

Table S1. Details of CMIP6 models

Model name	Institution
ACCESS-CM2	CSIRO (Commonwealth Scientific and Industrial Research Organization, Aspendale), ARCCSS (Australian Research Council Centre of Excellence for Climate System Science)
ACCESS-ESM1-5	CSIRO
BCC-CSM2-MR	Beijing Climate Center
CanESM5-CanOE CanESM5	Canadian Centre for Climate Modelling and Analysis, Environment and Climate Change Canada
CESM2 CESM2-WACCM	NCAR (National Center for Atmospheric Research, Climate and Global Dynamics Laboratory)
CNRM-CM6-1 CNRM-CM6-1-HR CNRM-ESM2-1	CNRM (Centre National de Recherches Meteorologiques), CERFACS (Centre Europeen de Recherche et de Formation Avancee en Calcul Scientifique)
EC-Earth3 EC-Earth3-Veg	EC-Earth-Consortium, Europe-wide consortium
FGOALS-f3-L FGOALS-g3	Chinese Academy of Sciences
GFDL-CM4 GFDL-ESM4	National Oceanic and Atmospheric Administration, Geophysical Fluid Dynamics Laboratory
GISS-E2-1-G	Goddard Institute for Space Studies
INM-CM4-8 INM-CM5-0	Institute for Numerical Mathematics, Russian Academy of Science
IPSL-CM6A-LR	Institute Pierre Simon Laplace
KACE-1-0-G	National Institute of Meteorological Sciences/Korea Meteorological Administration, Climate Research Division
MCM-UA-1-0	Consortium for Mathematics and Its Applications
MIROC6 MIROC-ES2L	JAMSTEC (Japan Agency for Marine-Earth Science and Technology), AORI (Atmosphere and Ocean Research Institute, The University of Tokyo), NIES (National Institute for Environmental Studies), and RCCS (RIKEN Center for Computational Science)
MPI-ESM1-2-HR	Max Planck Institute for Meteorology, Germany

MPI-ESM1-2-LR	Max Planck Institute for Meteorology
MRI-ESM2-0	Meteorological Research Institute, Japan
NESM3	Nanjing University of Information Science and Technology
NorESM2-LM	NorESM Climate modeling Consortium consisting of CICERO (Center for International Climate and Environmental Research)
NorESM2-MM	
UKESM1-0-LL	Met Office Hadley Centre; Natural Environment Research Council; National Institute of Meteorological Sciences/Korea Meteorological Administration, Climate Research Division; National Institute of Water and Atmospheric Research

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