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Publications**

CLIMATE CHANGE

Issues, Challenges and Control Measures



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Climate Change

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CLIMATE CHANGE: AN OVERVIEW

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Introduction

The world most group in the society are the rural poor as they often depend on natural resources for livelihoods such as agriculture, fishing and forestry. The impact of climate change currently predicted for India include rise of up to 40°C in surface air temperature by 2100. Customized interventions are therefore the need of the hours to cope up with the specific risk's indifferent states and regions.

Definition

-It is abroad range of global phenomena created predominantly by burning fossil fuels. Which add heat – trapping gases to earth's atmosphere? These phenomena include the increased temperature trends described by global warming but also encompass changes such as sea-level rise, ice mass loss in Greenland, Antarctica, the Arabic and Mountain glaciers worldwide shifts in flower \ plant blooming and extreme weather events\ said by NASA.

Climate Change and its Impact on Agriculture

Climate is the main factor that influences agricultural operations starting from sowing to harvesting. Tamil Nadu is the 11th largest and 7th most populous state (6%) in the country. The major crops are rice, jawar, bajra, maize, cotton, ground nut, mung bean, banana and sugar cane. The climate changes most affect by agricultural low level and high-level rain fall are total spoil the crop growth.

Increasing Temperature - Declining Rainfall

For Tamil Nadu as a whole, the projections of maximum temperature show an increase of 1.0, 2.2 and 3.1 °C for the periods 2020s (2005–2035), 2050s (2035–2065) and 2080s (2065–2095), respectively, with respect to baseline period (1970–2000). Similarly, the projections of minimum temperature show an increase of 1.1, 2.4 and 3.5 °C respectively, for the similar period bands.

The annual rainfall projections for the same periods indicate a general decrease in rainfall of about 2–7, 1–4 and 4–9 %, respectively. There are also indications of increasing heavy rainfall events during the northeast monsoon season and a slight decrease during the southwest monsoon season. The High Altitude agro-climatic zone of the Western Ghats and the Eastern Ghats, and the High Rainfall agro-climatic zone near the tip of the peninsula could have an increase in rainfall from 10% to 25%.

Seasons in Tamil Nadu

Monsoon : The monsoon season in Tamil Nadu starts from late June to December.

Temperature: On an average monsoon day, the temperature can range anywhere between 25 and 30 degrees Celsius in Tamil Nadu.

Summers: Summer starts in the month of March and lasts up to late June.

Temperature: During summers, temperatures range from 28 degrees Celsius to 45 degrees Celsius depending on the place you are visiting in Tamil Nadu.

Winter: This is perhaps the best time to visit Tamil Nadu. Winter in Tamil Nadu begins in the month of November and extends until March, just before the onset of the summer season.

Temperature: The temperature in the state during this time ranges between 22 to 30 degrees Celsius.

Climate Change Knowledge Portal

Each of the last three decades has been successively warmer at the earth's surface than any preceding decade since 1850. The globally averaged temperature data show a warming of 0.85 [0.65 to 1.06] °C. Cover the period 1880 to 2012.

IPCC Assessment report 5th States the global mean temperatures will be continue to rise over the 21st Century if Green House Gas (GHG) emissions continue unabated and temperature change will not be regionally uniform. It is

virtually certain that in most places there will be more temperature. Extremes as global mean temperatures increase (IPCC 2014).

- An increase in heavy precipitation (heavy rain and hail)
- Shrinking glaciers
- Thawing permafrost

High Frequency – Low Impacts

1. Multiple minor events impact > 1 major event [Cyclone, flood or Server drought]

2. Impacts of strong wind and heavy rain

- March 30/2012 – 50 lakhs worth 150 banana trees were lost in Theni District
- May 04/2011 – Lot of banana trees Managuzhi village, coodalore taluk Nilgiris District were lost.
- May 07,08/2012 – 1.5 cores of banana trees, drumsticks trees, coconut trees were damaged in sinamanoor area Theni District.

The indirect consequences of climate change, which directly affect us humans and our environment, include;

- An increase in hunger and water crises, especially in developing countries
- Health risks through rising air temperatures and heat waves
- Economic implications of dealing with secondary damage related to climate change
- Increasing spread of pests and pathogens
- Loss of biodiversity due to limited adaptability and adaptability speed of flora and fauna
- Ocean acidification due to increased HCO₃ concentrations in the water as a consequence of increased CO₂ concentrations
- The need for adaptation in all areas (e.g. agriculture, forestry, energy, infrastructure, tourism, etc.)

Effects of Climate Change

It is not scientifically possible to assign individual weather events to the current climate change, however, it can be statistically proven that global warming will increase the probability of extreme weather events. The direct consequences of man-made climate change include;

- Rising maximum temperatures
- Rising minimum temperatures
- Rising sea levels
- Higher ocean temperatures

Climate Changes – Affect Human Health

Extremes in weather and temperature, increased pollutions and environmental toxins and changes in food security can all cause physical and mental health including;

- Safety of Shelter
- Air Quality

- Quality, Safety and Supply Of Drinking Water
- Food Availability
- Nutrition Levels in Food.

According to the world health organizations (WHO) researches predict that certain effects of climate change will contribute to an increase of about 250,000 deaths per year between 2030 and 2050 from conditions such as;

- Heat Stress
- Malnutrition
- Diarrhea
- Malaria
- High level body pain
- Dehydrations
- Climate Change

Conclusion

We need to take part and try to stop global warming and other effects on climate change. If the earth's temperatures continue to rise in the future, living things on earth would become extinct due to the high temperatures. If humans contribute to control global warming, this world would be cooler and the high temperatures we currently have would decrease. If everybody as one take stand and try to end most of the climate changes that are occurring, this world would be a safer place to live on.

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