



RNRFA: an R package to interact with the UK National River Flow Archive

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The UK National River Flow Archive (NRFA) serves daily streamflow data, spatial rainfall averages and information regarding elevation, geology, land cover and FEH related catchment descriptors.

In order to view, filter and download data, users are required to use a web interface which has several limitations. For instance, only one station can be selected at a time, therefore the bulk download of multiple datasets (whenever possible) can become a rather tedious task.

An application programming interface to the NRFA web services is currently under development but no application has been built

yet to interact with its services. A joint effort between Imperial College London and the UK Centre of Ecology and Hydrology has led to the development of an open source project, the R package "rnrfa", to provide alternative and more efficient access and usage of the following NRFA web services:

- Metadata catalogue
- Catalogue filters based on a geographical bounding-box
- Catalogue filters based on metadata entries
- Gauged daily data for about 400 stations available in WaterML2 format, the OGC standard used to describe hydrological time series.

The rnrfa package, beside being a convenient stand-alone application, is also an ideal back-end tool for virtual observatory type web applications as it simplifies the interaction between data provider and data consumers.