**Selection of CMIP6 GCM with Projection of Climate over the Amu Darya River Basin**

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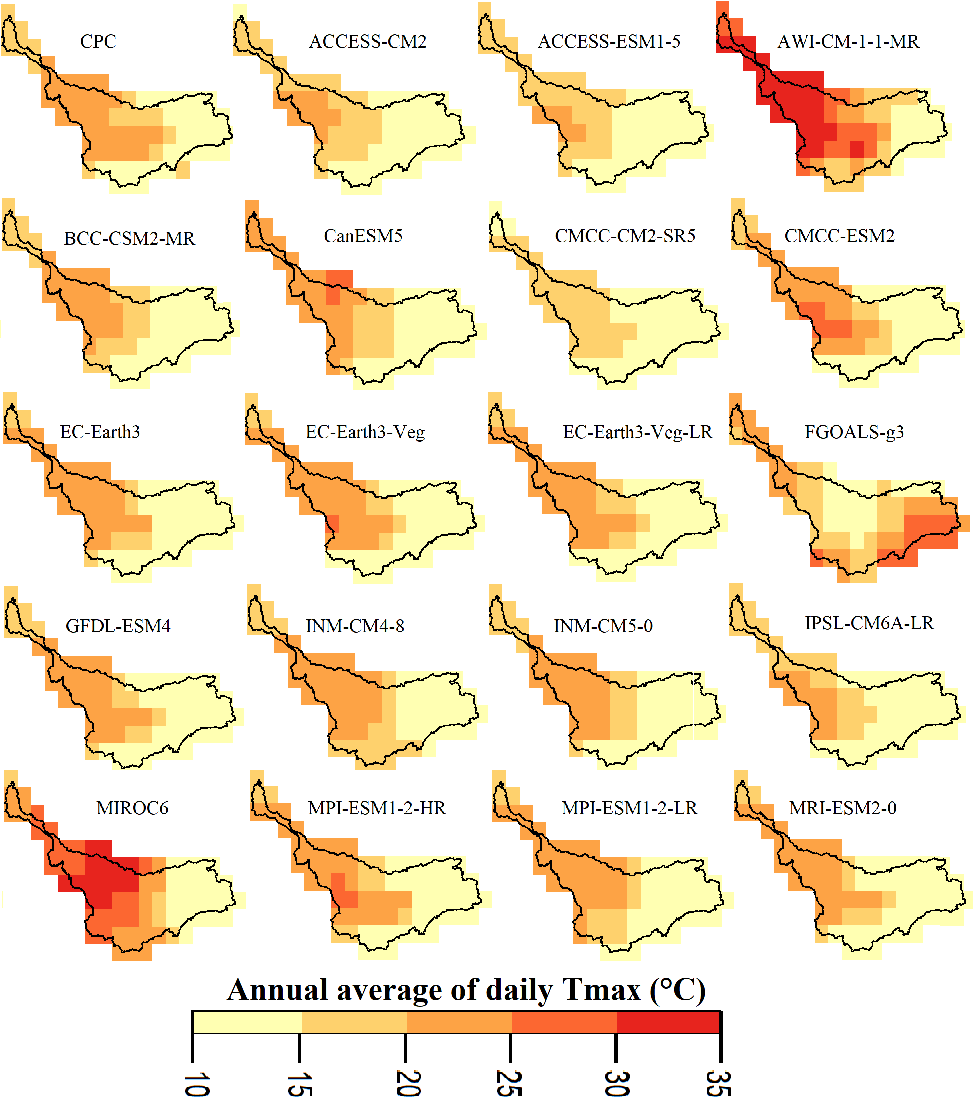


Figure S-1. Annual average of daily maximum temperature estimated by GCMs and CPC for the period of 1979-2014.

