

Table 21-1 Major Greenhouse Gases from Human Activities

Greenhouse Gas	Human Sources	Average Time in the Troposphere	Relative Warming Potential (compared to CO₂)
Carbon dioxide (CO ₂)	Fossil fuel burning, especially coal (70–75%), deforestation, and plant burning	100–120 years	1
Methane (CH ₄)	Rice paddies, guts of cattle and termites, landfills, coal production, coal seams, and natural gas leaks from oil and gas production and pipelines	12–18 years	23
Nitrous oxide (N ₂ O)	Fossil fuel burning, fertilizers, livestock wastes, and nylon production	114–120 years	296
Chlorofluorocarbons (CFCs)*	Air conditioners, refrigerators, plastic foams	11–20 years (65–110 years in stratosphere)	900–8,300
Hydrochloro-fluorocarbons (HCFCs)	Air conditioners, refrigerators, plastic foams	9–390	470–2,000
Hydrofluorocarbons (HFCs)	Air conditioners, refrigerators, plastic foams	15–390	130–12,700
Halons	Fire extinguishers	65	5,500
Carbon tetrachloride	Cleaning solvent	42	1,400