

## ***Interactive comment on “A review of the available cropland and land cover maps for South Asia” by Prashant Patil***

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Referee comment: This manuscript listed lots of LUCC datasets and cropland maps of South Asia. But I couldn't find any helpful results or discussions. The manuscript did not propose any new techniques or present any significant results that could be useful to other land cover studies. A simple list of LUCC datasets and cropland maps is not enough for a paper at the level of the journal.

Authors reply: The main objective of the article is to list the available land cover and cropland maps of the South Asian region and to highlight the methodology adopted in mapping the land cover and cropland maps. To know and understand, a lack of accuracy, uniqueness, and systematic classification of cropland categories, together with

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long-pending updates of cropland mapping, are the primary challenges and that needs to be addressed in developing high-resolution cropland maps for the South Asian region by ensuring and adopting the unique definition of cropland categories which can be applied globally. Which can be helpful; In continuous monitoring of croplands with higher accuracy, and for policymakers to know and understand the at the regional and national levels. Further, high-resolution accurate cropland mapping is also required for policymakers to study the multi-dimensional tasks associated with global ecological variation and the impacts of population growth and increased industrialization on croplands. To know and to understand to overcome the yield gaps and importantly the uncertainties associated with data mismatch.

Suggestions by a referee for further revision:

Referee suggestion: 1. In those LUCC datasets and cropland maps, which one is the most suitable for South Asian, and why?

Authors reply: The main objective of the listing the available land cover & cropland datasets are to know presently, how many datasets are available for the South Asian region and within a South Asian region, their resolutions, the year of mapping and the methodology adopted in mapping and how many cropland categories available. All available land cover & cropland maps are important for South Asian region to know and understand the major concerns, particularly the paucity of knowledge regarding the spatial distribution of major crop types within South Asia, and the knowledge in further proposing & developing the methodology for mapping the high-resolution cropland maps for the South Asian region by ensuring and adopting the unique definition of cropland categories which can be applicable globally.

Referee suggestion: 2. Fig.1 is meaningless just displayed the boundaries of South Asian. I think an LUCC map of South Asian should be better.

Authors reply: Thank you for your valuable suggestion. I will replace with available LUCC map of South Asia.

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Referee suggestion: 3. There is repetition on the content, especially in section 2.2 and 2.3. National land cover and cropland maps in 2.3 are just subsets of globe of regional datasets and maps. This section is unnecessary.

Authors reply: Section 2.2 and 2.3 are different and not the subsets of a globe of regional datasets and maps. Section 2.2 and 2.3 are important sections which highlight the specific regional level and country level individual studies and maps. Section 2.2 Deals within continent level studies carried out and mainly highlights the specific region wise available land cover & croplands maps within Asia. i.e. "A regional land cover map of peninsular Southeast Asia (Miettinen et al. 2016). "A rice/paddy map of South Asia (Gumma et al. 2011). "Rice maps of South, Southeast, and East Asia (Huke and Huke 1997). "Paddy rice maps of South and Southeast Asia (Xiao et al. 2006). "An annual paddy rice map for northeast Asia ((Dong et al. 2016). "A regional land cover map of central Asia ((Klein, Gessner, and Kuenzer 2012). Section 2.3 Deals within sub-continent level studies and mainly highlights the specific country wise land cover and cropland maps within South Asia. i.e. "The land cover map of Afghanistan. (ALCM, 2012) ([http://www.glcnc.org/activities/afg\\_lc\\_en.jsp](http://www.glcnc.org/activities/afg_lc_en.jsp)). "The land use/land cover map of Bhutan (Sushil Pradhan, 2002). "The seasonal paddy rice maps of Bangladesh (Gumma et al. 2014). "A national-level agriculture land cover-type map of India (Sreenivas et al. 2015). "The land use/land cover map of Nepal (Sushil Pradhan, 2002). "The land use/land cover map of Pakistan (PAK-SCMS, 2015).

Referee suggestion: 4. The unit of spatial resolution of remote sensing data should be the length unit, not the area unit. Authors reply:

Thank you for your valuable suggestion. I will replace all spatial resolution of remote sensing data in manuscript with length unit.

Referee suggestion: 5. The name of LUCC dataset in 2.1.21 should be GlobeLand30.

Authors reply: Thank you for your valuable suggestion. I will change the name of

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LUCC dataset in section 2.1.21 with GlobeLand30.

Please also note the supplement to this comment:

<https://www.solid-earth-discuss.net/se-2017-121/se-2017-121-AC1-supplement.pdf>

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Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2017-121>, 2017.

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