

Comment on essd-2022-142

Anonymous Referee #2

Referee comment on "An improved global land cover mapping in 2015 with 30 m resolution (GLC-2015) based on a multi-source product fusion approach" by Bingjie Li et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2022-142-RC2>, 2022

This paper developed an improved global land cover map at 30m resolution in 2015 by fusing multi-source products of land covers and other thematic mappers. Two sets of global samples with points and patches have been developed and used to evaluate the performance of derived GLC-2015. This work is high-intensive in terms of the labor involved, and the evaluation is sound with clear logic. Before recommending it for publication, I raised several concerns below, which might be helpful to improve this paper.

(1) Although the authors adopted the DSET approach to generate the GLC-2015 product and compared it with similar products such as FROM-GLC and GLC_FCS30, the improvements gained from the DSET approach should be highlighted in those common approaches such as major voting and other common approaches. Otherwise, the highlights of the DSET in the manuscript should be reconsidered.

(2) How about the mapping performance if using these samples (80%) do the classification directly? Because these samples have been manually visualized and are qualified for the classification task. Please add some test results or discuss this issue in the manuscript.

caption uses "Figure". Please make them consistent.

- Page 281: how to determine these two thresholds: 25% and 75% in Eq. (4). Please explain.