

Terminology

CCM	chemistry-climate model
CFC	chlorofluorocarbon, a group of industrial compounds that contains at least one chlorine, fluorine, and carbon atom
CFC-11-equivalent	a unit for the measure of the mass of emission of an ODS, equal to the product of the actual mass emission of the ODS times its ODP
CO ₂ -equivalent	a unit for the measure of the mass of emission of a GHG, equal to the product of the actual mass emission of the GHG times its GWP
DU	Dobson unit, a measure of total column ozone; 1 DU = 2.687 × 10 ¹⁶ molecules/cm ²
EESC	equivalent effective stratospheric chlorine, a measure of the total amount of reactive chlorine and bromine gases in the stratosphere that is available to deplete stratospheric ozone
GHG	greenhouse gas
gigatonne	1 billion (10 ⁹) metric tons = 1 trillion (10 ¹²) kilograms
GWP	global warming potential, a measure of the effectiveness of the emission of a gas to cause an increase in the radiative forcing of climate, relative to the radiative forcing caused by the emission of the same mass of CO ₂ ; all GWPs used here are for a 100-year time interval
halon	a group of industrial compounds that contain at least one bromine and carbon atom; may or may not contain a chlorine atom
HCFC	hydrochlorofluorocarbon, a group of industrial compounds that contain at least one hydrogen, chlorine, fluorine, and carbon atom
HFC	hydrofluorocarbon, a group of industrial compounds that contain at least one hydrogen, fluorine, and carbon atom and no chlorine or bromine atoms
HFO	hydrofluoroolefin, a group of industrial compounds that contain at least one hydrogen, fluorine, and carbon atom and no chlorine or bromine atoms, and also include a double carbon bond that causes these gases to be more reactive in the troposphere than other HFCs
IPCC	Intergovernmental Panel on Climate Change
kilotonne	1000 metric tons = 1 million (10 ⁶) kilograms
megatonne	1 million (10 ⁶) metric tons = 1 billion (10 ⁹) kilograms
mPa	millipascal; 100 million mPa = atmospheric sea-level pressure
nm	nanometer, one billionth of a meter (10 ⁻⁹ m)
ODP	ozone-depletion potential, a measure of the effectiveness of the emission of a gas to deplete the ozone layer, relative to the ozone depletion caused by the emission of the same mass of CFC-11
ODS	ozone-depleting substance
ozone layer	the region in the stratosphere with the highest concentration of ozone, between about 15 and 35 km altitude
ppb	parts per billion; 1 part per billion equals the presence of one molecule of a gas per billion (10 ⁹) total air molecules
ppm	parts per million; 1 part per million equals the presence of one molecule of a gas per million (10 ⁶) total air molecules
ppt	parts per trillion; 1 part per trillion equals the presence of one molecule of a gas per trillion (10 ¹²) total air molecules
PFC	perfluorocarbon, a group of industrial compounds that contain only carbon and fluorine atoms
PSC	polar stratospheric cloud
RCP	Representative Concentration Pathway
RF	radiative forcing of climate
SAOD	stratospheric aerosol optical depth
stratosphere	layer of the atmosphere above the troposphere that extends up to around 50 km altitude, and that includes the ozone layer
TEAP	Technology and Economic Assessment Panel of the Montreal Protocol
troposphere	lower layer of the atmosphere that extends from the surface to about 10-15 km (6-9 miles) altitude
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change

UV	ultraviolet radiation
UV-A	ultraviolet radiation between wavelengths of 315 and 400 nm
UV-B	ultraviolet radiation between wavelengths of 280 and 315 nm
UV-C	ultraviolet radiation between wavelengths of 100 and 280 nm
WMO	World Meteorological Organization

Chemical Formulae

Bromine Compounds:

CBrClF ₂	halon-1211
CBrF ₃	halon-1301
CBrF ₂ CBrF ₂	halon-2402
CH ₂ Br ₂	dibromomethane
CHBr ₃	bromoform
CH ₃ Br	methyl bromide
Br	atomic bromine
BrO	bromine monoxide
BrCl	bromine monochloride

Chlorine Compounds:

CCl ₃ F	CFC-11
CCl ₂ F ₂	CFC-12
CCl ₂ FCClF ₂	CFC-113
CCl ₄	carbon tetrachloride
CH ₂ Cl ₂	dichloromethane
CH ₃ CCl ₃	methyl chloroform
CH ₃ Cl	methyl chloride
CHF ₂ Cl	HCFC-22
CH ₃ CCl ₂ F	HCFC-141b
CH ₃ CClF ₂	HCFC-142b
Cl	atomic chlorine
ClO	chlorine monoxide
(ClO) ₂	chlorine monoxide dimer, chemical structure ClOOCl
ClONO ₂	chlorine nitrate
HCl	hydrogen chloride

Other Halogens:

CHF ₃	HFC-23
CH ₂ F ₂	HFC-32
CHF ₂ CF ₃	HFC-125
CH ₂ FCF ₃	HFC-134a
CH ₃ CF ₃	HFC-143a
CH ₃ CHF ₂	HFC-152a
CF ₃ CF=CH ₂	HFO-1234yf
CF ₄	carbon tetrafluoride
C ₂ F ₆	perfluoroethane
IO	iodine monoxide
SF ₆	sulfur hexafluoride

Other gases:

CH ₄	methane
CO	carbon monoxide
CO ₂	carbon dioxide
H	atomic hydrogen
H ₂ O	water vapor
HNO ₃	nitric acid
H ₂ SO ₄	sulfuric acid
N ₂	molecular nitrogen
N ₂ O	nitrous oxide
NO _x	nitrogen oxides
O	atomic oxygen
O ₂	molecular oxygen
O ₃	ozone