



eWaterCycle II: an online environment for explorative computational Hydrology

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Whether you study compound hazards that require models from different fields of geoscience, or you just want to compare the river discharge predictions from your model to the predictions from another research groups model: running each others (hydrological) models is often a painstaking process.

Recognizing the need for hydrologist to not only have access to the software code of each others models, but also to be able to run these models without the tech-support of the researcher that made the model, we have build the eWaterCycle II platform.

The goals for the eWaterCycle II project is to provide the hydrological community with tools that:

Allow the use of a wide variety of models, written in different programming languages, without having to learn those languages.

Run models needing large amounts of memory and CPUs.

Have access to all the relevant datasets from the community (forcing, observations)

Allow advanced use cases such as data assimilation and model coupling studies.

Allow the sharing of models with the entire community, both for citing (DOIs) and re-use.

Ultimately providing hydrologists with a toolset that allows them to run each other models, but also adept, couple, and in general tinker with models without the headache of having to delve into each others detailed code.

Currently one year into this three year project, at the General Assembly we will demonstrate, and make accessible to fellow hydrologist the first version of our system where scientists can:

Get started with modelling without installing a single piece of software.

Run any of the available models within minutes.

Add their own model with minimal effort.

Compare output of their model, as well as that of colleagues to standard observations like discharge from the Global River Data Centre.

Develop code quickly in a notebook environment.

We will demonstrate (and make available to the community) the system we have built during the presentation.