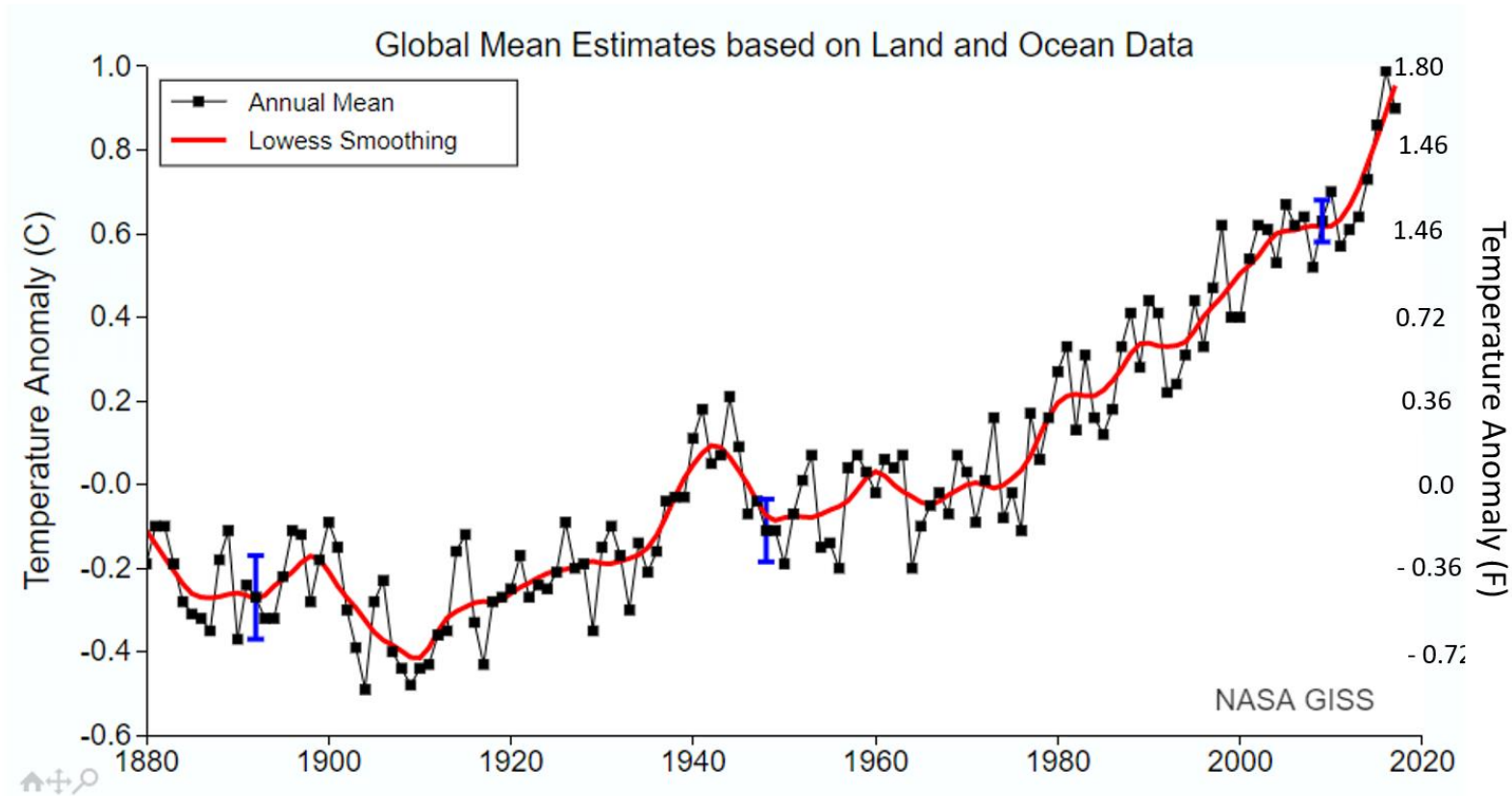


A

# Global Temperatures 1880 – 2017

*Baseline 1951-1980*



<https://data.giss.nasa.gov/gistemp/graphs/>

A

Hot bodies  
emit radiation  
in shorter wavelength form =  
Visible and UV Light Energy

