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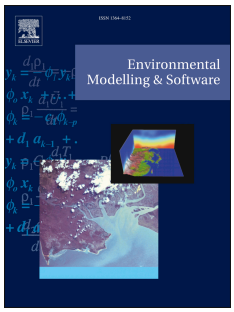

An R-based open framework for reproducible climate data access and post-processing

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climate4R: An R-based Open Framework for Reproducible Climate Data Access and Post-processing

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Abstract

Climate-driven sectoral applications commonly require different types of climate data (e.g. observations, reanalysis, climate change projections) from different providers. Data access, harmonization and post-processing (e.g. bias correction) are time-consuming error-prone tasks requiring different specialized software tools at each stage of the data workflow, thus hindering reproducibility. Here we introduce `climate4R`, an R-based climate services oriented framework tailored to the needs of the vulnerability and impact assessment community that integrates in the same computing environment harmonized data access, post-processing, visualization and a provenance metadata model for traceability and reproducibility of results. `climate4R` allows accessing local and remote (OPeNDAP) data sources, such as the Santander User Data Gateway (UDG), a THREDDS-based

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