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## Acronyms and Units for *Climate Science Special Report* (Appendix D)

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## **Acronyms and Units for *Climate Science Special Report* (Appendix D)**

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**Comments:** U.S. Government work

### **Abstract**

Alphabetical list of Acronyms, Agencies, Abbreviations and Units used in the Report.

## Appendix D. Acronyms and Units

AGCM	Atmospheric General Circulation Model
AIS	Antarctic Ice Sheet
AMO	Atlantic Multidecadal Oscillation
AMOC	Atlantic meridional overturning circulation
AMSU	Advanced Microwave Sounding Unit
AO	Arctic Oscillation
AOD	aerosol optical depth
AR	atmospheric river
AW	Atlantic Water
BAMS	Bulletin of the American Meteorological Society
BC	black carbon
BCE	Before Common Era
CAM5	Community Atmospheric Model, Version 5
CAPE	convective available potential energy
CCN	cloud condensation nuclei
CCSM3	Community Climate System Model, Version 3
CDR	carbon dioxide removal
CE	Common Era
CENRS	Committee on Environment, Natural Resources, and Sustainability (National Science and Technology Council, White House)
CESM-LE	Community Earth System Model Large Ensemble Project
CFCs	chlorofluorocarbons
CI	climate intervention
CMIP5	Coupled Model Intercomparison Project, Fifth Phase (also CMIP3 and CMIP6)
CONUS	contiguous United States
CP	Central Pacific
CSSR	Climate Science Special Report
DIC	dissolved inorganic carbon
DJF	December-January-February
DoD SERDP	U.S. Department of Defense, Strategic Environmental Research and Development Program
DOE	U.S. Department of Energy
EAIS	East Antarctic Ice Sheet
ECS	equilibrium climate sensitivity
ENSO	El Niño-Southern Oscillation
EOF analysis	empirical orthogonal function analysis
EP	Eastern Pacific

ERF	effective radiative forcing
ESD	empirical statistical downscaling
ESDM	empirical statistical downscaling model
ESM	Earth System Model
ESS	Earth system sensitivity
ETC	extratropical cyclone
ETCCDI	Expert Team on Climate Change Detection Indices
GBI	Greenland Blocking Index
GCIS	Global Change Information System
GCM	global climate model
GeoMIP	Geoengineering Model Intercomparison Project
GFDL HiRAM	Geophysical Fluid Dynamics Laboratory, global High Resolution Atmospheric Model (NOAA)
GHCN	Global Historical Climatology Network (National Centers for Environmental Information, NOAA)
GHG	greenhouse gas
GMSL	global mean sea level
GMT	global mean temperature
GPS	global positioning system
GRACE	Gravity Recovery and Climate Experiment
GrIS	Greenland Ice Sheet
GWP	global warming potential
HadCM3	Hadley Centre Coupled Model, Version 3
HadCRUT4	Hadley Centre Climatic Research Unit Gridded Surface Temperature Data Set 4
HCFCs	hydrochlorofluorocarbons
HFCs	hydrofluorocarbons
HOT	Hawai'i Ocean Time-series
HOT-DOGS	Hawai'i Ocean Time-series Data Organization & Graphical System
HURDAT2	revised Atlantic Hurricane Database (National Hurricane Center, NOAA)
IAM	integrated assessment model
IAV	impacts, adaptation, and vulnerability
INMCM	Institute for Numerical Mathematics Climate Model
IPCC	Intergovernmental Panel on Climate Change
IPCC AR5	Fifth Assessment Report of the IPCC; also SPM – Summary for Policymakers, and WG1, WG2, WG3 – Working Groups 1-3
IPO	Interdecadal Pacific Oscillation
IVT	integrated vapor transport
JGOFS	U.S. Joint Global Ocean Flux Study

