ESSDD

Interactive
comment

Interactive comment on "Time series of Inland Surface Water Dataset in China (ISWDC) for 2000–2016 derived from MODIS archives" *by* S. Lu et al.

Anonymous Referee #2

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General Remarks The paper is in general well written but lacks the bigger picture. The work reported understandably China focused but the authors miss the opportunity to discuss how their techniques could be applied elsewhere and what the long term benefits are. It is highly recommended that such a discussion be included.

Although a degree of statistical testing has been applied, the results of which are reported, the paper lacks a discussion of the overall uncertainty associated with the surface water areas reported. It is highly recommended that such a discussion be added.

Section 5.2 Although the links to the data work and there is a 'ReadMe' file accompa-

nying the data the metadata it contains is minimal. This section needs expansion to include a description of the data archive structure, access, and usage licensing as well as the file formats and metadata provided.

The authors are providing imagery (including .tif format). It is advised that the metadata in the 'ReadMe' file be embedded into the files - this would improve the usability of the data in the long-term. For example the following could be used and or adapted to meet the authors needs https://iptc.org/standards/photo-metadata/photo-metadata/

Specific edits Page 1 15: 'for the time' change to 'for time' 16: 'create Inland' change to 'create an Inland' 16: 'maps the water body' change to 'maps water bodies' 17: '0.0625 km2 17 in the terrestrial land of China for the period 2000–2016, in 8-day temporal' change to '0.0625 km2 17 within the land mass of China for the period 2000–2016, with 8-day temporal' 18: remove 'the' at end of line 20: 'data with the' change to 'data with' 21: '2015 too' change to '2015' 23: 'and as input' change to 'and as an input'

Page 2 3: 'systems in' change to 'systems in a' 5: 'has a role' change to 'have a role' 9: 'But' change to 'but' 9: 'did limited exploration for' change to 'were limited' 17: 'but in' change to 'but only in' 17 – 19: 'Their research hotspot was Qinghai-Tibetan Plateau due to the existence of the largest number of inland lakes there with the highest elevation on the planet (Lu et al., 2017).' This sentence does not make any sense and needs restructuring. 20: 'Almost every 10-year of lake water surface area datasets from 1960s to present has been produced' change to 'Almost every 10-year since the 1960s lake water surface area datasets have been produced'

Page 3 1: 'dataset.' change to 'datasets are available.' 3: 'is water' change to 'is a water' 3: 'as Normalized' change to ' as the Normalized' 8: 'these methods to extract water boundary is to determine' change to 'these methods in extracting the water boundary is to determine' 11: 'experience causes' change to 'experience which causes' 11: 'and it is' change to 'and is' 12: 'apply to large scale and large amount of data research' change to 'apply on larger scales and to large amounts of data' 16: 'and divided it'

change to 'and to divide these' 18: 'of visual' change to 'of a visual'

Page 4 2: 'China is one of the most rivers and lakes in the world' change to 'China has one of the highest densities of rivers and lakes in the world' 3: 'exceeding 1000 km2, and 2928 lakes with an area larger than 1 km2 and a total area of 91,020 km2 (Ma' change to 'exceeding 1000 km2, 2928 lakes with an area larger than 1 km2 giving in total a surface water area of 91,020 km2 (Ma' 5: 'resources are very uneven in distribution.' Change to 'resources are unevenly distributed.' 7: 'bought' change to 'placed' 10: 'China. So the research to' change to 'China, hence the potential to' 12: Remove 'Therefore' and 'research' 17: Replace 'other' with 'existing' 20: 'to the water' change to 'to a water'

Page 5 4: 'as an ancillary' change to 'as ancillary' 7: 'The first one' change to 'The first' 9: 'The second one' change to 'The second'

Page 6 4: 'extraction of' change to 'extraction of the' 7. 'the cloud and cloud shadows in this process' change to 'cloud and cloud shadow in this process' 8: What is the time period referred to by the statement 'over longer time periods' 10: remove 'if ' before equation

Page 7 5: 'will be' change to 'will also be' 8: 'values of' change to 'values for' 10: 'values of' change to 'values for' 12: 'extracted as' change to 'extracted as the'

Page 9 9: 'high consistency' change to 'highly consistent' 11: 'respectively (Figure 3).' change to 'respectively is shown in figure 3.'

Page 12 3: 'series surface' change to 'series of the surface' 4: 'area such as' change to 'area; including; 6: 'as a cross-validation' remove 'a' 8: 'models' change to 'model' Table 19: need to include uncertainty accessioned with the values given

Page 13 Figure 5: There are no error bars on this figure – they need to be added or an explanation as to why they are not shown. The axis tick marks need to be 'out' rather than 'in' to improve clarity. The x axis labelling is cluttered and needs revision to make

clearer

Page 14 11: '2016 was' change to '2016 has been' 11: 'series and' change to 'series with' 12: 'of surface' change to 'of a surface' 12: 'in China' change to 'for China' 13: 'in high consistency' change to 'is highly consistent' 14: 'data in' change to 'data from' 16: '0.88 in' change to '0.88 for the' 18: 'and Poyang Lake region) with the GSW data set, especially for the large water bodies (as lakes and' change to 'and Poyang Lake region) to that of the GSW data set, especially for large water bodies (such as lakes and' 19: 'and the' change to 'and' 20: remove 'for' 21: 'process' change to 'processes'

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