



Chaining flood forecasting models to inundation models

The production of spatially accurate representations of potential floods and flood inundation is often limited by the lack of available data as well as model complexity

Adapted modelling tools for real-time operations

Our applied research focuses on developing operational applications of hydrological and flood inundation models.

We have developed:

- a spatialized hydrological model (GRSD model) that is able to provide streamflow predictions everywhere in gauged as well as ungauged catchments;
- efficient techniques to calibrate and increase the versatility of a the hydrological model in order to simulate flood events under different climate and hydrological conditions;
- a new approach for rapid inundation mapping (MHYST approach) that is well adapted for data-scarce areas: it combines hydraulic geometry concepts for river channels and DEM data for floodplains.

Contact



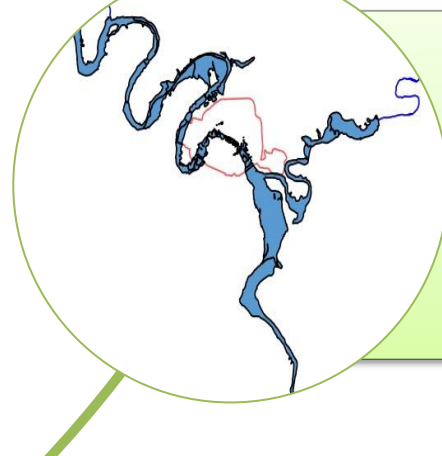
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For more information:
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When different goals have to be achieved, hydrological models are particularly useful if they are built to provide a reliable description at any location over the entire catchment. It concerns:

-  the allocation of water in space and time (e.g., water reservoir management)
-  the design and implementation of ecosystem services spatially distributed within a catchment (e.g., nature-based solutions for flood or water quality control)
-  flash flood inundation mapping

