

The manuscript provides the China's 30-m UISA and UGS fraction datasets based on the urban area in CLUDs by logistic regression and linear calibration using NDVI from Landsat data.

I would suggest the authors reorganize the sections, give more details on the samples and mapping algorithm, discuss more about the accuracy of the maps and comparison with various datasets, add an discussion part and resubmit this paper.

Figures:

1. For Figure 5 and 8, it would be better to remove the other land cover types and only show the fraction of UISA. The color is confusing among the vegetation types and the lower percentage of UISA.

Introduction:

2. There are quite a few existing dataset/report that are providing information about urban green spaces and urban land use categories of China. For examples, (1) <https://www.mdpi.com/2072-4292/10/10/1569/htm>, (2) <https://www.sciencedirect.com/science/article/pii/S2095927319307054?via%3Dihub>

Method

3. I feel the methodology section can be written to make it clearer (e.g., sample selection, the retrieval of UGS fraction)
4. Effect of urban boundary. How to define the urban area and extract the urban boundary are not clear? There are some other datasets providing the urban extent using different algorithms and data sources, e.g.:

*Gong P, Li X C, Zhang W. 40-Year(1978-2017) human settlement changes in China reflected by impervious surfaces from satellite remote sensing. Science Bulletin, 2019, 64,https://doi.org/10.1016/j.scib.2019.04.024*

*Zhou, Y., Li, X., Asrar, G. R., Smith, S. J., & Imhoff, M. (2018). A global record of annual urban dynamics (1992–2013) from nighttime lights. Remote Sensing of Environment, 219, 206-220.*

*Li, X., Gong, P., Zhou, Y. et al. 2020. Mapping global urban boundaries from the global artificial impervious area (GAIA) data. Environmental Research Letters. https://iopscience.iop.org/article/10.1088/1748-9326/ab9be3/meta*

5. In model training, 28 capital cities were selected to extract samples for LRM model input. Are these capital cities capable to represent other cities in China? As is mentioned, the UISA is related with economic and geographic conditions, but the capital cities are commonly the better developed region than the other cities.
6. Does the urban land changes area refer to the area with land conversion between urban area and other land cover types (cropland to urban) or the changes within urban area (from built-up to greenspace)?
7. Why not use samples in 90m×90m for validation?
8. Would you please provide the details of validation samples, e.g., spatial distribution, types.

Results

9. Currently, there is no discussion part. What is the potential application and the uncertainty of this datasets? And the results are too short and simplified. Please add more details such as comparisons with other UGS, UISA dataset, line graphs of the temporal changes of UISA in different regions to support the conclusion of "high in east and low in west".