

Interactive comment on “Development and validation of the global map of irrigation areas” by S. Siebert et al.

N. Ramankutty (Referee)

nramanku@wisc.edu

Received and published: 19 August 2005

General Comments

This paper describes the development of the 3rd version of a very useful global data set of irrigation. The earlier versions of this data set have been widely used in global change studies, and it is encouraging to see it being further developed. This particular version is accompanied by an estimate of data quality, which has been done fairly comprehensively given the constraints. The new product, and the accompanying data quality indicators will be extremely valuable to the scientific community.

The paper is well written, the scientific methods and assumptions are clearly described and valid, and the conclusions are consistent with the results. I only have the following few comments.

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper

Specific Comments

1. Page 1312, line 25: Recently, the remote-sensing based global irrigation mapping project of IWMI developed and published online a beta version of their first global product (e.g., <http://www.iwmidsp.org/dsp/web-materials/posters/JPG/poster-16-iwmi-IRRIGATED-53classes-low-res-2707x1417.jpg>). The authors should compare their version 3 product to this new global map. The data used to be available in ERDAS Imagine format on their website (e.g., <http://www.iwmidsp.org/iwmi/SearchData/ReadFolder.asp?fPath=/dsp/rs-gis-data/Global/>), but only the images seem to be available now. Maybe the authors can contact IWMI to get the digital data. However, the IWMI product is not yet peer-reviewed and published, and therefore potentially not citable here. This is the only major revision I recommend to the authors, if it is possible to do.

2. The authors should include a comprehensive list of national and subnational census and map data sources, otherwise the results are irreproducible. The results and the conclusions would carry more weight if a list of data sources were made available to readers. Since such a list is going to be long, I recommend that the authors place it on a website, and mention the web address in the paper.

3. Currently, the map only says whether a grid cell is equipped or not for irrigation. It would be useful to know to what purpose the irrigation is being used. Is it used to irrigated crops, pastures, lawns, etc. Furthermore, it would help to know which specific crops (corn, wheat, soy, etc), and to what extent, they were being irrigated. I would recommend that the authors consider this for future versions of this database.

Interactive comment on Hydrology and Earth System Sciences Discussions, 2, 1299, 2005.

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper