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CLIMATE CHANGE: INDIA'S WAY AHEAD

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Abstract

Fluctuations in temperature of Earth is a natural phenomenon and have happened many times in about 4 billion years of existence of our planet. However, we have to recognize the fact that the rate at which the temperature of Earth is rising has increased due to anthropogenic activities. Considering the geography and coastline of India, she faces significant risks. The Great Himalayan glaciers are moving towards extinction. This would impact many major rivers like the Ganges and Indus. However, India's efforts in formulation of the policies and their implementation to combat climate change demonstrate commitment towards climate conservation.

Keywords: *Greenhouse Gases (GHG), Carbon Sink, COP 27, International Solar Alliance (ISA).*

INTRODUCTION

Earth is more than 4 billion years old and has gone through many ice ages. The last ice age ended about 11,700 years ago and since then the temperature of the earth has been rising constantly. Though, the rise in the temperature of earth happens to be a natural phenomenon, the pace at which it's increasing has increased due to the anthropogenic activities. Since, the industrial revolution, the temperature of the world has increased by at least 1.1°Celsius. Emission of the greenhouse gases (GHG) remains the prime culprit behind the climate change. The GHG can remain in the environment for hundreds of years. Between 1850 and 2019, India has been responsible for only 4% of the global GHG emission. It is also imperative to note that per capita emission is also considerably less than the global average. Due to the geographical features and location of India, India would be one of the worst affected countries along with other island nations and nations with huge coastline. Glaciers in the Great Himalayas are also at risk of extinction due to the rise in temperature which can further lead to the extinction of the glacial rivers like Ganges, Indus and its tributaries, Brahamputra etc. Extinction of these major glacial rivers would be a catastrophic blow to the irrigation system of the nation and would lead to desertification of the whole Northern and Eastern region. Melting of the Glaciers would result in rise of the sea level because of which people residing at the coastline would be faced with relocation.

OBJECTIVE OF THE STUDY

1. To study the steps taken by India to combat Climate change and to mitigate its harmful effects.
2. To study the policies formulated or other initiatives taken by the Government of India and their stages of implementations to deal with climate change.

RESEARCH METHODOLOGY

This is a study based on descriptive method. Date is collected using secondary sources like Research Papers, Books, Encyclopaedia Britannica, other resources available on the internet etc.

INDIA'S FIGHT AGAINST CLIMATE CHANGE

In order to deal with the imminent threat of the climate change and to mitigate its effect on not just our country but on the world, India is coming out as the torch bearer in fight against the climate change. India is continually innovating and implementing new strategies for an environmentally sustainable development. India's target to achieve 40 percent of its energy from non-fossil fuel sources by 2030 has already been achieved. Hence, India has revised its target to producing 50 percent of its electric power demand through non-fossil fuel-based

resources. India's other aims and objectives stands as an epitome of a nation's resolute intent for climate conservation.

Creating Carbon Sink through Afforestation.

Carbon sink becomes vital while dealing with the GHG that are already in the atmosphere. Oceans, forests & soil are the most important carbon sinks. Forests and Oceans combined are the reason behind removing around 25 percent of the carbon that is added to the atmosphere by humans. Therefore, one of the ways to increase the area of the carbon sink is through afforestation. Forest Survey of India (FSI) publishes "India State of Forest Report" (ISFR). This report is published every two years. As per the 2021 report, India has increased its forest cover by 1,540 square kilometers from the 2019 assessment. This is in continuation of India's previous strides in afforestation. ISFR 2019 stated that the forest cover is increased by 3,976 square kilometers as compared to the 2017 report.

Carbon stock is the amount of carbon sequestered from the atmosphere and stored in an ecosystem viz. biomass, soil, deadwood etc. The carbon stock of forests in 2019 was 7,124.6 million tonnes. This increased to 7,204 million tonnes in 2021. A clear increase of 79.4 million tonnes.

India at COP 27

India at United Nations Framework Convention on Climate Change's (UNFCCC) Conference of Parties (COP) 27 submitted its Long-Term Low Carbon Development Strategy (LT-LEDS). India became the part of less than 60 parties who have submitted the LT-LEADS. Major goals in LT-LEADS among other things stated that the National resources are to be utilized rationally and India will transition from the fossil fuels to better alternatives such as use of Bio-fuel, especially the blending of ethanol and petrol. India would also strive towards having more electric vehicles and smart cities. Through the LT-LEADS, India sets a goal to increase the nuclear energy production three folds by 2032. National Green Hydrogen Mission launched in January, 2023 is also in tune with the goals stated in LT-LEADS. For the National Green Hydrogen Mission, Rs. 19,744 crore was allocated.

The submission of LT-LEADS at COP 27 sets a clear path for India to tread on. These goals also act as a guiding principle not just to India but to the world, laying out a clear strategy to deal with the imminent threat of climate change.

International Solar Alliance

In 2015, on the sidelines of COP 21 which was held in Paris, India along with France conceived the International Solar Alliance (ISA) as a joint effort for mobilizing against climate change through Solar energy. At present, 116 countries are signatory of the to the ISA Framework Agreement. ISA provides assistance to all its members in meeting their demands of energy access, energy security and in the facilitation of energy transition.

The countries that are located between the Tropic of Cancer and Tropic of Capricorn are fortunate enough to receive most amount of solar insolation. This makes the area ripe for the production of solar energy and alleviating the energy deficit of the world. ISA aimed to bring together these solar resource rich countries for meeting the energy demand through sustainable development and reducing overall carbon footprint of the world. However, seeing the interest of the major economies, ISA was opened for all members of the United Nations.

The ISA is based on the "Towards 1000" strategy which envisages investment of USD 1,000 Billion in the solar energy sector by 2030, leading into installation of 1,000 GW of solar energy which will provide access of energy to 1,000 million people.

CONCLUSION

India's resolute intent of climate conservation is not just in the making of policies and setting up of goals but it can be seen through implementation of the policies and realization of goals. Strides like these clearly depicts the ardent efforts of the Nation to deal with the scourge of climate change. India's involvement in "International Solar Alliance" (ISA), its submission of LT-LEDS at COP 27 and local policies makes it absolutely clear that it will leave no stone unturned for a better future.

However, these achievements of India have to be supported by further innovation or new strategies. It must not be forgotten that pernicious effects of climate change are not within the geographical and physical contours only but transcend to economics and geopolitics also. A recent study published in the "National Bureau of Economic Research" states that had there been no climate change between 1960 and 2019, the world GDP would have been 37 % higher. As the world had to deal with climate change induced droughts, famines and conflicts, it has not been able to achieve its full potential.

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