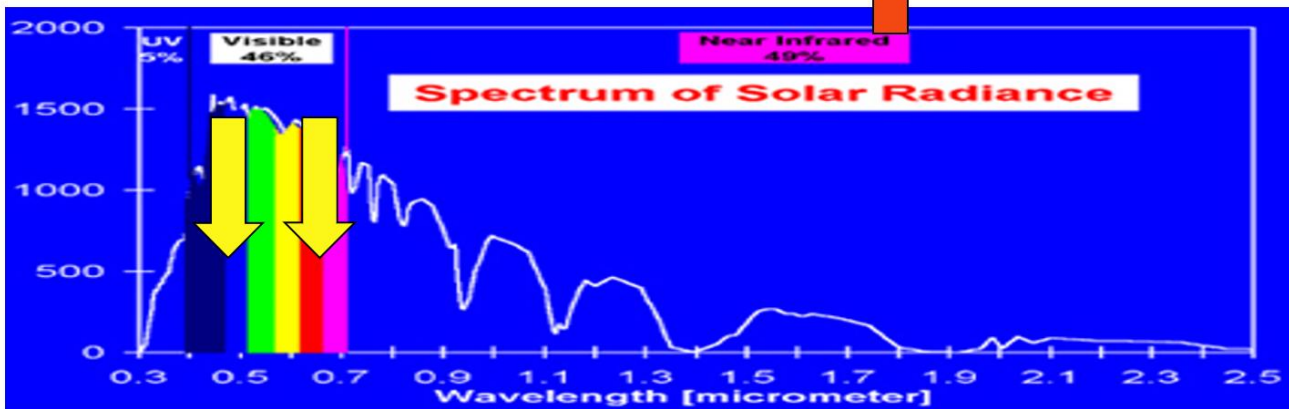


**What Happens to  
Incoming Radiation?**



Cooler bodies  
emit radiation  
in longer wavelength form  
= Heat Energy

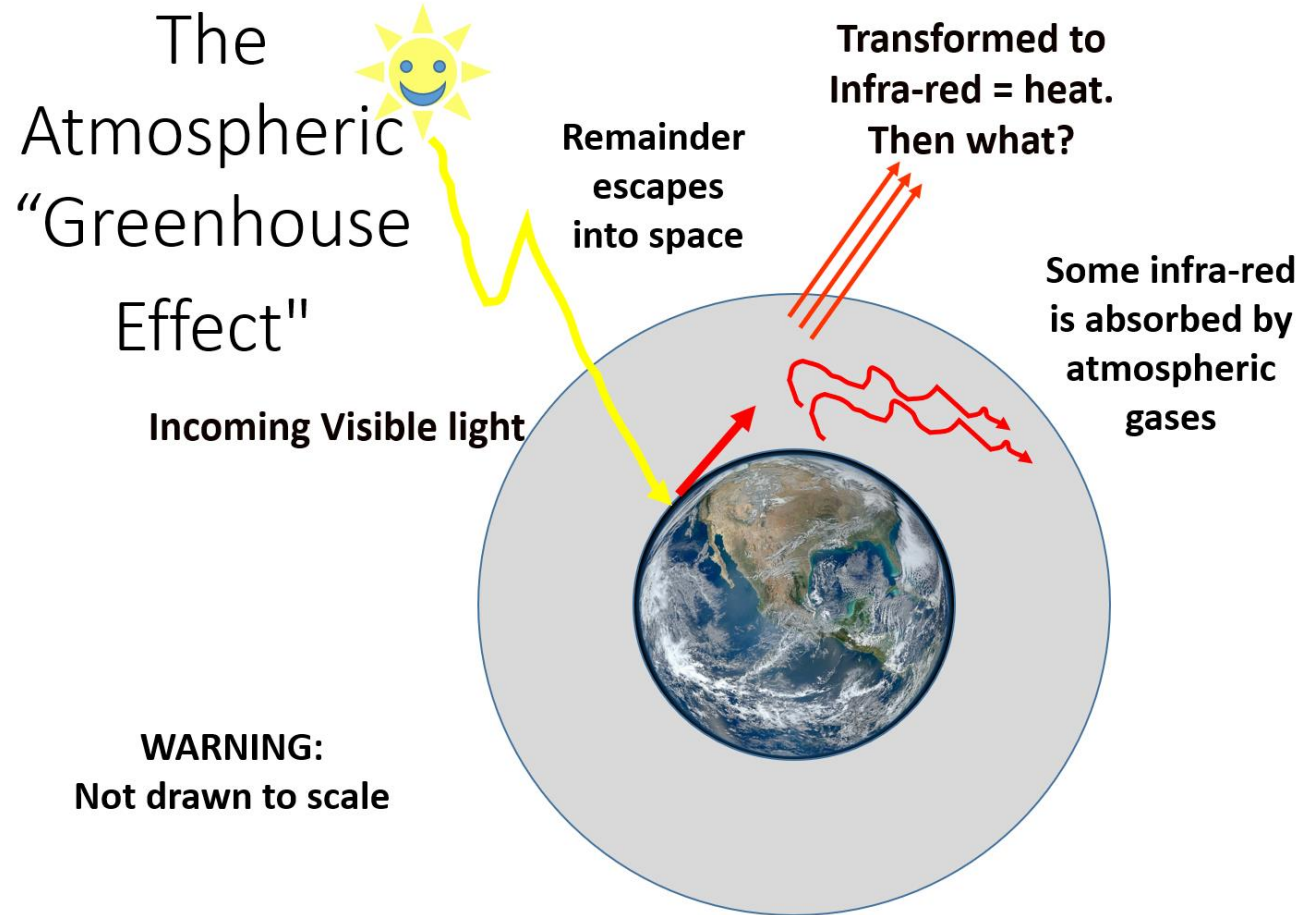
Spectral  
Irradiance  
Intensity  
 $\text{wm}^2/\mu\text{m}$



