UGS-1m: Fine-grained urban green space mapping of 34 major cities in China based on the deep learning framework" by Qian Shi et al., Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2022-75-RC1, 2022

This paper provides a high-resolution urban green space (UGS) maps for 34 megacities in China, as well as a UGS dataset for the deep learning models. The paper is complete in structure and the results have shown the effectiveness of the proposed deep learning framework. I think the paper can contribute to UGS research in terms of both algorithm, dataset and products. However, some revisions still should be made to the manuscript before considering publication:

- The caption of Figure 1 should be expanded in combination with its content to improve understanding.
- The descriptions of the reminders of the paper (Line 100) should be revised, while the Conclusions are arranged in Section 7.
- In the deep learning framework, the author use “four enhanced Coordinate attention (ECA) modules (Hou et al., 2021) to enhance feature representations” (Line 164). The descriptions of the ECA is simple with only a Figure 7. Is there any difference between the ECA and that in the reference (Hou et al., 2021)? Please elaborate.
- The Point Head in 3.1.2 sounds interesting. However, some details are not clarified. For example, how does the N sampling points obtain? And what is the rationale behind the Point Head to improve accuracies? Besides, the value of N is missed in the paper.
- What does "D" denote in (4) and (5)?
- Some training details and the network configuration are missed. For example, the details of the data augmentation strategies.
- The Section 4 should be elaborated to upgrade the readability and approval of the results, which is brief relatively at present.
- The introductions of Figure 12 (Line 260) should also be extended.
- There are several typos and statements without any references or evidence. For example, the references of the "Guidance of the General Office of the State Council on Scientific Greening" (Line 108) should be provided.
- For writing, the manuscript needs proofreading.