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CABra: a novel large-scale dataset for Brazilian catchments

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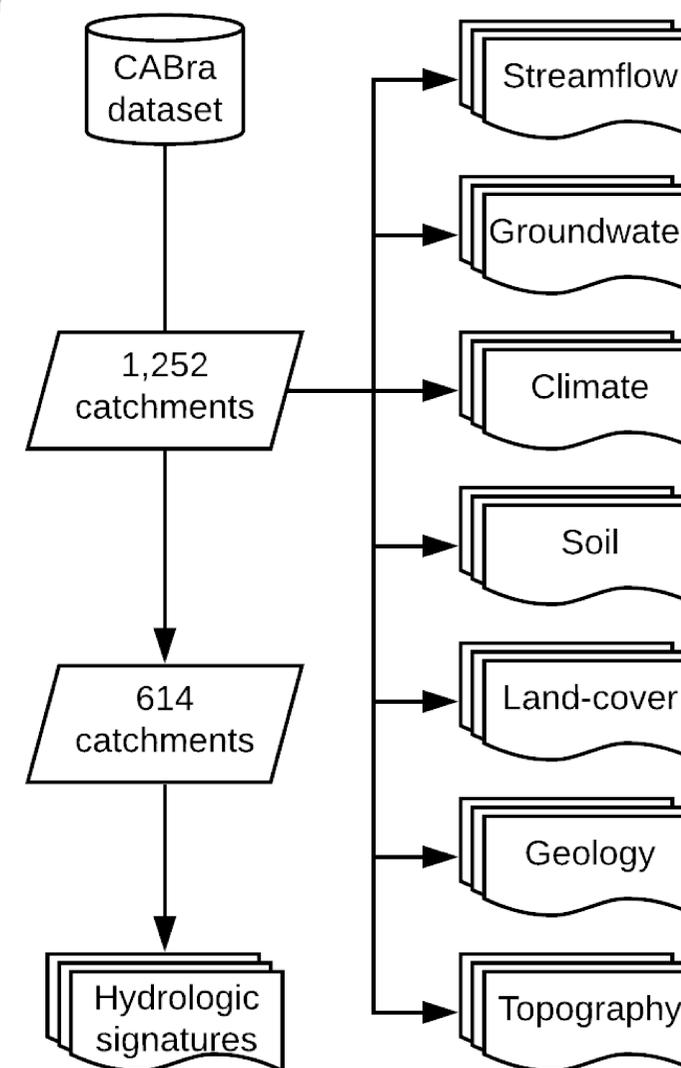
Background

Brazil has a **continental area**, with a diversity of landscapes, climatic patterns, biomes and hydrology. There is a lot of data that can be useful for hydrologic sciences in Brazilian catchments. But this **data is sparse** and there is a need for dataset that join these information. **Big data are essential to large-scale grouping and classification of catchments**.
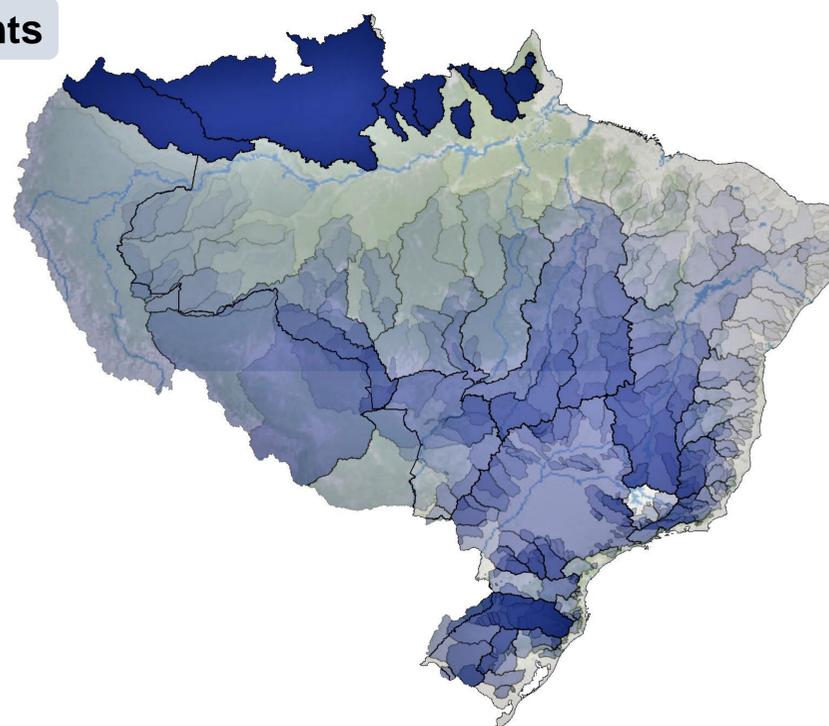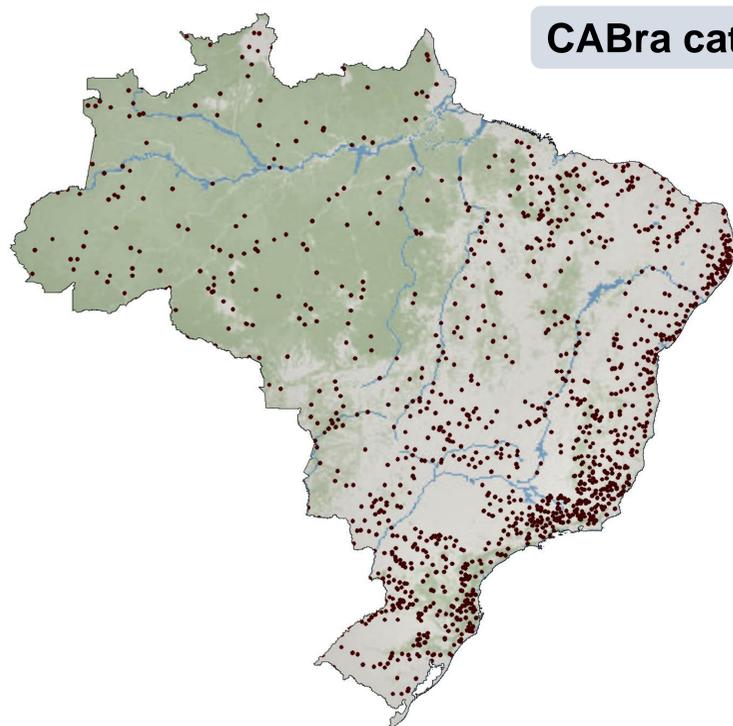
The CABra dataset

For the CABra development, we are using a **multi-source** data information. It consists in **field measurements**, **ground-based grids**, **remote sensing**, and **hydrologic modeling**. Our database have 1,252 catchments over the **12 hydrographic regions** and **6 biomes** of Brazil, and portions of South America, including the Amazon. We summarized information for seven main classes: **streamflow**, **groundwater**, **geology**, **soil**, **topography**, **climate**, **and land-use and land-cover.**

Organization

CABra dataset
→ Streamflow
→ Groundwater
1,252 catchments → Climate
→ Soil
614 catchments → Land-cover
→ Geology
Hydrologic signatures → Topography

CABra catchments

Conclusion

Aside from being a **potential tool for large-scale studies** in hydrology, our extensive dataset is of main importance for the **development of high-quality hydrologic studies** in Brazil.

CAPES

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CABra
Large-scale dataset