

Interactive comment on “The integrated water balance and soil data set of the Rollesbroich hydrological observatory” by Wei Qu et al.

Anonymous Referee #3

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The submitted manuscript by Qu Wei and co-authors describes the set-up, methods and data of a comprehensive hydro-meteorological monitoring system of a small agricultural catchment in the Eifel region (Germany) operated in the frame of TERENO. The measured variables include the classical components of the (catchment) water balance plus the governing meteorological parameters. Altogether, the set-up and methods are classical and state-of-the-art. The most special component of the data set is the very dense soil water content measurement network, which offers a very interesting opportunity to analyze spatial variability of soil moisture at a small scale. The manuscript is easy to understand and informative. The set-up and methods are well described. In my opinion, only minor changes are needed to finalize the paper. (see below)

However, when I tried to download and review the data, I had a hard time. First, I tried to download the soil moisture data using the link indicated in the text

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(<http://doi.org/10.5880/TERENO.2016.003>). I was forwarded to a meta-data page without access to the data. Then I tried to download the climate and runoff data using the link indicated in the text (<http://doi.org/10.5880/TERENO.2016.001>). Here I found the data – only in NetCDF format (which I'm not able to read/open with my software). The second option (online data access) didn't work. Finally, I tried to download the eddy correlation data using the link indicated in the text (<http://doi.org/10.5880/TERENO.2016.002>). Here I was finally able to access the on-line data access, but data (e.g. latent heat flux) was available only for the period Oct 2011 to May 2012 (not for the entire period announced in the manuscript May 2011 to Dec 2013). In conclusion, I was not able to access the data and to check the quality of the data sets. The data access is not ready yet and needs major improvements.

Specific comments and remarks to the manuscript:

- Page 4, line 75: In the manuscript, the authors present data that they gathered from 1st May 2011 to 31st December 2013. Why only for this (rather short) period? What happened after 2013 with the measurements? For me as a potential user of the data set the value of the data would be much larger if data for 2014 and 2015 would also be available. In particular, the exceptional drought of summer/autumn 2015 would be of highest interest to me. Please extend the data set if possible.
- Pages 5 to 7: For the description of the different methods (chapters 3.1 to 3.4) the authors use different tenses (imperfect in chapters 3.1, 3.2 and 3.4; present in chapter 3.3). I suggest to use the same tense for all four method descriptions.
- Page 5, line 83: "located in the Eifel" Something is missing here. E.g. "located in the Eifel area" or "located in the Eifel mountain range"?
- Page 10, chapter 3.5: The soil physical data – described in chapter 3.5 and summarized in Table 2 - are an important part of the hydrological data set Rollesbroich. It would be crucial to get access to these data as well. Is it already possible to download these data?

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- Page 11 and Fig. 11: Where can the time series of Leaf Area Index be downloaded? (I didn't find access information in the manuscript.)

- Figure 2: In the caption – or in the y-axes label – you should write “Dielectric permittivity”.

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