

Effects of Global Warming

6th sem

Paper: 6.1

Effects of Global warming or Impacts of Enhanced Greenhouse effects

The enhanced greenhouse effect will not only cause global warming but also affect various other climatic and natural processes.

i) Global temperature increase: It is estimated that the earth's mean temperature will rise between 1.5 to 5.5°C by 2050 if input of greenhouse gases continues to rise at the present rate. Even at the lower value, earth would be warmer than it has been for 10,000 years.

ii) Rise in sea level: With the increase in global temperature sea water will expand. Heating will melt the polar ice sheets and glaciers resulting in further rise in sea level. Current models indicate that an increase in the average atmospheric temperature of 3°C would rise the average global sea level by 0.2 - 1.5 metre over the next 50 - 100 years. Life of millions of people will be affected.

iii) Effects on Human Health: The global warming will lead to changes in the rainfall pattern in many areas, thereby affecting the distribution of vector born (water born) diseases like malaria, filariasis, elephantiasis etc.

Higher temperature and humidity will increase (aggravate) respiratory and skin diseases.

10) Effects on Agriculture: Global warming may show positive or negative effects on various types of crops in different regions of the world. Tropical and subtropical regions will be more affected since the average temperature in these regions is already on the higher side. Even a rise of 2°C may be quite harmful to crops. Soil moisture will decrease and ~~evapotranspiration~~ evapotranspiration will increase, which may drastically affect wheat and maize production.

v) Ecological disturbances like increased chances of cyclones, increased desert areas, extinction of large number of species etc. take place.

⇒ Measures to check Global Warming: The following steps are important.

- a) Cut down the current rate of use of CFCs & fossil fuel.
- b) Use energy more efficiently.
- c) Shift to renewable energy resources.
- d) Increase Nuclear Power Plants for electricity production.
- e) Shift from coal to natural gas.
- f) Trap and use methane as a fuel.
- g) Reduce beef production.
- h) Adopt sustainable agriculture.
- i) Stabilize population growth.
- j) Efficiently remove CO_2 from smoke stacks.
- k) Plant more trees.
- l) Remove atmospheric CO_2 by utilizing photosynthetic algae.