

## Introduction to catchment modeling with the Soil and Water Assessment Tool (SWAT+)



The Soil and Water Assessment Tool is one of the most widely used hydrologic models. It has a large, global user community and has been applied to catchments all over the world. One of the most important strengths of the model are its comprehensive simulation of both land processes including plant growth and detailed land management and channel routing processes, integrating multiple environmental processes and pollutants. To face present and future challenges in water resources modeling and management, the SWAT code, input, and output files have undergone major modifications over the past decade, resulting in SWAT+, a completely restructured version of the model.

This 2-day introductory workshop will focus on the basics of SWAT+ modeling. The following topics will be covered in a mix of theoretical and hands-on sessions:

1. General introduction to the model
2. Setting up a SWAT+ model using QSWAT+ and the SWAT+ Editor
3. SWAT+ input files and parameters
4. Running the model and evaluating SWAT+ outputs
5. Basic calibration and overview of available calibration tools
6. Preparing your own input data

Basic knowledge of Geographic Information System is required for active participation in the hands-on sessions.

### The workshop instructor

Dr. Katrin Bieger has over 15 years of SWAT/SWAT+ modeling experience. After earning her PhD at the University of Kiel (Germany) in 2013, she joined the model development team in Temple, Texas, where she focused on SWAT+ testing and debugging as well as large-scale SWAT+ applications to the continental US. Since March 2021, she has been employed as a Tenure Track Researcher at Aarhus University in Denmark, where she is applying SWAT+ in the context of several projects funded by the European Commission, the Ministry of Foreign Affairs of Denmark, and NordForsk, an organisation under the Nordic Council of Ministers.