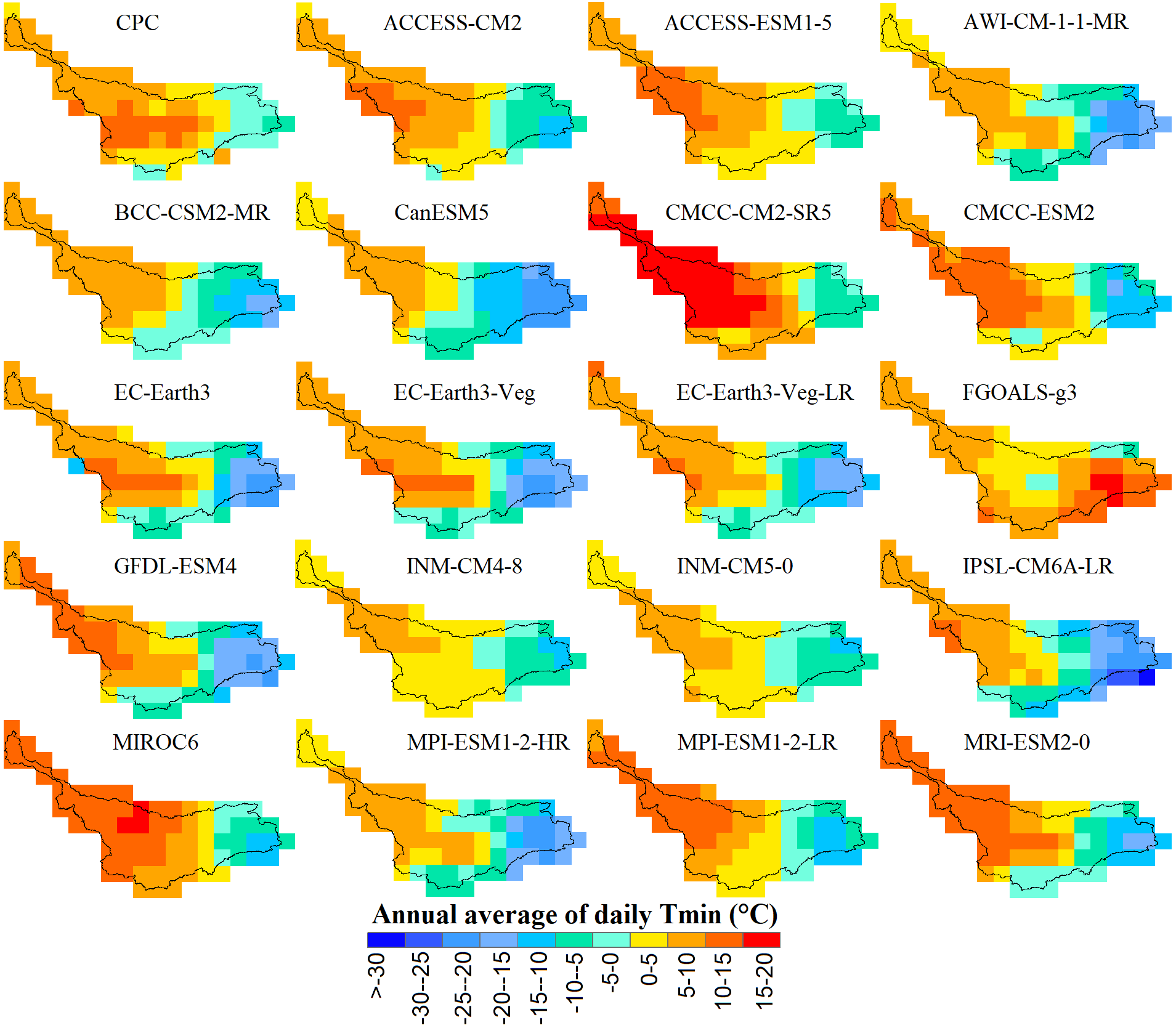


Figure S-2. Annual average of daily minimum temperature estimated by GCMs and CPC for the period of 1979-2014.

Table S-1 General circulation models (GCMs) used in this study.

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| No | Model name | Institution | Country | Resolution |
| 1 | ACCESS-CM2 | Australian Community Climate and Earth System Simulator coupled model | Australia | 1.2°×1.8° |
| 2 | ACCESS-ESM1-5 | Australian Community Climate and Earth System Simulator (ACCESS) and Earth System Model (ESM) | Australia | 1.2°×1.8° |
| 3 | AWI-CM-1-1-MR | Alfred Wegener Institute Climate Model | Germany | 0.9°×0.9° |
| 4 | BCC-CSM2-MR | Beijing Climate Center climate system model version 2 | China | 1.1°×1.1° |
| 5 | CanESM5 | Canadian Earth System Model version 5 | Canada | 2.8°×2.8° |
| 6 | CMCC-CM2-SR5 | Euro-Mediterranean Centre on Climate Change coupled climate model (standard configuration) | Europe | 1°×1° |
| 7 | CMCC-ESM2 | Fondazione Euro-Mediterranean Center on Climate Change | Italy | 0.9°×0.9° |
| 8 | EC-Earth3 | EC-Earth consortium | Europe | 0.7°×0.7° |
| 9 | EC-Earth3-Veg | EC-Earth consortium | Europe | 0.7°×0.7° |
| 10 | EC-Earth3-Veg-LR | EC-Earth consortium | Europe | 0.7°×0.7° |
| 11 | FGOALS-g3 | Chinese Academy of Sciences-Flexible Global Ocean-Atmosphere-Land System Model Grid-Point Version 3 | China | 2.3°×2.0° |
| 12 | GFDL-ESM4 | Geophysical Fluid Dynamics Laboratory | USA | 1.0°×1.3° |
| 13 | INM-CM4-8 | Institute for Numerical Mathematics | Russia | 1.5°×2.0° |
| 14 | INM-CM5-0 | Institute for Numerical Mathematics | Russia | 1.5°×2.0° |
| 15 | IPSL-CM6A-LR | Institute Pierre-Simon Laplace | France | 1.3°×2.5° |
| 16 | MIROC6 | Model for Interdisciplinary Research on Climate Version 6 | Japan | 1.4°×1.4° |
| 17 | MPI-ESM1-2-HR | Max Planck Institute Earth System Model | Germany | 0.94°×0.94° |
| 18 | MPI-ESM1-2-LR | Max Planck Institute Earth System Model | Germany | 1.875°×1.86° |
| 19 | MRI-ESM2-0 | Meteorological Research Institute Earth System Model Version 2.0 | Japan | 1.125°×1.125° |