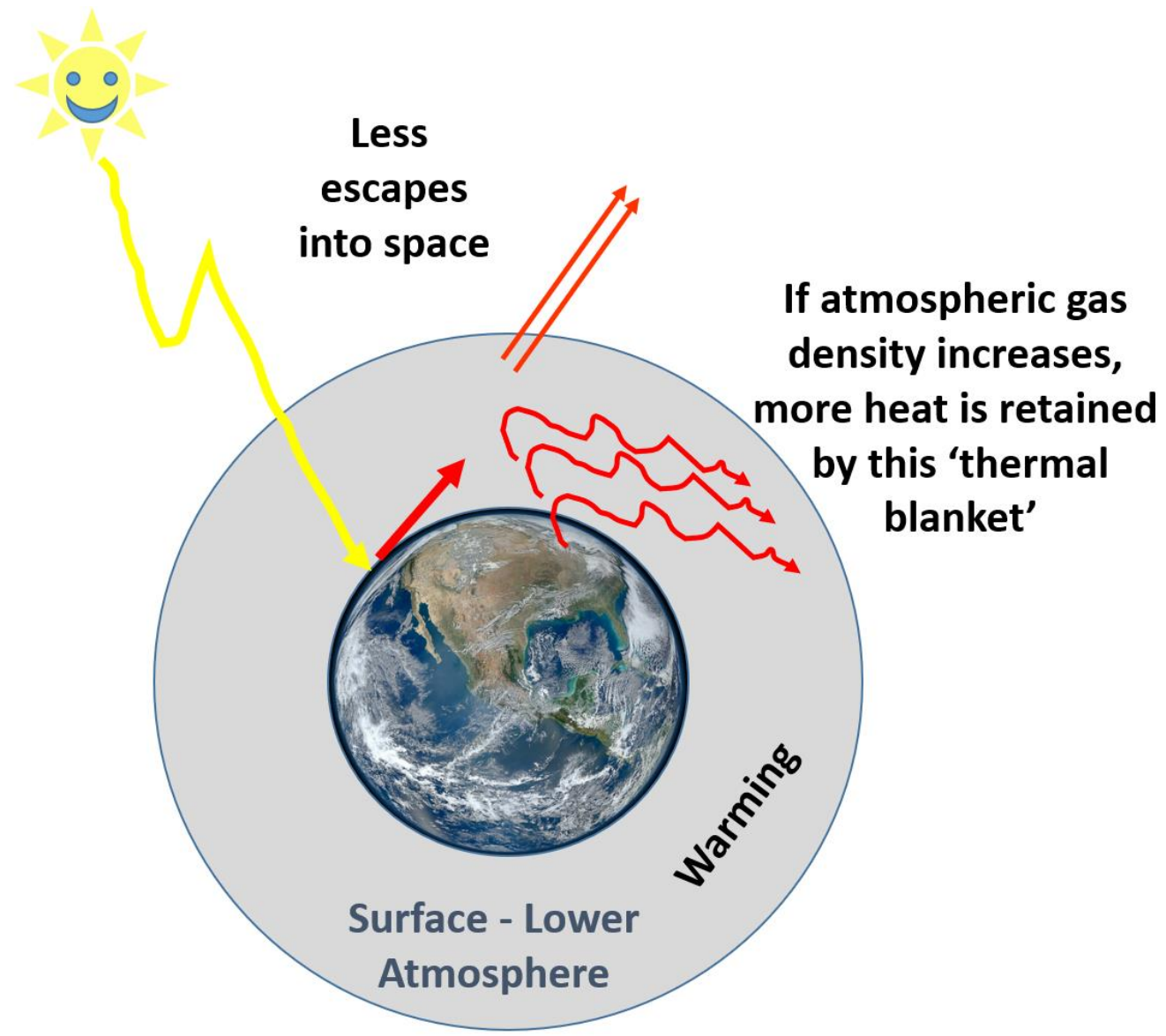
[http://solarcellcentral.com/images/solar\\_spectrum\\_2.jpg](http://solarcellcentral.com/images/solar_spectrum_2.jpg)



