

EGU2020-14592

<https://doi.org/10.5194/egusphere-egu2020-14592>

EGU General Assembly 2020

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Fidelity of CORDEX experiments over Himalayan Watersheds

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How much water will come in future from the Himalayan watersheds under changing climate is a growing concern for ensuring sustainable development of downstream agrarian economies and for socioeconomic wellbeing of dependent communities. However, robust assessment of future water availability largely depends upon fidelity of climate modelling experiments simulating future change scenarios, beyond the debate of their possibility and plausibility. Thus, I assess the fidelity of CORDEX experiments over the Himalayan watersheds for the historical period against a broader set of observational datasets, in terms of reproducibility of the observed climatology of temperature and precipitation. Changes in these basic variables relevant for impact studies will also be presented under different scenarios and their robustness will be discussed in view of their fidelity for the historical period. The study will suggest the suitability of CORDEX experiments for the impact studies and further possibilities for improvement.