Earth Syst. Sci. Data Discuss.,
https://doi.org/10.5194/essd-2018-4-RC1, 2018
© Author(s) 2018. This work is distributed under
the Creative Commons Attribution 4.0 License.

Open Access Earth System Science Data Discussions

Interactive comment on "Global radiation, photosynthetically active radiation, and the diffuse components dataset of China, 1981–2010" *by* Xiaoli Ren et al.

Anonymous Referee #1

Received and published: 12 April 2018

This paper describes a significant and impressive undertaking in an important region. The authors succeed in describing the relevant points and steps of the dataset production process. The dataset itself will be very interesting to environmental modellers and is presented in a readily usable format. Apart from minor adaptations listed below I recommend publishing the article in ESSD.

–

General comments:

1) It would be interesting to include a figure, which displays the number of stations (y axis) for each year (x-axis) with available observational data. The bars could exhibit the

Printer-friendly version

Discussion paper

number of stations with data separated in global, diffuse and PAR in a form as given in Fig1 (attachment)

2) Would it be possible to include the original observational data in the Zenodo record or give a link to where this data can be obtained from? This would be very helpful for people trying to reproduce the data generation process or for those that would like to use the observational data itself. As this might be a data-owner/copyright issue I do understand if this is not possible.

3) I am missing a discussion on the influence of smog/aerosols in urban areas on radiation values. Could that influence the results of the data expansion in some areas?

–

Specific comments:

P1 L15: delete the word "the" in the sentence "...freely available from the Zenodo..."

P1 L16: remove the blank after "DOI:"

P1 L 18: there is a blank missing in front of the reference bracket. This is also the case in P1 L27, P2 L15, P2 L27 and so on)

P1 L20, L21, L25: I am not a fan of the "/" used e.g. in "global radiation/PAR". Please replace the "/" with "and", "or", "vs." or whatever else is meant.

P1 L1: Maybe write "However, in China, global radiation, PAR, diffuse radiation, and diffuse PAR are not generally measured in contrast to other meteorological variables such as sunshine duration"

P2 L2: Maybe write: "... and diffuse PAR is required for a better understanding of the ecosystem carbon dynamics in China as well as..."

P2 L11: Change the sentence beginning with "Then" to "They then generated the radiation dataset in China from 1981 to 2010 and analysed the spatio-temporal variations."

CC BY

I do hope I understood right that the dataset was created by Ren et al.?

P2 L16: When you write at the end “In this paper” which one do you mean, the one I am reading or the one of Ren et al. 2017c? If it was the current (ESSD) one I would begin a new line to clarify that.

P3 L18: where does the 40% come from, do you have a reference on that?

P3 L22: in the formula, what requirement has to be fulfilled if Q/Q’ is between 0.2 and 0.6?

P4 L7, L16/17: here again the blank in front of the reference bracket is missing

P4 L18: replace “performance with other models” by “performance compare to other models”

P5 L13, L18: blank in front of the reference brackets missing

P5 L17: The title sounds a little odd, maybe just “Dataset generation”?

P6 L3: You begin points 2) to 4) with a verb, you should do it the same way for point 1)

P6 L14: again, I am not a fan of the “/” – rather use “and”, “or” or whatever is meant here

P6 L20: replace the “We can see” with “It can be seen” or something similar

P6 L26: I like Table 1, but do you think giving a mean of the total of China as done in line 26 is of any meaning? I would leave it at having means of the regions as given in Table 1.

P6 L27: replace “which was consistent” with “which is consistent”

P6 L29 and P7 L6, L23: blank in front of the reference brackets missing

P7 L13: maybe better to say “…. was derived”

P7 L14: replace “leaved” with “left”

CC BY

P7 L14: better “with the remaining data” (instead of rest data)

P7 L15: maybe better “.. and then the average performance of site expansion was derived”

P7 L16: “Table 2 shows” (instead of showed)

P8 L4ff: I would rather write: “The dataset is freely available from the Zenodo website at . . . (DOI:10.11. . ..).”

P8 L8: Instead of “There are two formats. . .” I would write “Two formats are offered, i.e. ArcGIS . . ..”

P9ff - Reference list: I am missing the article dois in the References chapter

P17 Table1: It would maybe be nice to have a figure on that, too.

Interactive comment on Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2018-4, 2018.

CC BY

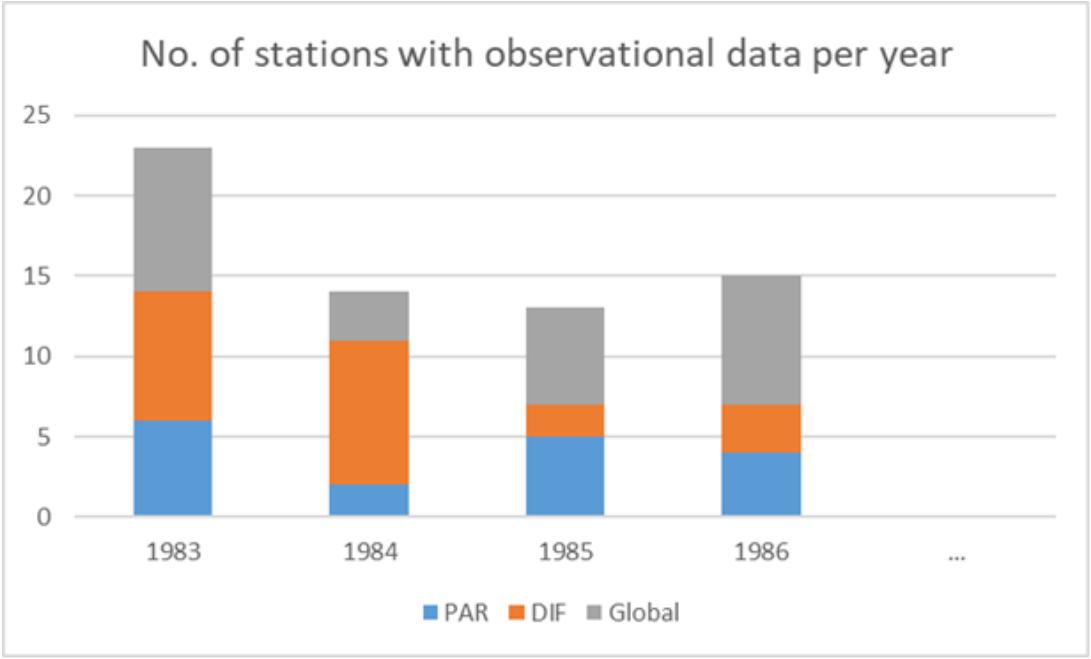

Fig. 1.

Printer-friendly version

Discussion paper

CC BY