

As I pointed out in the previous review, the authors have taken good account of the suggestions made. The exchanges with reviewer 1 are rich. I share many of Reviewer 1's opinions, while at the same time finding the proposed exercise of reconstructing hydrological chronicles to analyze trends interesting.

To be consistent with all the discussions between reviewers and authors, I suggest a few small adjustments to the text:

L380-383

Replace

*We consider that, given the high number of gauging stations in our study, randomly determining the calibration and validation periods for each station **effectively captures all spatio-temporal variability** in both periods.*

with

*We consider that, given the high number of gauging 380 stations in our study, randomly determining the calibration and validation periods for each station **efficiently captures spatio-temporal variability** in both periods.*

L492-494

*Process-based hydrological modelling is a useful tool to characterize **and predict** water resources availability within a watershed, which then has the potential to support decision-making in the water sector, especially if management operations and infrastructures are integrated into the modelling framework*

Remove “and predict” as the article does not deal with forecasting

L494-495

The article doesn't suggest an optimization method, so I suggest replacing *Climatic and/or management scenarios can be implemented and **assessed to determine the best measures** to implement to support sustainable and resilient societies and ecosystems.*

with

*Climatic and/or management scenarios can be implemented and assessed to **project measures** to implement to support sustainable and resilient societies and ecosystems.*

L516-518

Replace

*The good model performance achieved for the validation period corroborates our assumption that the new strategy proposed to define the calibration and validation periods randomly for each individual gauging station **captures all** spatio-temporal variability and it is a good approach when dealing with spatio-temporally heterogeneous basins.*

with

The good model performance achieved for the validation period corroborates our assumption that the new strategy proposed to define the calibration and validation periods randomly for

*each individual gauging station **efficiently captures** spatio-temporal variability and it is a good approach when dealing with spatio-temporally heterogeneous basins.*

L544-546

I suggest to remove “**highlighting the potential use of this model to support decision-making in the water management sector**”. It's not just because you've integrated information from experts that the model is more useful or easier to access for those experts

Last line

“without the need for complex analysis”, it's a bit obscure, we don't understand what kind of complex analysis you're talking about. I suggest you withdraw it.