

Models and Reanalyses Available for Downscaling as of January, 2023

Reanalyses

Organization	Product	Years Available
ECMWF	CERA-20C ²	1901-2010
ECMWF	ERA 40	1958-2001
ECMWF	ERA Interim	1979-2017
ECMWF	ERA 5	1950-2021 ¹
NASA	MERRA	1979-2013
NASA	MERRA2	1980-2021
NCAR/NCEP	Re-analysis (original)	1949-2021 ¹
NCAR/NCEP	Re-analysis v2	1979-2021
NOAA	20 th Century Re-analysis, v2c ²	1851-2014
NOAA	20 th Century Re-analysis, v3 ²	1836-2015

CMIP5 Models

Organization	Product	Experiment	Years Available
CCSR/NIES/JAMEST (Japan)	MIROC5	Historical	1850-2012
		RCP 4.5	2006-2100
		RCP 8.5	2006-2100
EC-EARTH (EU)	EC-EARTH	Historical	1925-2009
		RCP 4.5	2006-2100
		RCP 8.5	2006-2100
IPSL (France)	CM5A-LR	Historical	1850-2005
		RCP 4.5	2006-2100
		RCP 8.5	2006-2300
Max Planck Institute (Germany)	MPI-ESM-MR	Historical	1850-2005
		RCP 4.5	2006-2100
		RCP 8.5	2006-2100
National Center for Atmospheric Research (U.S.A.)	CCSM4	Historical	1950-2005
		RCP 4.5	2006-2100
		RCP 8.5	2006-2100
NOAA/GFDL (U.S.A.)	CM3	Historical	1860-2005
		RCP 4.5	2006-2100
		RCP 8.5	2006-2100
U.K. Met Office (United Kingdom)	HADGEM2-ES	Historical	1950-2005
		RCP 4.5	2006-2099
		RCP 8.5	2006-2099

¹ Reanalyses as different and less reliable before 1979 owing to the absence of satellite data

² This product specifies only sea surface temperature and sea ice; it does not assimilate any atmospheric data and so is not really a re-analysis product.

CMIP6 Models

Model	Scenario	Years
CanESM5	Historical	1850-2014
	1pctCO2	1850-2000
	SSP2 – 4.5	2015-2100
	SSP3 – 7.0	2015-2100
	SSP5 – 8.5	2015-2300
CNRM-CM6-1	Historical	1850-2014
	1pctCO2	1850-1999
	SSP2 – 4.5	2015-2100
	SSP3 – 7.0	2015-2100
	SSP5 – 8.5	2015-2300
CESM2	Historical	1850-2014
	1pctCO2	1850-1999
	SSP2 – 4.5	2015-2100
	SSP3 – 7.0	2015-2100
	SSP5 – 8.5	2015-2100
EC-Earth3	Historical	1850-2014
	1pctCO2	1850-2000
	SSP2 – 4.5	2015-2100
	SSP3 – 7.0	2015-2100
	SSP5 – 8.5	2015-2100
FGOALS-3g	Historical	1850-2014
	SSP2 – 4.5	2015-2100
	SSP3 – 7.0	2015-2100
	SSP5 – 8.5	2015-2100
GFDL-ESM4	Historical	1850-2014
	ssp585	2061-2100
GISS-E2-1-G	Historical	1951-2014
HadGEM3-GC31-LL	Historical	1850-2014
	1pctCO2	1850-1999
	SSP2 – 4.5	2015-2100
	SSP5 – 8.5	2015-2100
IPSL-CM6A-LR	Historical	1850-2014
	1pctCO2	1850-2099
	SSP2 – 4.5	2015-2100
	SSP3 – 7.0	2015-2100
	SSP5 – 8.5	2015-2100
	abrupt4	1850-2149

Model	Scenario	Years
MIROC6	Historical	1850-2014
	1pctCO2	1850-1999
	SSP2 – 4.5	2015-2100
	SSP3 – 7.0	2015-2100
	SSP5 – 8.5	2015-2100
MPI-ESM1-2-HR	Historical	1850-2014
	1pctCO2	1850-2014
	SSP2 – 4.5	2015-2100
	SSP3 – 7.0	2015-2100
	SSP5 – 8.5	2015-2100
MRI-ESM2-0	Historical	1950-2014 (thermo but no wind 1850-1949)
	1pctCO2	1850-2014
	SSP2 – 4.5	2015-2100
	SSP3 – 7.0	2015-2100
	SSP5 – 8.5	2015-2100
NORESM2-LM	Historical	1950-2014 (thermo back to 1850)
	1pctCO2	1970-1999 (thermo back to 1850)
	SSP2 – 4.5	2015-2100
	SSP3 – 7.0	2015-2100
	SSP5 – 8.5	2015-2100
UKESM1-0-LL	Historical	1850-2014
	1pctCO2	1850-1999
	SSP2 – 4.5	2015-2100
	SSP3 – 7.0	2015-2100
	SSP5 – 8.5	2015-2100