Comment

Supplementary information to:

Climate models need more frequent releases of input data

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This Supplementary information comprises:

1. List of co-signatories
2. Supplementary Table 1: An overview of the common suite of historical forcings data sets

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Table 1. An overview of the common suite of historical forcings datasets developed for the seventh phase of the Coupled Model Intercomparison Project (CMIP7) by the Climate Forcings Task Team (https://wcrp-cmip.org/cmip7-task-teams/forcings/). Latest information on CMIP7 forcings datasets can be accessed from https://wcrp-cmip.org/cmip-phases/cmip7/cmip7-forcing-datasets/.

Forcing Dataset	Current Data Provider Organization	Key Observations Underpinning Annual Updates	Current Frequency of Updates
Anthropogenic emissions	Pacific Northwest National Laboratory, College Park, MD, USA	Energy statistics and activity data, EDGAR and other emission inventories, NASA point source catalogue (details can be accessed here https://tinyurl.com/2ntxvck7)	Annual extensions with full updates on CMIP cycle
Open biomass burning emissions	Deltares, Delft, Wageningen University and Research, Wageningen, the Netherlands	NASA MODIS fire data for the satellite-era (1997 onwards https://www.globalfiredata.org/data.html)	CMIP cycle, but raw data is updated ~2-3 years
Land use change	Department of Geographical Sciences, University of Maryland, College Park, MD, USA	HYDE population and land-use, UN FAO wood harvest and agricultural data	Annual extensions and regional improvements, with full updates on CMIP cycle
Well-mixed greenhouse gas (WMGHG) and Ozone Depleting Substance (ODS) concentrations	Climate Resource S, Berlin, Germany	NASA sponsored AGAGE network, NOAA supported Global Greenhouse Gas Reference Network, HadCRUT5 for surface temperature observations	CMIP cycle, but raw data is extended annually
Stratospheric aerosol properties and stratospheric volcanic SO2 emissions	University of Exeter and University of Oxford, UK; SSAI/NASA Langley Research Centre, Hampton, VA, USA; Michigan Technological University, MI, USA and NASA Goddard Space Flight Center, Greenbelt, USA; German Aerospace Center, Oberpfaffenhofen Germany	NASA Global Space-based Stratospheric Aerosol Climatology (GloSSAC) and Multi-Satellite Volcanic Sulfur Dioxide Long-Term Global Database (MSVOLSO2L4)	CMIP cycle, but raw data is extended annually

AMIP Sea-surface temperature and Sea-ice	PCMDI, Lawrence Livermore National Laboratory (LLNL), Livermore, CA, USA	MOHC HadISST v1.0, NOAA OISST v2.0	~6 monthly (OISST v2.0 data ceased production in March 2023)
Ozone concentration and nitrogen deposition	Forschungszentrum Julich, Institute of Climate and Energy Systems (ICE-4), Germany; Environment and Climate Change Canada, Montreal, QC, Canada; National Science Foundation National Center for Atmospheric Research, Boulder, CO, USA	Produced by global chemistry-climate model simulations driven by historical forcing datasets and evaluated against ESA Climate Change Initiative and APARC Data Initiative ozone data records, and national monitoring networks for atmospheric nitrogen concentration and deposition	Annual extensions with full updates on CMIP cycle
Incoming Solar Irradiance and atmospheric ionization by energetic particles	Instituto de Astrofísica de Andalucía, CSIC, Granada, Spain	Solar irradiance climate data record supported by NOAA/NASA/LASP, SILSO sunspot index and long-term solar observations from SIDC, Royal observatory of Belgium, GFZ Postdam Geomagnetic indices	CMIP cycle but raw data is extended annually
Anthropogenic aerosol optical properties	Heidelberg University, Heidelberg, Germany	Same as that for anthropogenic emissions for current method	Reliant on anthropogenic emissions for extensions and updates