

Project: **1177**

Project title: **NAMAL**

Principal investigator: **Shabeh ul Hasson**

Report period: **2023-07-01 to 2024-06-30**

Study Area: The project focuses on Namal Watershed at the monsoon margin region of the south Asian summer monsoon within the Indus basin. The WRF model was setup at a single domain at 1 km grid spacing covering the NAMAL watershed and surrounding region.

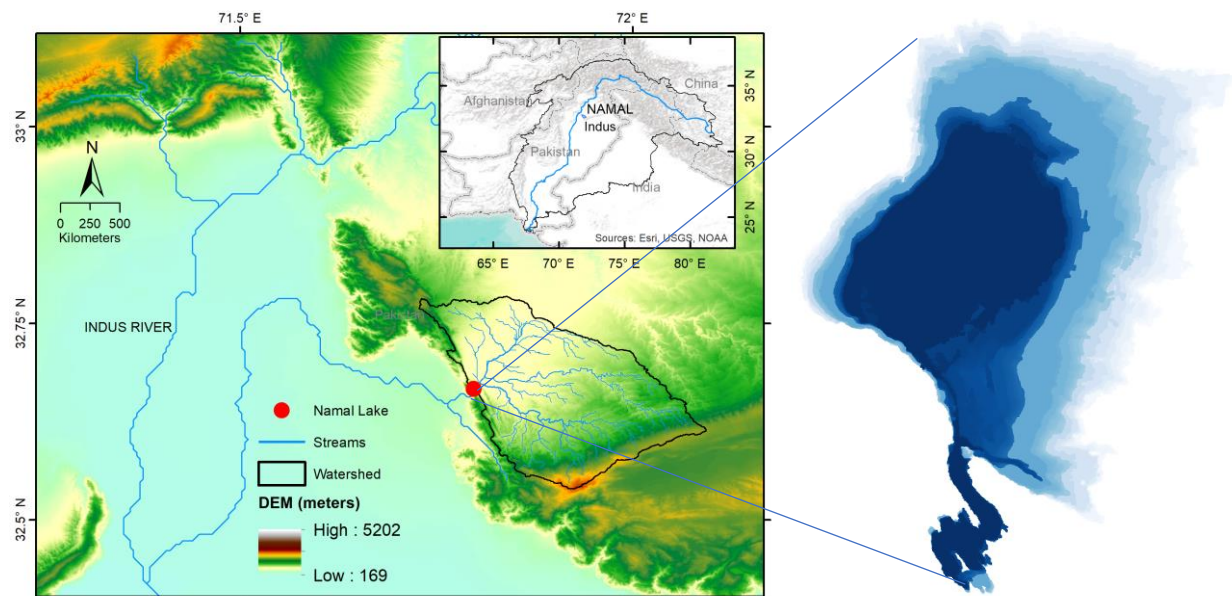


Figure: Study Area Namal Watershed and Namal Lake at monsoon margins

2. BASELINE Experiment: Based on physics chosen within the Convection-permitting Tibetan Plateau project, a 26-year (1994-2019) baseline was produced by dynamically downscaling the ERA5 reanalysis on 1km grid spacing using explicitly resolved convection. The whole simulation was divided into yearly simulations with 1-month spin-up time. The output is being postprocessed and analysed. Initial results will be presented in the VII Convection Permitting Climate Modelling workshop August 2023 in Bergen, Norway. The bias adjusted data will be ingested to swat and swim hydrological models to produce historical discharges to the NAMAL lake.

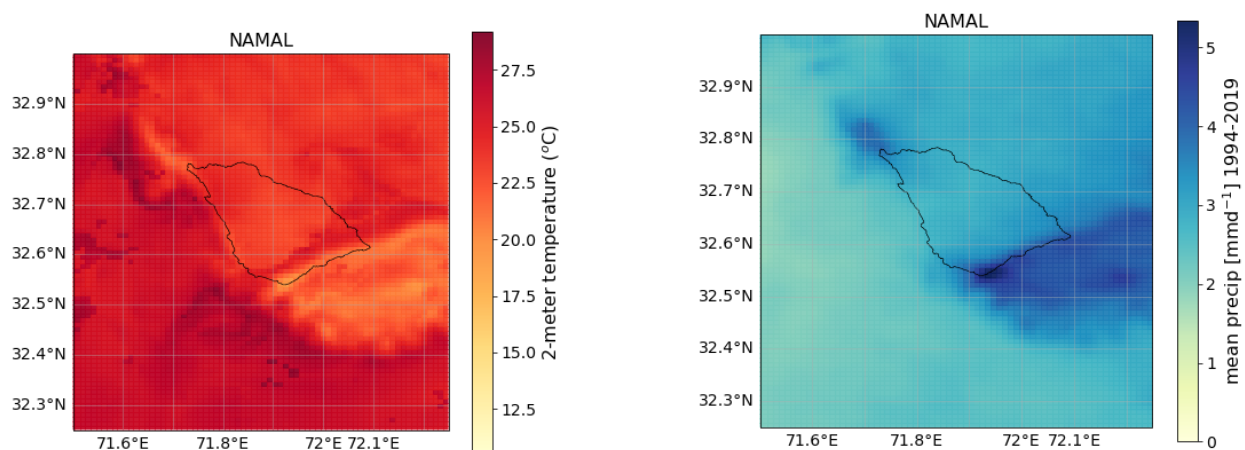


Figure: Climatology (1994-2019) of 2-m mean air temperature and daily total precipitation for Namal watershed and surrounding monsoon margin regions.