1   Supplementary Material for

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3   Future changes in spatiotemporal precipitation patterns of the
4   East Asian summer monsoon and associated uncertainty
5   factors

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19   **Table S1. List of CMIP6 models used in this study**

Model	Institution	Resolution (Long. × Lat.)
ACCESS-CM2	Commonwealth Scientific and Industrial Research Organisation and Australian Research Council Centre of Excellence for Climate System Science, Australia	192 × 144
ACCESS-ESM1-5		192 × 145
BCC-CSM2-MR	Beijing Climate Center, China Meteorological Administration, China	320 × 160
CanESM5	Canadian Centre for Climate Modelling and Analysis, Canada	128 × 64
CESM2	National Center for Atmospheric Research	288 × 192
CESM2-WACCM		288 × 192
CMCC-CM2-SR5	Fondazione Centro Euro-Mediterraneo sui Cambiamenti Climatici	288 × 192
CNRM-CM6-1	Centre National de Recherches Météorologiques, Météo-France, France	256 × 128
CNRM-ESM2-1		256 × 128
EC-Earth3	EC-Earth-Consortium	512 × 256
EC-Earth3-Veg		512 × 256
FGOALS-g3	Chinese Academy of Sciences, China	180 × 80
GFDL-ESM4	Geophysical Fluid Dynamics Laboratory, USA	288 × 180
INM-CM4-8	Institute for Numerical Mathematics, Russia	180 × 120
INM-CM5-0		180 × 120
IPSL-CM6A-LR	Institut Pierre-Simon Laplace, France	144 × 143
KACE-1-0-G	National Institute of Meteorological Science/Korea Meteorological Administration, Korea	192 × 144
MIROC6	Atmosphere and Ocean Research Institute (AORI),	256 × 128
MIROC-ES2L	National Institute for Environmental Studies (NIES), Japan Agency for Marine-Earth Science and Technology (JAMSTEC), RIKEN Center for Computational Science (R-CCS), Japan	128 × 64
MPI-ESM1-2-HR	Max Planck Institute for Meteorology, Germany	384 × 192
MPI-ESM1-2-LR		192 × 96
MRI-ESM2-0	Meteorological Research Institute, Japan	320 × 160
NorESM2-LM	Norwegian Earth System Model (NorESM) climate modeling Consortium of the Center for International Climate Research (CICERO), Norwegian Meteorological Institute, National Energy Research Scientific Computing Center (NERSC), Norsk Institutt for Luftforskning (NILU), University of Bergen, University of Oslo, and UNI, Norway	144 × 96
NorESM2-MM		288 × 192
UKESM1-0-LL	Met Office Hadley Centre, UK	192 × 144

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21 **Table S2. List of CMIP5 models used in this study**

| Model	Institution	Resolution (Long. × Lat.)
bcc-csm1-1	Beijing Climate Center, China Meteorological Administration, China	128 × 64
bcc-csm1-1-m		320 × 160
BNU-ESM	Beijing Normal University, China	128 × 64
CanESM2	Canadian Centre for Climate Modelling and Analysis, Canada	128 × 64
CCSM4	National Center for Atmospheric Research (NCAR), USA	288 × 192
CNRM-CM5	Centre National de Recherches Météorologiques, Météo-France, France	256 × 128
CSIRO-Mk3-6-0	Australian Commonwealth Scientific and Industrial Research Organization, Australia	192 × 96
FGOALS-g2	Institute of Atmospheric Physics, Chinese Academy of Sciences, China	128 × 60
GFDL-CM3	Geophysical Fluid Dynamics Laboratory, USA	144 × 90
GFDL-ESM2G		144 × 90
GFDL-ESM2M		144 × 90
HadGEM2-AO	Met Office Hadley Centre, UK	192 × 145
HadGEM2-ES		192 × 145
IPSL-CM5A-LR	Institut Pierre-Simon Laplace, France	96 × 96
IPSL-CM5A-MR		144 × 143
MIROC5	Atmosphere and Ocean Research Institute (AORI), National Institute for Environmental Studies (NES), Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Japan	256 × 128
MIROC-ESM		128 × 64
MIROC-ESM-CHEM		128 × 64
MPI-ESM-LR	Max Planck Institute for Meteorology, Germany	192 × 96
MPI-ESM-MR		192 × 96
MRI-CGCM3	Meteorological Research Institute, Japan	320 × 160
NorESM1-M	Norwegian Climate Centre, Norway	144 × 96

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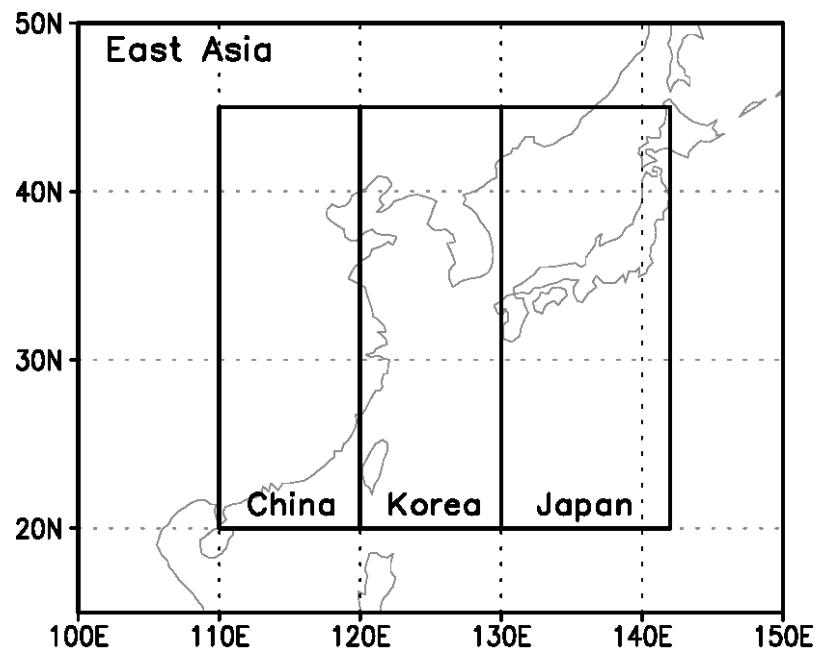
Figure S1. Geographical location of the East Asian domain and three subregions—China, Korea, and Japan—analyzed in this study

