RC1 answer

The authors thank Prof. Hrachowitz for his kind and encouraging words on this work.

(1) It would be helpful for the reader to add a very brief description of how CAMELS-FR complements the recently published EStreams data set (Do Nascimento et al., 2024)

We indeed see CAMELS-FR and EStreams as complementary datasets. Their main differences lie in the scale at which they were designed (national/continental), which led to different catchment selection methods, data analyses and choices in data sources. The main difference are:
- Data quality checks: our approach consisted in a reproducible selection of catchments based on a few objective criteria, where, at some point of the selection process, the human eye was involved. We even organized our perusal to have several independent human eyes doing the same analysis. While this is obviously not sufficient to exclude all the stations with data-quality issue, it is in our opinion an irreplaceable procedure before distributing a dataset for research purposes. For example, we decided to provide time series and not only give a tool to download the data, because as the producers update their data, the streamflow can change from one extraction to another from the national streamflow archive. They regularly check and fix some time steps in the series, or update the rating curves. This could impact the reproducibility of the hydrological signatures computation for one catchment from one extraction to another. In addition, we visually inspected the time series of all the catchments while taking into account the metadata and the producer comments to exclude influenced catchments (we know by experience that the producer flags are not sufficient to identify the influenced catchments, as sometimes they only mention the influence in the comments of the station).
- Catchment selection: Most of the 654 stations of CAMELS-FR are indeed present in the EStreams dataset. Our objective in CAMELS-FR was to include only stations having hydrological significance (e.g. excluding canals) and with limited known artificial influences (e.g. not closely downstream of dams). The detailed analyses and exchanges with data producers needed to conduct this detailed catchment selection is probably not feasible at the scale of a European dataset like EStreams.
- Climate data sources: In CAMELS-FR, we preferred to use national climatic products provided by experts from Météo-France as we feel this is the highest quality-level we can achieve currently. Their resolution (8 km) is better than the E-OBS dataset whose 25-km resolution could be problematic for small catchments in mountainous regions. It is tempting to use a single product for Europe, but since the density of raingauges changes so much between countries, it does not warrant any homogeneity in catchment precipitation estimation.
- Catchment descriptors: We acknowledge that the EStreams dataset provides some additional indicators that are not included in CAMELS-FR dataset such as NDVI, LAI, snowcover, etc. However our dataset provides more metadata, and more detailed metrics about topography, climate, hydrology, hydrologeology and soil. So the two datasets are probably complementary on this aspect.

We will mention the EStreams dataset in the introduction of the revised article and shortly explain the main differences with CAMELS-FR (end of line 42 of the paper).
"As a national dataset, CAMELS-FR should also be seen as complementary to other datasets built at larger scales that include France, e.g. the EStreams dataset at European scale (Do Nascimento et al., 2024). CAMELS-FR differs from such datasets in the criteria used in the catchment selection process, the data analysis methods and the choices in data sources that may be available at national but not larger scales."

(2) not sure what the different symbol sizes in Figure 5 indicate. Catchment area? Please add this information in the Figure caption

The small dark grey points represent all the catchments outside the given hydrological region. The bigger colored ones represent the catchment in the given hydrological region. We will add the definition in the caption:

"Figure 5. Distribution of CAMELS-FR catchment set over hydrological regions (AG: Adour-Garonne, AP: Artois-Picardie, LB: Loire-Bretagne, RM: Rhin-Meuse, RMC: Rhône-Méditerrannée-Corse, SN: Seine-Normandie; hydrological region boundaries: French water agencies, 2017a): (a) Geographical locations; (b) Boxplots of climatic indices; (c) Projection on a Budyko space (large colored dots: catchments inside the given hydrological region; small grey dots: all the other catchments)"