

## Role of India in climate change

Devi Singh Meena

Research Scholar, Department of Geography, University of Rajasthan, Jaipur, Rajasthan, India

### Introduction

Climate change is today a global problem. All the continents are facing the consequences of climatic change. Smaller islands and low lying coastal area are face a greater danger. As the developed and developing countries are marching a head on the path of industrialisation dooms day is nearing. Actually from early times long term weather changes are taking place and this is term as climatic change.

### What is climate change?

Times has been change in climatic structure after industrial revolution. By the entry of new chemicals and gases into environment the whole world has been affected. CO<sub>2</sub>, CO, CFCS etc. Gases amount increased, earth temperature increases.

Climatic change in the principle is increase in the temperature of earth environment by the increase of CO<sub>2</sub>, CO, CFCS, and etc. gases.

Attributes for the climatic change:-

After Industrial revolution, climatic changes have been visible more emmision of CO<sub>2</sub>, gases in large quantities is notable cause.

There are two division of attributes of climatic change:-

#### i) Natural attributes

- Sun spots:-** sun is the major source of energy on earth. Increases and decreases in the no. Of sun spots on the sun effects weather. Increase in the no. of sun spots leads to the cool and humid climate, results in storm on earth. Decrease in no. Sun spots leads to the hot and dry climate on the earth. This cycle continuous for every 11 year.
- Mercovich oscillating theory:-** as around he sun, the axis of earth changes which leads to change in amount of insolation received and this lead to change in climate.
- Principal of gases change in atmosphere:-** co<sub>2</sub>, nitric oxide, methane, watervapours, amount keep on changing atmosphere and this lead to the climatic change.
- Volcanic activity:-** this is also a reason for the climatic change. This leads to the climatic change. The subsistence released out of valonice eruptions reduced insloation reaching earth. Penotrova and elseol valoconic eruptions lead to reduce of temperature on earth

#### ii) Man made attributes

- Removal of forest's cover:-** forest act as the natural umberalla for earth's surface as they reduce the gases

exhaled by human beings, thus reducing green house effect. By degradation of forest amount of co<sub>2</sub> is increasing in the atmosphere.

- Buring of fossil fuel:-** ther e has bneen ever increasing use of fossil fuels and this has lead to air, water, pollution, increasing the amount of green house gaeses.
- Agricultural practices:-** presnt days afgricultural methods used by man has also lead to climate change eg. By water filled fields of rice there is release of methane gas. Reminants lead to expulsion of methane gas into atmodphere. methane is 22% more heat absorbing gas than co<sub>2</sub>. More and more stress on bio gas production is leading to production of methane gas which is hazardous for atmosphere.
- Mining:-** lot of methane gas is being released from earth's interior due to mining of coal. E.g, there has been cases of continuous coal mine fire at jharia (jharkhand, india).
- Industrialisation and urbanisation:-** indiscriminate urbansiation and industrilastion has lead to the irreparable damage to the nature and have lead to climate change.

### Controlling climate change

- Sustainable use of natural resources
- Recovery of 1 % forest cover in the temperate regions and 40% in the tropical regions may lead to some amount of recovery for the damage done in the past.
- Alternative sources of energy should be used and stressed upon by the govt. Use of solar, wind, tidal, geothermal, hydroelectricity should be promoted.
- Developing and under develop world has no excess to modern technologies. They must be given access to technological changes by rich and developed world.
- International law should be mandatorly followed by all the stakeholders so that equal responsibility is shouldered.

### Climate change and India' role

India has been vocal at all international summits on the matter of climate change. It is leading the developing and under develop nations whole heartedly.

- From Montreal protocol 1987 to Paris summit 2015, India has been working for concusses.
- On release of green house gases Indian position is 11<sup>th</sup> in 2017. India is developing country but still it has taken huge strides to fight against climatic change.
- As a peace loving country, India's clear message to world is that developed countries must play their part on climate change. All the countries without hindering

development must stress on sustainability. India has announced 33% to 35% reduction of green house gases emissions by producing 175000 megawatt electricity by clean energy sources.

4. India has reduced use of air conditioners, refrigerators, sprays, and this would reduce CFCS emission. CFC'S have a life span of 75200 years and are 15000 more harmful to the environment than co2.

**Effects of climate change**

**a) Climate change and bio diversity**

- i) Many species are extinct due to changes in the climate. E.g
- ii) Many island countries maturities, Tuvalu, srilanka Maldives, have been facing effects of climate change
- iii) Climate change leads to dry spans at some places and at some places unusually heavy rainfall.
- iv) El-nino and La-nina effects have been seen frequently due to climate change.
- v) Monsoon climatic areas have faced delay and early rainfall due to climate change. This is leading to food scarcity.

**b) Climate change and human health**

- i) Climate change has resulted in new diseases which never heard like zika virus, swin flue etc. Malaria has taken an epidemic form in many countries.
- ii) 97 countires of world have 3.2 million malaria effected population.
- iii) Lismaniasis is a group of diseases caused by sandlie mosquito bite. Visceral, quotatani, mocco, quotanias, are included. Visceral is called kalazar in India. According to WHO 98 countries have traits of this disease.
- iv) Tuberculosis has resulted in 13 lakh deaths in the year 2013 allover the world. In the year 2009 climate change has resulted in 20 to 23 lac people infected inn India.

**Diseases due to climate change**

**Table 1**

S. No	Disease	Effected Population In Crores	Countries
1.	<i>malaria</i>	320	97
2.	<i>Lismaniasis (kalazar)</i>	0.9	98
3.	<i>limphantic</i>	123	73
4.	<i>Flariasis</i>	26.2	78
5	<i>sistrozomisis</i>	0.2	102

- v) Dengue, plague, yellow fever, cholera, anchephelitis, asthma, Japanese encephilis, brownchities, bird flue, TB, allergies, are other diseases which have more profound effect on human beings as the climate changes are taking place.

**Steps for resolving Climate change**

1. 1992 rio summit green house emission should be reduced by 2000.
2. Reforestation can be a use full step.
3. Fuel wood consumption be replaced by agricultural plantations.

4. Cooking, drying agricultural products, heating water and house heating systems could be turned to systems based on solar energy. Govt of India has taken a nobal initiative for the promotion of these energies under ujwla yojna.
5. Deforested areas and grass lands should be again planted.

**Conclusion**

Development is must nature can nat bbe taken for granted so in order to fight the damage done to the nature in past we must move towards sustainable development. Nature has a very unique ability to replenish what is lost so climate change can be controlled by global efforts.

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