



Higher resolution of the regional climate modelling for the two catchments in China

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Within the framework of DFG/NSFC-Joint funding programme "Land Use and Water Resources Management under Changing Environmental Conditions", dynamical downscaling of global climate runs with COSMO-CLM (CCLM) will be performed for two catchments in China, namely the Haihe river and the Poyang lake basins. Climatically, the catchments are located in the semi-arid and humid zones of China respectively, both of which belong to the East Asian summer monsoon ((EASM)) region. So far CCLM has rarely been applied to the EASM region, hence at first the optimal configuration of CCLM is performed for the East Asia domain (based on CORDEX project). Then the 30-year (1968-2000) evaluation run (50 km * 50 km) driven by ERA40 and ECHAM 5 are carried out, from which the two-step nesting for the modelling of the catchments (10 km * 10 km) can be achieved. Finally the results from the 20C and A1B scenario simulations will be employed to evaluate the future extreme events, which could help the policy-makers to take precautions against the social-economic losses caused by drought and flooding in the study areas. At the current research stage, the results from the evaluation run will be presented. The capability of CCLM to model EASM will be examined.