1.2 Climate Change causes

The Earth is a massive ecosystem in which the living and non-living worlds interact through four major subsystems - the atmosphere, hydrosphere, geosphere and biosphere.

Atmosphere - The layer of gases surrounding the earth and composed of considerable amounts of nitrogen, hydrogen, and oxygen.

Hydrosphere - All of the planet's waters, except for moisture in the atmosphere**.**

Geosphere - The soil and the extreme upper portion of the continental crust

Biosphere - Includes all living organisms from plants, mammals, birds, reptiles, aquatic life, insects to bacteria and viruses.

Left on itself, the Earth is a self-sustaining and balanced ecosystem, with climate change occurring gradually through certain natural processes. With the advancement of mankind and technology, however, the Earth's climate has witnessed several alterations driven excessively by mankind. Hence the causes of climate change can be broadly partitioned into **Natural factors** and **Human factors**.

1. Natural

    a) External Changes (from extraterrestrial systems):
       i)   Changes in Solar Output
       ii) Changes in the Earth's Orbit
    b) Internal Changes (from oceans, atmosphere and land systems)
       i)   Changes in the concentrations of atmospheric gases - Greenhouse Effect
       ii) Natural processes on the Earth -- Mountain Building, Continental Drifts, Atmospheric/Ocean Heat Exchanges

2. Human

    a) Enhancing the Greenhouse Effect - increase CO2 emissions through fossil fuel combustions
    b) Forms of Land Uses
       i)   Irrigation
       ii) Deforestation
       iii) Agriculture

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References

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1. Answer.com.(2008). *Definition of ecosystem.* Retrieved 03 Nov 2008 from http://www.answers.com/ecosystem&r=67
2. The Green Lane.(2008)._Glossary._Retrieved 13 Nov 2008 from http://www.ec.gc.ca/water/en/info/gloss/e_gloss.htm