

?

People Science Forum

Mysuru, India

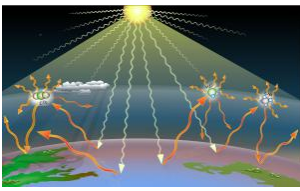
Space Eco Literacy and Sky Watch for 5-9<sup>th</sup> Std Students with /parents/teachers/guardians

Batch # 01 : Week 01 of 10 :

## **Climate Change - A real challenge ahead** : One Page Note for Week # 01 On Climate Action

In the Earth's atmosphere natural and synthetic gases trap the infrared(IR) radiation emitted by the surface of the Earth which would have otherwise escape in space. This is called **GREENHOUSE EFFECT**.

The gases are Carbon-dioxide, Methane, Nitrous Oxide and a whole range of Chloro Fluro Carbons(CFC's). The heat trapping capacity of gases vary. For example a molecule of methane can hold 20 to 30 times more heat than a molecule of Carbon dioxide and CFC's 20,000 times more than Carbon dioxide. **Changed ecological niche of mankind is the primary reason for a wide range of environmental and ecological problems haunting mankind.** The energy demand of the present day human activities are unprecedented.



**During 1875 and 1975 the population has increased three fold while the primary energy consumption has been a shocking 32 times more.**

### **Global Warming**

During the period 1860-1990 there has been a global temperature increase of the order 0.5 to 0.7 degree centigrade, half of which has been estimated since 1965. **The latest most reliable figures on global warming suggest that the temperature of the biosphere will increase by about 1.5 degree centigrade over the next 50 years.** By the same date, mainly due to thermal expansion of the Oceans, mean sea level may rise by about 30 cm on average. It is estimated that the increase of 100 cm sea level rise will submerge 20 km of land. By an expected 50 cm sea level rise expected by the middle of next century without action, as many as 50 million people may be forced to move as a result of rising sea levels. The effects are likely to be particularly severe in developing countries where much of the population lives on or near the coastal line and funds are not available to erect sea defenses.

### **Effects :**

The **global warming is projected to affect various regions of the world in a different way.**In the ESCAP region where Indian sub continent is - more frequent and intends river and coastal flooding are expected. In Maldives - fresh water supplies are expected to get threatened with coastal flooding. In Australia and New Zeal and increased incidence of skin cancer, as a result of ozone layer depletion is expected.

### **Hottest year**

The global warming real consequences may seem to be for the future. But our generation has already become a part of this phenomena. **Of the ten most warm years recorded in the past 100 years, six were in the 1980s.** There are many other effects on agriculture resources, human health and biological diversity due to global warming.

### **Strategies**

The world spends a trillion dollar for war and defence industry and yet another for energy sources such as oil, coal and gas. The real term strategies projected for slowing down the global warming are **1) Efficiency of energy production and use. 2) Switching from carbon intensive fuels such as coal and oil to hydrogen intensive such as natural gas, wherever possible. 3) Encouraging rapid development of solar and other carbon free energy sources.4) Elimination of post of CFC's production and recapture of the emitted ones and 5) Reduction in the rate of deforestation.**

The energy and materials used by each of the industrial, agricultural and domestic activities directly or indirectly affect the environment. Recycling materials, and use of appropriate energy systems and life styles are urgent needs of the present generation. Most of the present generation may or may not be present for the projected consequences of the global warming. Yet the present world is borrowed from the future. Thus, we have a collective responsibility. In our efforts it is a necessity to do the needful job as a way of life. This is the **challenge ahead each one alive for climate Action with a social responsibility and scientific temperament.**

( Written by Er. V Jagannath, p.6, SOM, 26 Nov 1991 based on ESCAP UN News Letter)