Open Access Earth System Science Data Discussions

Earth Syst. Sci. Data Discuss., referee comment RC2
https://doi.org/10.5194/essd-2020-382-RC2, 2021

Comment on essd-2020-382

Anonymous Referee #2

Referee comment on "A historical reconstruction of cropland in China from 1900 to 2016" by Zhen Yu et al., Earth Syst. Sci. Data Discuss.,
https://doi.org/10.5194/essd-2020-382-RC2, 2021

Spatial mapping of croplands distribution is essentially needed for multiple agricultural and environmental studies. In particular, the long-term croplands spatial datasets, like the one introduced by this study, enable the long-term tracking of cropland changes and analyzing their driving factors. Hence, I believe that the current study is introducing a very useful cropland dataset and so, it has great potential to be published in ESSD after considering a few minor revisions. I have listed three comments below for your consideration.

- What is the final spatial resolution of the produced cropland grids? It will be better to have this information in the abstract.
- It is clear that the cropland areas at the provincial level estimated from the constructed cropland dataset were compared with other earlier studies, and all were compared to official statistical data. However, I believe that this comparison might be biased because the official statistical data (from NLRB) was part of the tabular data used to construct the final cropland layers, right? That is why the correlation between the produced cropland layer and NLRB data was very high (R-Square = 0.999, k=1.0, in Figure 3). Therefore, I believe the accuracy assessment, through traditional error matrix and estimated OA, PA, Kappa, etc., can be performed here for selected years when crowdsourcing validation samples (or field samples) are available to reflect the efficiency of the cropland spatial allocation method introduced by the current study. Some crowdsource validation sets are publicly available and can be used for validation such as the one from Geo-Wiki (https://www.nature.com/articles/sdata2017136) and Global validation sample set v1 (http://data.ess.tsinghua.edu.cn/).
- In figure 1, GFSAD30 was produced for 2015 and so I think it belongs to the 2010s rather than the 2000s, right?.