

Article

Assessing the Impact of Climate and Land-Use Changes on the Hydrologic Cycle Using the SWAT Model in the Mun River Basin in Northeast Thailand

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Supplementary Materials

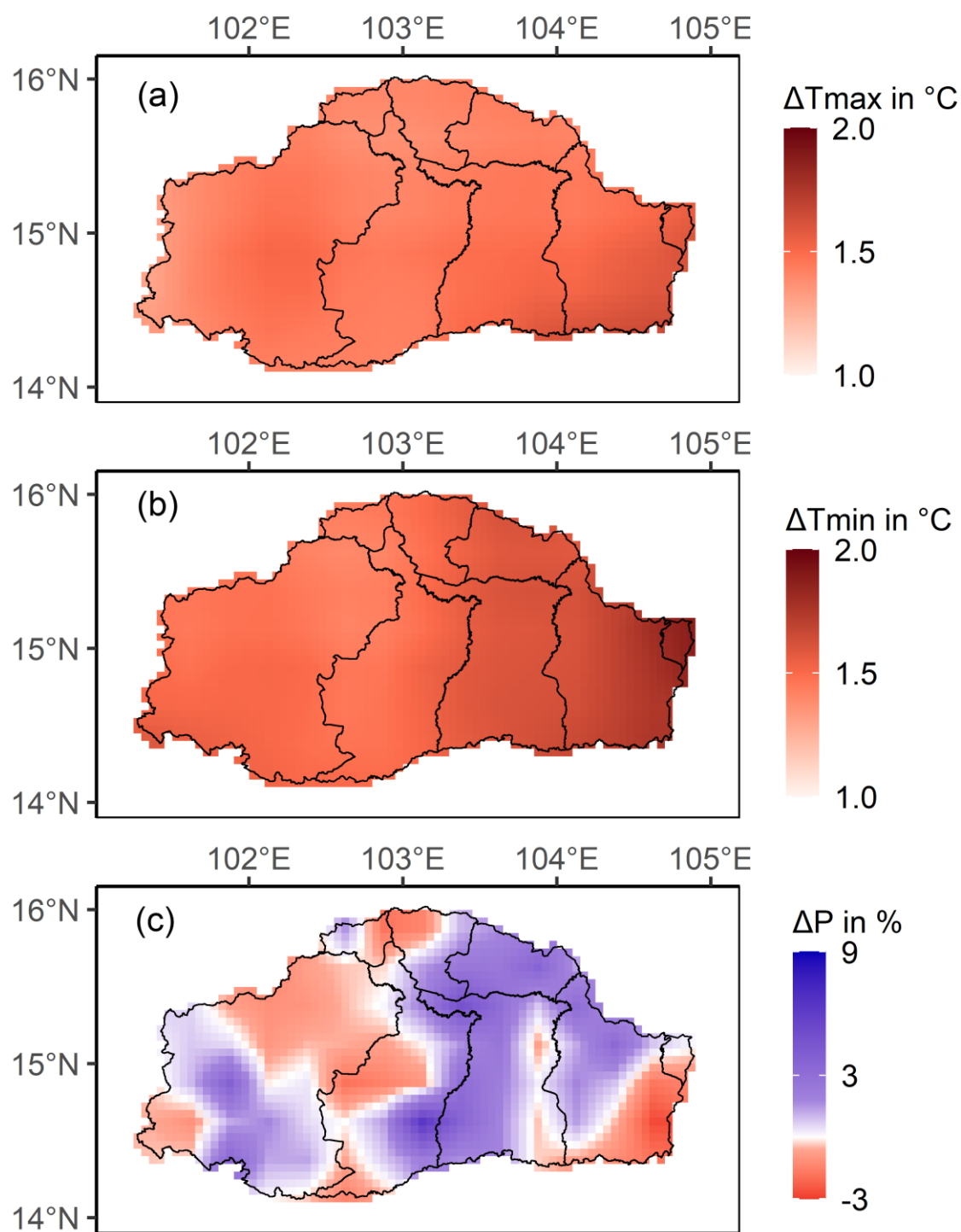


Figure S1. Climate change projections for the near-future (2021-2050). The spatial pattern of the projected changes in (a) T_{\max} , (b) T_{\min} , and (c) rainfall for CMIP6 –SSP5-8.5 using the multi-model average for the near-future period. Changes are with respect to the baseline period. (Adopted from [48]).

