

Special Session
on
Irrigation Modelling at Catchment Scale
at
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Session Organizers:

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Scope and Objectives:

Irrigation is one of the most important water uses worldwide. The current and future agricultural water demand under change of climate and crop patterns can be predicted by applying models at different scales from the field to global. Modeling the water demand of irrigated catchments not only requires the knowledge about current crop patterns and irrigation practices but also a good implementation of the relevant hydrological processes and management operations. Data about agricultural management operations including irrigation schemes and the control of irrigation operations are relatively scarce at the catchment scale. Furthermore, due to the simplification of water transfer via soil, vegetation, and the atmosphere in many agro-hydrological models the overall irrigation amounts are mostly over or under simulated.

Our session deals with the structure and application of agricultural water management models, or agro-hydrological models, at the catchment scale. Topics of this session include: the evaluation of catchment models regarding the implementation of agricultural irrigation, model improvements regarding irrigation schemes or irrigation scheduling, model comparisons, upscaling from field scale agricultural models to catchment scale, model applications in irrigation advising and planning of management scenarios, case studies about modelling irrigated catchments (under current and/or future climate and land use). This session primarily deals with the water quantity. However, studies about the relationship between irrigation and water quality aspects are welcome.