

Evaluating and Improving World-Wide HYPE

THEMES:

- Improving an existing model setup for a part of the world (your area of interest will be delivered by SMHI)
- Include your own input data (river flow observations, catchment delineation, routing, landcover, water bodies, management, forcing data P/T)
- Calibration strategies and stepwise parameter estimation using multi-source data (provided by SMHI)

NOTE: You should bring your own data to the course (e.g. time-series of river flow observations, catchment delineation, routing, land-cover, waterbodies, regulation/irrigation, forcing data P/T).

Monday 4th of September

Room: Almagrundet

Time	Task	Responsible Lead
8:00	Installation of software and test runs on participants computers	Dr Lotta Pers, Jörgen Rosberg, Dr Alena Bartosova, Dr Rafael Pimentel, Dr Louise Crochemore
9:00	Welcome and Introduction to HYPE, examples of HYPE applications, and the HYPE Open Source Community	Dr Berit Arheimer Dr Lorna Little Dr Lotta Pers
9:15	Lecture: the HYPE model	Lic Göran Lindström
10:15	<i>COFFEE break – photo of participants</i>	
10:45	Demo: visualisation/result management with HYPETOOLS	Dr Alena Bartosova
11:00	Lecture: World Wide HYPE	MSc Kristina Isberg
12:00	<i>LUNCH break</i>	
13:00	Introduction to exercises on improving the model set-up (using the individual model domains selected by participants)	Dr Abdulghani and Kristina
13:45	Exercise: Upload data in Qobs files Exercise: Change forcing data and forcekey	Abdulghani and Kristina
14:45	Exercises: Evaluate geodata against other sources <ul style="list-style-type: none"> - Landuse - Evaluate routing, catchment delineation - Sinks - Lakes, wetlands, floodplains 	Abdulghani and Kristina
15:45	<i>COFFEE break</i>	
16:00-18:00	Exercise: using the WHIST tool for changing catchment delineation, lake position and the river routing	Abdulghani and Kristina (Jörgen Rosberg)
19:00	<i>Joint dinner downtown</i>	<i>(optional)</i>

Tuesday 5th September

Room: Almagrundet

Time	Task	Responsible Lead
9:00	Lecture: HYPE process description and Calibration	Göran Lindström
10:00	Exercise: Manual calibration of single sites (using individual domains selected by participants)	Göran/Jafet/Kristina
12:00	<i>LUNCH break</i>	
13:00	Lecture: Calibration of large domains using spatial analysis	Dr Jafet Andersson
14:00	Exercise: Automatic calibration using many gauges (in the individual domains selected by participants)	Jafet/Ilias/Kristina
15.30	<i>Coffee break</i>	
16:00	Lecture: Step-wise calibration based on hydrological processes	Dr Jafet Andersson
16.30-18:00	Exercise: Step-wise calibration for land cover types	Jafet/Ilias/Kristina
19.00	<i>Joint dinner downtown</i>	<i>(optional)</i>

Wednesday 6th September

Room: Almagrundet

Time	Task	Responsible Lead
9:00	Lecture: HYPE calibration using different open data sources (obs.data and EO-data) and different calibration criteria	Dr Jafet Andersson/ Dr Ilias Pechlivanidis
10:00	Exercise: individual choice to continue improving your model (input data or calibration)	ALL from day 1 and 2
11:30	Sum-up and Open discussion of potentials for the WW-HYPE community	Berit/ALL from day 1 and day 2
12:00	<i>LUNCH</i>	