

Connecting critical research on water modelling *Towards a reflexive approach*

Numerical models, including hydrological, socio-hydrological, and hydro-economic models, are important tools through which water flows have been researched and governed. Models are used in many different ways, including to document water distributions, predict future conditions and inform policy making and, according to some authors, they can be compatible with and instrumental in fostering progressive water distributions and geographies. A growing number of researchers has begun to critically engage with modelling practices and processes. These works underscore how model(ler)s and modelling practices are not neutral; models embody representations and simplifications of the (hydrosocial) world that foster processes of ordering and recognizing the agency of some actors, thereby excluding others. The subjectivities of modellers, contingent on particular research traditions, the requirements of funding agencies, the influence of actors participating in modelling exercises, available resources including knowledge, as well as technological limits, e.g. computational power, shape not only how water flows are known but ultimately actual water distributions.

The increase of critical research on modelling practices and processes in water merits an identification of, and connection between, researchers and research-groups working on this topic. IRI-THESys of the Humboldt University of Berlin and the Water Resources Management Group of the Wageningen University organise a first workshop intended as a space for exchange and learning. The aims are to 1) to share experiences and examples of critical, creative and reflexive engagement (practice and research) with modelling practices and processes that relate with water use, management and governance, and 2) to set the basis for future collaborations. We invite researchers from natural and social sciences and across all stages of their career with experience with critical research on modelling, or intent to work on this topic.

During the workshop, we provide time for participants to present their work and organise discussion groups on particular topics. We are particularly interested in reflections on opening up the back box of modelling and foremost in exploring the potential for a generative critique, towards reflexive modelling practices. We welcome contributions within the range of the following topics and beyond:

- complex and changing roles and practices of model-developers, funders and other actors
- connectivity to the modelled reality: data and (local) knowledge
- (perceived) neutrality of models
- liveliness of models as social and political actors
- inclusion/exclusions of human and non-human actors, ideas, worldviews in modelling
- use of models in decision-making and policy making
- impact and influence of models on water distributions and water quality
- examples of reflexive modelling practices, techniques and tools; design and counter design

Practicalities and registration

The workshop will take place online, on **19-20 January 2022**. We envision a mix between oral presentations and discussion rounds distributed over two half days. Based on the number of registrations we receive, we may adjust the duration of the programme.

To register for the workshop we ask you to share by December 3rd 2021 a brief application (approx. 250 words). This might include reflections on theoretical and/or methodological approaches you apply, your insights from practice, as well as questions you would like to pose to the group or ideas you would like to pitch. Additionally, please include also a short bio. These documents will be shared with all participants.

Please send your application to rossella.alba@hu-berlin.de, and rozemarijn.terhorst@wur.nl, referencing “Reflexive modelling workshop” in the subject of your email.

Please do not hesitate to contact us for questions and further information.