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

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Author response to reviewer 2

	Reviewer comment	Author response	Line numbers in manuscript (track-changes version)
1	The authors responded well to the previous concerns and nicely implemented some important changes. I appreciate the guidance now provided in sections 4.2. and 4.3	Glad to see that this reviewer is mostly happy.	
2	but would like these to be even clearer. My recommendation would be: 1) Add a paragraph such as: "To summarize, we recommend for standard users of this Camel data set to use only the 467 catchments, the Morton Wet Environment Evaporation and the AGDC precipitation data."	We have added an altered version of this statement, namely: "To summarise, we recommend for standard users of this data set to use the SILO Morton Wet Environment Evaporation and the AGDC precipitation data as forcing data for hydrological modelling studies." Thus, we have removed the part of the statement that refers to catchment choice. For the reason why, please see the next row.	258-259
3	2) Change the text in 4.2 an 4.3 slightly to be less 'this should/could be considered by the user'. The normal user should be given one option. Providing more data is nice, but users should not be required to do their own comparisons. Some will do and this is great, but it should not	As we said last time, the heart of the issue is whether the dataset authors should seek to make every possible decision to standardise the use of the dataset; or whether (as in the past) it remains the responsibility of researchers themselves to decide on data inclusion, depending on context. Our opinion on this	n/a

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	result in every user using different combinations.	matter has not changed, and in fact has strengthened, given that I (Keirnan Fowler) recently had the chance to discuss this issue with the leader of the CAMELS project internationally, Nans Addor. Like us, he felt that it is difficult to anticipate the varied needs of every study that will adopt the dataset, and thus it is better to give users the information to make an informed decision, rather than specifying a particular catchment set for all to adopt. Thus, we have declined to make any further changes in response to this comment. In general, the reviewer's prompting has resulted in some valuable additional information being included, so overall we are grateful for the dialogue.	
4	L206: Question mark seems incorrect here	We have changed this so that the question mark is gone and it now reads: *"Since many of the original catchments (from version 1) were subsequently excluded from HRS2022 based on data quality rules, the question arises as to whether users should now avoid such catchments even though they are included in CAMELS-AUS v2."*	205
5	L241: NSE is a measure to assess runoff simulation performances, but it is not a suitable measure to assess the quality/agreement of precipitation data	The full quote is *"For example, Tozer et al. (2012) reported that the Nash Sutcliffe Efficiency scores exceed 0.99 in approximately half of the stations tested."* So the	245

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		reviewer appears to be questioning a study from 13 years ago (?). The current dataset does contain some information which uses NSE in a similar fashion. This information is discussed at line 250-256 and is clearly marked as authored by a third party, so it is not within our control to change this. In any case, we would argue it is indeed appropriate. Often when two timeseries datasets are compared, the correlation is used to quantify agreement. Perhaps this is what the reviewer means – that correlation should be used instead. However, a limitation of the correlation is that it is insensitive to bias, and bias is important here. Since the NSE overcomes this limitation, it is a suitable alternative, in our view.	250-256