

Interactive comment on “New anthropogenic land use estimates for the Holocene; HYDE 3.2” by Kees Klein Goldewijk et al.

Anonymous Referee #1

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General Comments This paper describes a major update in the most popular, spatially explicit, long-term historical land use and population reconstruction. These data are widely used in land change and climate change science. More detailed categories of land use are included in this version and the algorithms are improved. Basic issues remain with the modeling methods, including uncertainties introduced by a number of untested, and perhaps untestable assumptions. It would be useful if these were assessed and presented in more detail. It is also concerning that the Introduction gives scarce background on the work presented here, including a review of other similar datasets, the broad methodological challenges of producing them, how they were produced in the past, and how this work improves on these. Nevertheless, this dataset remains the most widely accepted mainstream global dataset of its type; there is no full replacement, and the changes introduced are very welcome improvements.

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Specific Comments 1. The abstract should present some indication that the methods used introduce substantial uncertainties, as noted in the final section of the main paper. 2. The first part of the introduction, on page 2 L8-17, has no bearing on the work presented here: this should be removed. It also includes the incorrect assertions that the Neolithic begins in 10,000 BCE, when this depends on the region- it is defined by the start of agriculture, which varies from place to place; it also equates the Industrial Revolution (late 19th century) with the Great Acceleration (starting in 1950). It would be better to focus on the work presented here, including a review of other similar datasets, the broad methodological challenges of producing them, and how they were produced in the past.

Technical Corrections 1. P1 L13: change “and” to “an” 2. P2 L7: change “the last millennia” to “the last 10 millennia” 3. P2 L8-17: I urge the removal of these four sentences. 4. “Prestele (2016) was cited but is not in the references.

Interactive comment on Earth Syst. Sci. Data Discuss., doi:10.5194/essd-2016-58, 2016.

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