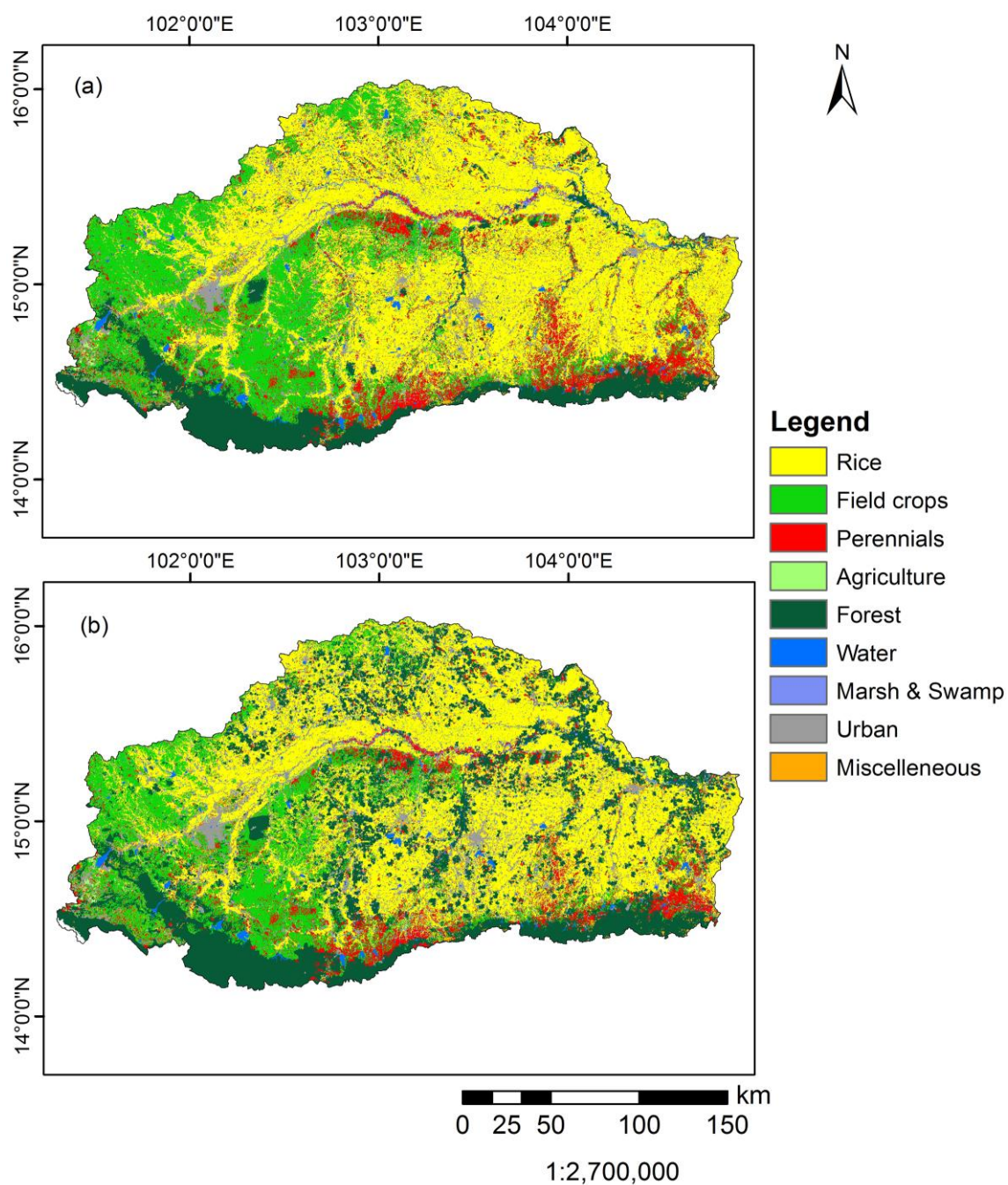


Figure S2. Land-use projections for the basin. (a) Projections under the Business as usual (BAU) scenario for 2050 and (b) Projection under the Combination of Forest Conservation and Urban Growth (CCU) scenario for 2050. (Adopted from [56]).

Table S1. Details of climate models from HighResMIPs of CMIP6 considered in the study.

| I D | Model Designation | Modeling Group | Atmospheric Resolution (lat × lon) | Number of Vertical Levels | Ensemble Member |
|----------------|--------------------------|--|---|--|----------------------------|
| 1. | CNRM-CM6-1 | Centre National de Recherches Meteorologiques / Centre Europeen de Recherche et Formation Avancees en Calcul Scientifique | 1.4° × 1.4° | 91 | r1i1p1f2 |
| 2. | CNRM-CM6-1-HR | Centre National de Recherches Meteorologiques / Centre Europeen de Recherche et Formation Avancees en Calcul Scientifique | 0.5° × 0.5° | 91 | r1i1p1f2 |
| 3. | EC-Earth3P | EC-EARTH consortium | 0.7° × 0.7° | 91 | r1i1p2f1 |
| 4. | EC-Earth3P-HR | EC-EARTH consortium | 0.35° × 0.35° | 91 | r1i1p2f1 |
| 5. | HadGEM3-GC31-HH | UK Met Office Hadley Centre | 0.23° × 0.35° | 85 | r1i1p1f1 |
| 6. | HadGEM3-GC31-HM | UK Met Office Hadley Centre | 0.23° × 0.35° | 85 | r1i1p1f1 |
| 7. | HadGEM3-GC31-MM | UK Met Office Hadley Centre | 0.55° × 0.83° | 85 | r1i1p1f1 |
| 8. | HadGEM3-GC31-LL | UK Met Office Hadley Centre | 1.25° × 1.875° | 85 | r1i1p1f1 |