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the downscaling of G4 in RCP4.5 scenario

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We use data from BNU-ESM model and the model was selected based on the availability of daily data for the required variables covering the historical period from 1 January 1970 to 31 December 1999 and the future RCP4.5(Representative Concentration Pathway 4.5) scenario period from 1 January 2010 to 31 December 2099. The output of BNU-ESM model is bi-linearly interpolated in space to a 0.5*0.5 grid. And then continue to using ISI-MIP method to bias-corrected the downloading data ,The bias-corrected method is called ISI-MIP,developed within ISI-MIP(Inter-Sectoral Impact Model Intercomparison Project),a project is designed to synthesise impact projections in the agriculture, water, biome,health, and infrastructure sectors at different levels of global warming.the ISI-MIP Bias-corrected method is based on transfer functions generated to map the distribution of the simulated historical data to that of the observations.Then which subsequently applied to correct the future projections.the ISI-MIP method preserves the absolute changes in monthly temperature, and relative changes in monthly values of precipitation which are needed for our research objection.the trend and the long-term mean are well represented, and then continue to adjust the variability. The observation-based reference dataset using in the Bias-Corrected processing is the WATCH Forcing Data (WFD,Weedon et al.,2011) for the period from 1 January 1970 to 31December 1999 (the reference period) which has high resolution grid(0.5°).