JJA	June-July-August
JTWC	Joint Typhoon Warning Center
LCC	land-cover changes
LULCC	land-use and land-cover change
MAM	March-April-May
MSU	Microwave Sounding Unit
NAM	Northern Annular Mode
NAO	North Atlantic Oscillation
NARCCAP	North American Regional Climate Change Assessment Program (World Meteorological Organization)
NAS	National Academy of Sciences
NASA	National Aeronautics and Space Administration
NCA	National Climate Assessment
NCA3	Third National Climate Assessment
NCA4	Fourth National Climate Assessment
NCEI	National Centers for Environmental Information (NOAA)
NDC	nationally determined contribution
NOAA	National Oceanic and Atmospheric Administration
NPI	North Pacific Index
NPO	North Pacific oscillation
NPP	net primary production
OMZs	oxygen minimum zones
OSTP	Office of Science and Technology Policy (White House)
PCA	principle component analysis
PDO	Pacific Decadal Oscillation
PDSI	Palmer Drought Severity Index
PETM	Paleo-Eocene Thermal Maximum
PFCs	perfluorocarbons
PGW	pseudo-global warming
PNA	Pacific North American Pattern
RCM	regional climate models
RCP	Representative Concentration Pathway
RF	radiative forcing
RFaci	aerosol–cloud interaction (effect on RF)
RFari	aerosol–radiation interaction (effect on RF)
RMSE	root mean square error
RSL	relative sea level
RSS	remote sensing systems
S06	surface-to-6 km layer
SCE	snow cover extent

SGCR	Subcommittee on Global Change Research (National Science and Technology Council, White House)
SLCF	short-lived climate forcer
SLCP	short-lived climate pollutant
SLR	sea level rise
SOC	soil organic carbon
SRES	IPCC Special Report on Emissions Scenarios
SREX	IPCC Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation
SRM	solar radiation management
SSC	Science Steering Committee
SSI	solar spectral irradiance
SSP	Shared Socioeconomic Pathway
SST	sea surface temperature
STAR	Center for Satellite Applications and Research (NOAA)
SWCRE	shortwave cloud radiative effect (on radiative fluxes)
LWCRE	longwave cloud radiative effect (on radiative fluxes)
TA	total alkalinity
TC	tropical cyclone
TCR	transient climate response
TCRE	transient climate response to cumulative carbon emissions
TOPEX/JASON1,2	Topography Experiment/Joint Altimetry Satellite Oceanography Network satellites (NASA)
TSI	total solar irradiance
TTT	temperature total troposphere
UAH	University of Alabama, Huntsville
UHI	urban heat island (effect)
UNFCCC	United Nations Framework Convention on Climate Change
USGCRP	U.S. Global Change Research Program
USGS	U.S. Geological Survey
UV	ultraviolet
VOCs	volatile organic compounds
WAIS	West Antarctic Ice Sheet
WCRP	World Climate Research Programme
WMGHG	well-mixed greenhouse gas
WOCE	World Ocean Circulation Experiment (JGOFS)

**Abbreviations and Units**

C	carbon
CO	carbon monoxide
CH <sub>4</sub>	methane
cm	centimeters
CO <sub>2</sub>	carbon dioxide
°C	degrees Celsius
°F	degrees Fahrenheit
GtC	gigatonnes of carbon
hPA	hectopascal
H <sub>2</sub> S	hydrogen sulfide
H <sub>2</sub> SO <sub>4</sub>	sulfuric acid
km	kilometers
m	meters
mm	millimeters
Mt	megaton
µatm	microatmosphere
N	nitrogen
N <sub>2</sub> O	nitrous oxide
NO <sub>x</sub>	nitrogen oxides
O <sub>2</sub>	molecular oxygen
O <sub>3</sub>	ozone
OH	hydroxyl radical
PgC	petagrams of carbon
ppb	parts per billion
ppm	parts per million
SF <sub>6</sub>	sulfur hexafluoride
SO <sub>2</sub>	sulfur dioxide
TgC	teragrams of carbon
W/m <sup>2</sup>	Watts per meter squared