

CAMELS-AUS v2: updated hydrometeorological timeseries and landscape attributes for an enlarged set of catchments in Australia

Keirnan J. A. Fowler¹, Ziqi Zhang¹, Xue Hou^{1,a}

¹Department of Infrastructure Engineering, University of Melbourne, Parkville, Victoria, Australia

^anow at: Department of Energy, Environment, and Climate Action, East Melbourne, Victoria, Australia

Correspondence to: Keirnan Fowler (fowler.k@unimelb.edu.au)

Author response to reviewer 1

	Reviewer comment	Author response
1	<p>General appreciation</p> <p>First of all, I wish to congratulate the authors for their lasting efforts to make available quality-controlled hydrological datasets: publishing an update of their initial dataset is a great initiative, and I hope that it will be an example for the authors of other CAMEL sets. I downloaded the files to check that they behave well, and I understand that the authors already corrected minor issues that were found. The changes between the v1 and v2 are well documented, the authors took the initiative to put as supplementary file a commented version of the first paper, which allows a very quick appraisal of what has changed for somebody who would have already read in detail the initial article (please only remove the comment inside section 3.6.3). To summarize my opinion on this paper and the accompanying dataset I would say: bravo!</p>	<p>Thank you very much for the kind words acknowledging the work that has been done already, and the value of updating the dataset. Note sure if the journal allows inclusion of the commented version of the first paper, but if so, we will check it again for errors and correct the one noted at 3.6.3 – thanks for that.</p>
2	<p>Minor comments</p> <p>1. You provide to precipitation estimates, one from AGCD, the other from</p>	<p>Good point. In the updated paper, we will provide more information that is relevant to choosing between the two products, and we will also provide a recommendation, as suggested. This will also include a recommendation for which PET product to</p>

	Reviewer comment	Author response
	SILO. The unexperimented user would have appreciated a recommendation on which to use... and if there are political reasons why you cannot give this advice, please mention it.	use – this in response to comment #2 from the other reviewer.
3	Also mention the evolution of AWAP to AGCD in Table 1 (the name of the column has changed).	In the paper text, we will briefly describe the evolution from AWAP to AGCD, as requested – thanks.
4	2. I see no mention of karst, though I imagine some of the catchments may be affected. Are there one or two examples that you could provide, just to warn unexperimented en-users that there may be cases where the water balance will be difficult to close?	Thanks, a helpful suggestion. We will provide a summary of affected catchments based on the best available data from Geoscience Australia.
5	3. You provide several variables to appreciate the level of anthropogenic influences. Some readers may be willing to analyze catchments that are either “almost natural” or “almost unregulated by reservoirs”. Could you provide a mention on this, and perhaps suggest a threshold on some of the descriptors you provide (i.e. we would consider catchments with impound_fac less than xxx to be almost unregulated).	OK, we will suggest suitable thresholds based on consideration of the two components of human impact on hydrology that are already supplied as attributes, namely flow regime factors and catchment factors (see Table A4 under the category “Anthropogenic Influences”). The former accounts for the impound_fac suggested by the reviewer.