

Comment on essd-2021-400

Anonymous Referee #1

Referee comment on "Improved maps of surface water bodies, large dams, reservoirs, and lakes in China" by Xinxin Wang et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2021-400-RC1>, 2022

In this study, the authors generated a valuable dataset of Large Dams, Reservoirs, and Lakes across China by analyzing all available Landsat imagery in 2019 via GEE platform. Overall, this manuscript is written well and suitable to publish in ESSD. I recommend a minor revision based on the comments below to improve the quality of this manuscript / data set before publication.

Specific comments:

- Line 78: Please confirm the expression of "GLObal geOreferenced Database of Dams (GOODD) V1", which is different from the handwriting in line 165.
- Line 118: Why did the authors choose to analyze the large SWB with area $> 1\text{km}^2$? What about the area $\leq 1\text{km}^2$? Please add one or two sentences to explain it.
- Line 127: In the Fig.2a, the DEM or other data could be added as the base map to make this figure look more abundant.
- Lines 127-132: The content of section 2.1 is a little simple, some information could be added in this part, like geographic or climatic characteristics.
- Line 146: In the Fig.2b, part of the background map was covered by the histogram, which could be improved to be more normative and beautiful.
- Line 170: In the Fig.3, if it's possible, the shapefile of dam and reservoir could be symbolized separately.
- Lines 209-210: As we know, the Landsat 7 ETM+ has problem of stripe, would it effect the generation of SWB? How did the authors deal with this issue? Please give detailed explanation.
- Line 221: In the section 2.3.2, when the authors generated the polygons of lakes or reservoirs, how did the authors determine the borderlines between water bodies and adjacent land, especially for mixed land-water pixels? Please give detailed explanation.

- Lines 240-244: In the section 2.4, is there only “area” in the attribute table? If not, please give more description about the attributes, otherwise, this paragraph is too simple.