

Table 1: Gases Involved in the Greenhouse Effect:
CFCs first began entering the Earth's atmosphere in the 1920s.

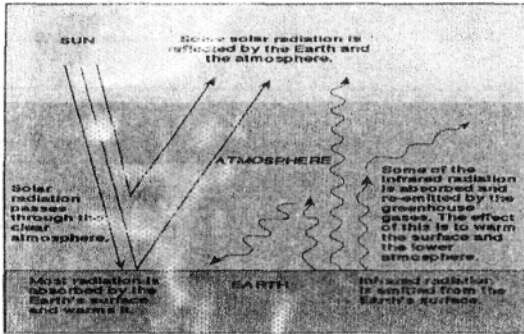
[PPM = parts permillion; PPB = parts per billion; PPT = parts per trillion].

Greenhouse Gas	Concentration-1790	Concentration-2005	Percent Change	Natural and Anthropogenic Sources
Carbon dioxide	278 PPM	379 PPM	36%	Organic decay; Forest fires; Volcanoes; Burning fossil fuels; Deforestation; Land-use change
Methane	715 PPB	1774 PPB	152%	Wetlands; Organic decay; Termites; Natural gas & oil extraction; Biomass burning; Rice cultivation; Cattle; Refuse landfills
Nitrous oxide	270 PPB	319 PPB	18%	Forests; Grasslands; Oceans; Soils; Soil cultivation; Fertilizers; Biomass burning; Burning of fossil fuels
Chlorofluorocarbons (CFCs)	0	153 PPT	Not Applicable	Refrigerators; Aerial spray propellants; Cleaning solvents
Ozone	Unknown	Varies with latitude and altitude in the atmosphere	Global levels have generally decreased in the stratosphere and increased near the Earth's surface	Created naturally by the action of sunlight on molecular oxygen and artificially through photochemical smog production

In summary, the greenhouse effect causes the atmosphere to trap more heat energy at the Earth's surface.

THE GREENHOUSE EFFECT

Greenhouse Effect - animated diagram



THE GREENHOUSE EFFECT

- Short waves (U.V.) radiation comes from the sun to Earth.
- Atmosphere allows radiation to pass through like clear glass.
- Objects on Earth absorb the radiation and re-radiate it as long wave (I.R.) radiation
- Atmosphere does not allow long wave (I.R.) radiation to pass back out into space.
 - 3 things that trap long waves:
 - clouds
 - water vapor
 - pollutant gases
- Atmosphere warms up.