A

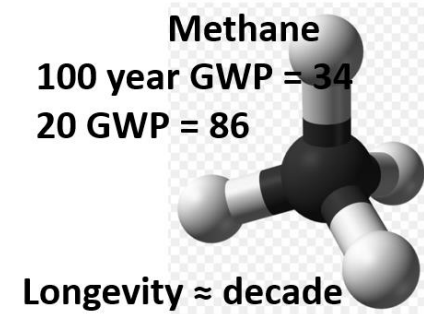
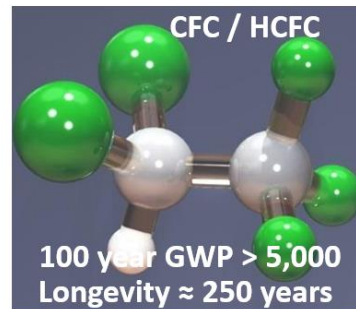
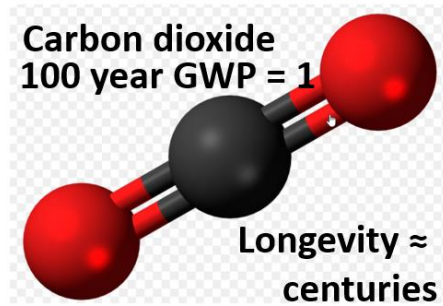


A

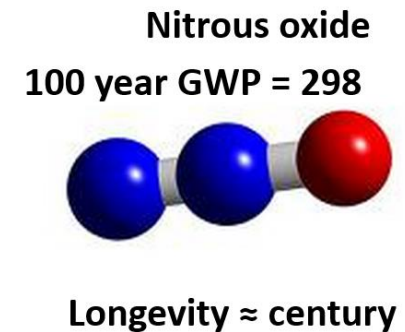


A

# The Main GreenHouse Gases (GHG)



**GWP = Global Warming Potential:**  
the relative heating capacity of 1  
Kg of a gas compared to 1 Kg of  
CO<sub>2</sub>.  
Also known as the Carbon  
dioxide equivalent  
CO<sub>2</sub>e.



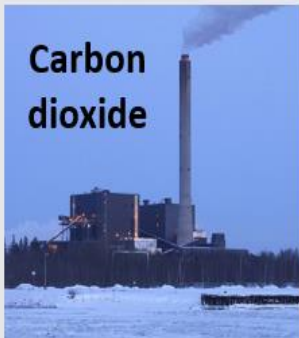
A

# Sources of Most Warming Gases

**COAL**



**Carbon dioxide**



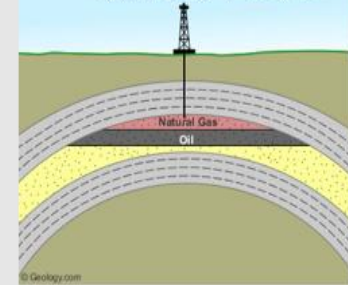
**Land Use Management**

**OIL / GASOLINE**



**Agriculture Forestry**

**NATURAL GAS**



**Methane Carbon dioxide**

