How can available hydrological tools be made usable by practitioners ?

Models

- Problems of data processing, **building graphical interfaces, good user manual and documentation**
- Who does it? Scientists don't. Practitioners do not want to invest, no time! Need someone at the interface between scientists and users, e.g. Technical colleges, government

Remote Sensing

- Available but **often interface missing** to help getting into GIS etc (good example: MODIS)
- **Reanalysis data** important but difficult to use, needs **interface**

Models…….

- Setback: if models are too easy, anyone will use model without understanding it

- If not an expert **need to interact with expert** to run it

- Participate in **training courses** and get certification (scientific or commercial, e.g. DHI)

- "School catchment network". **Field training** for practitioners / government agencies (free).

- Require sufficient **local knowledge** in catchment. General purpose models used **not always applicable**, few **custom built** models.

- **Models from 1970s** still primary models used for real time **stream flow forecasting** due to history of development and expertise

- **Community modeling framework**, flexible model framework, with modules (like CRHM, MMS, object modeling system OpenMI, Fews, UK CP09,)

- Government agencies not able to **develop free, well documented model.**

- Some good and well-documented models, e.g. HBV Environment Canada, **not well advertised**

- Lack of **Maintenance of data base and interface** after PhD finished, e.g. governmental agency

- Develop **physically-based holistic model**.
  Watershed similarity network,
  - parameters that are **easily accessible** and easy to measure.
  - specific **hydrograph analysis**. Dominant geology/climate/regime.
  - **rank watersheds**, search for those most **comparability/similarity.**
  - **online database**, public can contribute with own watersheds (with screening)

- Need **central information with list of models** and their degree of complexity and realm of use but also limitations. e.g. webpage or wikipedia