

Interactive comment on “A 30-meter resolution dataset of China’s urban impervious surface area and green space fractions, 2000–2018” by Wenhui Kuang et al.

Anonymous Referee #3

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This paper developed a 30-m resolution dataset of China’s urban impervious surface area and green space fraction from 2000 to 2018. The fraction information of impervious and green space is revealed from remotely sensed indicators. I have some comments on the adopted approaches and presented results. Main comments (1) It is difficult to derive the logistic regression model directly since most of the available observations are limited in this study (i.e., only five observations). Why not use continuous observations (i.e., annual) to fit the logistic regression model. (2) Retrieving the ISA information from the NDVI directly seems not reasonable. First, the maximum NDVI used in this study may be fluctuated over years and across spaces. Second, for the built-up areas in arid regions, the proposed approach of estimating the impervious

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surface information from the NDVI is not reliable. This is an issue that needs to be well addressed. (3) The comparison of urban areas with other products is necessary, including the accuracy and urban area. It is inadequate if only presenting these comparable figures here directly. (4) A similar approach to estimate the fraction of green space is not reasonable also. I am wondering if this linear relationship can well estimate the green space. (5)

Minor comments: Page 3, Line 78-80: how to harmonize the spectral bands between Landsat and HJ (or CBERS-1)? Page 3, Line 95: the author mentioned that most classifications exclude the green space, which is not accurate. Green space is a kind of definition from land use, which consists of trees, shrubs, grasses etc., which are general land cover types. Page 4, Line 100: the definition of new and old urban lands from their colors still needs more evidence. Visually, the new built-up areas such as residential which has similar layout and materials may be similar to the old urban lands Page 8, Line 230: there is a repeated reference (Dong et al., 2017).

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