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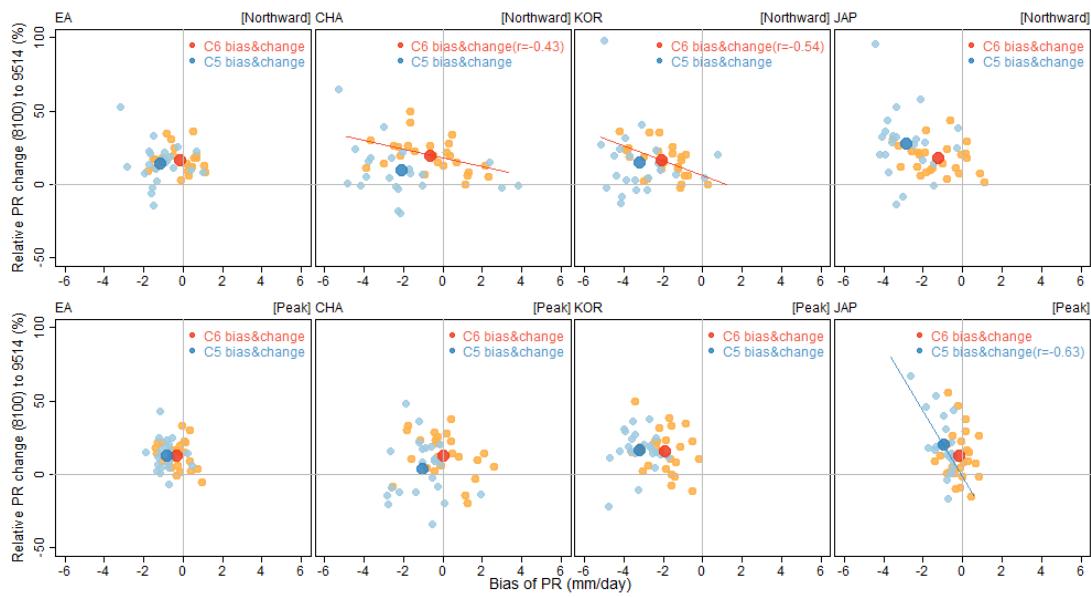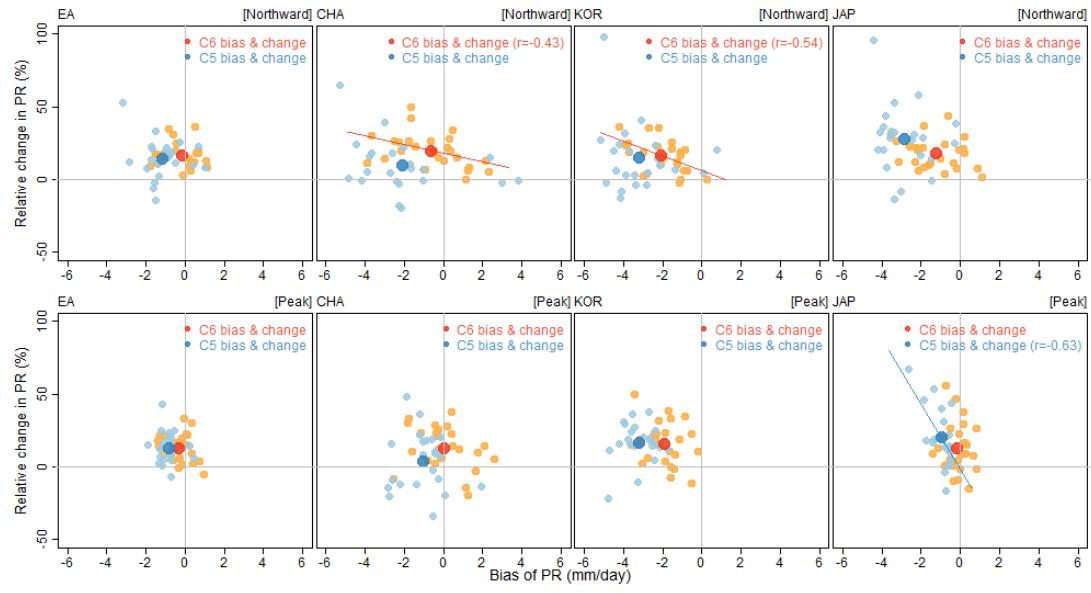
Figure S2. Scatter plot of the association between modeling bias and predictions of future precipitation (PR) change over the long term (2081–2100) when using the SSP5-8.5 climate change scenario in CMIP6 (orange) and RCP8.5 in CMIP5 (blue). Biases were calculated relative to the observed precipitation data from 1995–2014. Different graphs present the results of models analyzing the Eastern Asian (EA) domain and the subregions of China (CHA), Korea (KOR), and Japan (JAP). Correlation coefficients (r) are provided from the linear regression slopes (with statistical significance set at the 10% level).