CAMELS-FR: A large sample, hydroclimatic dataset for France, to support model testing and evaluation

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Over the last decades, the development of large sample hydrology has allowed a generalization of sound model evaluation and testing practices (Andréassian et al., 2006; Gupta et al. 2014), based on various types of split-sample tests. This presentation aims at illustrating some of these tests, while introducing at the same time a French dataset that we have been working with for many years. This dataset has been assembled at INRAE (HYCAR research unit), based on an automatized assembling of national data products (Delaigue et al. 2020). CAMELS-FR will provide daily hydro-meteorological time series (streamflow, solid and liquid precipitation, potential evapotranspiration, temperature, etc.) covering the 1958-2020 period. Catchment characteristics such as land cover, topography (i.e. elevation and slope distributions, drainage density, topographic index, etc.) will be provided, with information about possible regulations upstream, and with some a priori information on data quality. Graphical summary sheets for each catchment are already available.

This approach is part of the CAMELS international initiative (Addor et al., 2017), whose purpose is to facilitate reproducible hydrological research by the use of large sample catchment datasets, and the CAMELS-FR dataset will be made available to scientific users in partnership with data owners.

References


Gupta, H.V., Perrin, C., Blöschl, G., Montanari, A., Kumar, R., Clark, M., Andréassian, V. (2014). Large-