

M.Sc. ZOOLOGY
SEMESTER 2
CORE COURSE 5

TOPIC: GLOBAL CLIMATE CHANGE: THE SOURCES

INTRODUCTION:

Weather: It changes very quickly. Its parameter may be hour, days, month and year.

Climate: It is average of long-term weather parameter.

Example:

1. Precipitation
2. Wind pattern

When average of hour, day, diurnal, seasonal and yearly changes are taken in consideration, then climate is defined.

Most of Indian subcontinent lies in tropical region except Himalyan range.

Climate change is alteration of long term in weather of specific region. This shift is measured through changes in some of weather parameter like temperature, wind pattern precipitation, snow and cloud.

IPCC (Intergovernmental Panel on Climate Change) was established in 1987 under **UNEP** (United Nations Environmental Programme) which defines the climate as any change in climate over time whether due to natural variability or due to anthropogenic activity.

DRIVERS OF CLIMATE CHANGE

Mainly two:

1. Natural
2. Anthropogenic

NATURAL

- A. Volcanic eruption
- B. Oceanic circulation

VOLCANIC ERRUPTION: Whenever a volcanic eruption occurs, the particles coming outside are distributed on earth or oceanic surface. These eruptions causes cold summer and lead to climate change.

OCEANIC CIRCULATION: Near tropics, temperature of ocean is high and near poles it is low. Due to this, there is first vertical and then horizontal circulation of water.

ANTHROPOGENIC

The sources are listed below-

1. Fossil fuel combustion
2. Industrial activity (maximum contribution to CO₂ emission)
3. Agriculture styles
4. Changing land use pattern
5. Waste decomposition
6. Release of greenhouse gases during mining.

Details of anthropogenic sources will be dealt in next class.
