# Future climate in the Tibetan Plateau from a statistical regional climate model

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A statistical regional climate model (STAR) is used to project the Tibetan Plateau (TP) climate for 2011-2040. It generates ensembles of day-to-day time series by resampling the ERA-40 daily data from 1958-2001 to optimally fit linear temperature trends, which are derived from the MPI Earth System Model CMIP5 simulation under the RCP2.6 scenario. A detailed preceding validation demonstrates STAR's applicability in the TP and its merit in comparison to numerical global climate models, thus its result can provide useful input for hydrological modeling and applications. In the projected near future, overall warming and more precipitation are expected in the TP; the warming signal and the increase in precipitation exhibit spatially varying features; an extended Asian summer monsoon characterized by an earlier onset and later withdrawal is responsible for the increase in precipitation.