Session 4 Current status assessment and modelling methods

27 September 2017 – notes group B

In this group session, we started the discussion to better understand "now-casting". Looking at the current hydrological status and the desired frequency to update the 'current' status, might depend on the products you want. When the product is focusing on flood forecasting an everyday update is required, when looking at droughts or groundwater levels, a monthly update could be sufficient.

A current hydrological status assessment should look at the status of

- streamflow
- groundwater levels and
- soil moisture

Q1 How to combine observation data with modelled data

- For the hydroSOS, the use of (as much as possible) observational data is desired. Various data assimilation methods were discussed. Such as, replace modelled data by observed data points, statistical methods, comparison with similar basin/similar land types

Q2 What types of modelling methods could be used in the hydroSOS system,

- We need both global models for global coverage, as models on basin scale
- The global level should be an ensemble of models, various global model that exists include WWHYPE, WATERGap, satellite products,

Q3 what criteria and approaches could be used for identifying suitability of the candidate modelling methods?

- Looking at scale (temporal and spatial)
- Performance: is the model good enough compared to what is observed on the ground?
- Models can be selected, using criteria such as mean, extremes.

Q4 what modelling tools exist and how can they be integrated into the hydroSOS system?

- Water watch is a good example of nowcasting,
- HydroSOS could use global models with not very high resolution, when looking at regional scale run local models
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