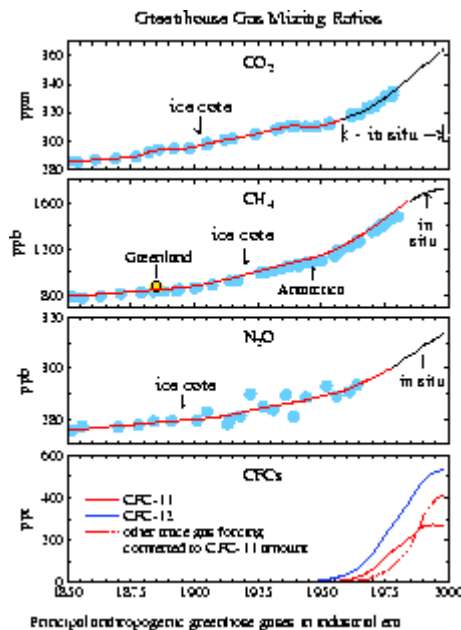


1. The composition of the atmosphere and properties of the land surface have been changing because of human action. Are there climatic consequences?
2. Concepts: Radiative forcing (positive or negative), feedbacks (amplifying or damping), and climate response.
3. Forcing: changes in atmospheric CO₂ and other greenhouse gases (CH₄, CFC), changes in aerosols, land albedo, ...
4. Feedbacks: increases in water vapor would enhance the warming due to the greenhouse gas increase; increase in cloud cover would diminish the warming.
5. Climate response: changes in the mean and standard deviation of temperature, precipitation, ice cover; changes in storm tracks, hurricane frequencies and intensities; changes in growing season.
6. Climate change detection and attribution – natural fluctuations versus result of human action.



The radiative forcing of the climate system since 1750 by gases, aerosol particles, and solar variation

