

Continental Scale hydro model inter-comparison for SWOT Teleconference summary 2016 07 29

by Cédric H. David, R. Edward Beighley, and Etienne Gaborit

In attendance

Kostas Andreadis,
Ed Beighley,
Sylvain Biancamaria,
Cedric David,
Vincent Fortin,
Colby Fisher,
Etienne Gaborit,
Rodrigo Paiva,
Tamlin Pavelsky,
Ernesto Rodriquez,
Guy Schumann,
Dai Yamazaki,

Catherine Otle,
Alban de Lavenne,
Pascal Bonnefond,
Four others listed as Users 1,2,7,8: did not get their names)

Meeting minutes

Cedric: provided some background on river modeling and the project approach; preliminary results for Mississippi (RAPID continuous simulation and sub-sampled simulation based on SWOT orbit). Key question is: will all models get the same results given same data?

Ed: the experimental design table includes some holes that need be filled (i.e. the bankfull quantities and the propagation times).

Tamlin: the team might consider using the GRWL dataset once it is ready. It is fine to use HydroSHEDS for the first basin study.

Guy: there are going to be challenges associated with GRWL once we get there because the smallest river reaches that are needed for modeling are not included. Also HydroSHEDS is not perfect everywhere (flow drainage directions etc.) and may need to be corrected in problematic areas (generally in flat terrain) before implementing the routing models.

Sylvain: existing coupled modeling systems such as ISBA-TRIP are going to be the hardest ones to adapt to the proposed experimental design.

Etienne: some models may not be able to utilize the data proposed to the full extent of spatial variability (WATROUTE can only use a limited number of values for Manning's n).

Ed: we should allow some relaxation on the dataset usage to make sure everybody can participate and note these differences when comparing results.

Vincent: we should have someone give an overview presentation about each basin before running all simulations.

Action Items

Simulations and analysis (all):

- Mississippi simulations completed by 09/30/2016
- Analysis of results completed by 12/31/2016

Data preparation (Kostas/Cedric)

- Link official HydroSHEDS unique IDs to Bankfull discharge, width, depth; based on Andreadis et al. (2013). 08/31/2016

Hold monthly telecons (Cedric)

- Next one for end of August. Cedric will talk about Mississippi Basin. Kostas will talk about dataset preparation.

Formalize SWOT working group on data assimilation (Kostas)

Designate a member from the French side to be a point of contact (Sylvain)

Formalize a home for the project, i.e. email, blog, wiki, Slack?