Volume : 5 | Issue : 8 | August 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 69.48

Original Research Paper

Global Warming, Climate Change & Its Management - A Study With Respect To Climate Change in India

MANAGEMENT

KEYWORDS : Global warming, Climate Change, Environmental, Economy, India, mitigation, vulnerability

MR. RAMESH CHANDRAHASA

BE in (E&C), MBA, (Ph.D), ASSISTANT PROFESSOR, GLOBAL BUSINESS SCHOOL HUBLI, KARNATAKA STATE

ABSTRACT

Global warming is primarily a problem of too much carbon dioxide (CO2) in the atmosphere. It's increase of Earth's average surface temperature due to effect of greenhouse gases, such as carbon dioxide emissions from burning fossil fuels or from deforestation. Climate change is the greatest humanitarian crisis of our time, responsible for rising seas, raging storms, searing heat, ferocious fires, severe drought, and punishing floods. It threatens our health, communities, economy, and national security. Climate change is no more an environmental concern. It has emerged as the biggest developmental challenge for the planet. Its economic impacts, particularly on the poor, make it a major governance issue as well. India is the second most populous country of the world with a population over 1.2 billion. India lies to the north of the equator between 6° 44′ and 35° 30′ north latitude and 68° 7′ and 97° 25′ east longitude. It shares a coast line of 7517 km with the Indian Ocean, the Arabian Sea and the Bay of Bengal .

The Indian economy is considered as one of the fastest growing major economies. However, the country is plagued by the climatic disasters that continue to wreak havoc on its economy. As a result, in spite of the leaping economic progress, the majority of the people of India continue to live in poverty, with malnutrition and diseases corroding the society.

INTRODUCTION

Being such a huge country, India exhibits a wide diversity of temperatures, from the freezing cold winters in the Himalayas to the scorching heat of the Thar Desert. The above two regions play a very significant role in controlling the weather of India, making it warmer than to be expected with its latitude. The Himalayas participate in this warming by preventing the cold winds from blowing in, and the Thar desert attracts the summer monsoon winds, which are responsible for making the majority of the monsoon season of India. However, the majority of the regions can be considered climatically tropical. Addressing Climate change requires a good scientific understanding as well as coordinated action at national and global level. This paper addresses these challenges. Historically, the responsibility for greenhouse gas emissions' increase lies largely with the industrialized world, though the developing countries are likely to be the source of an increasing proportion of future emissions. The projected climate change under various scenarios is likely to have implications on food production, water supply, coastal settlements, forest ecosystems, health, energy security, etc. The adaptive capacity of communities likely to be impacted by climate change is low in developing countries. The efforts made by the UNFCCC and the Kyoto Protocol provisions are clearly inadequate to address the climate change challenge. The most effective way to address climate change is to adopt a sustainable development pathway by shifting to environmentally sustainable technologies and promotion of energy efficiency, renewable energy, forest conservation, reforestation, water conservation, etc. The issue of highest importance to developing countries is reducing the vulnerability of their natural and socio-economic systems to the projected climate change. India and other developing countries will face the challenge of promoting mitigation and adaptation strategies, bearing the cost of such an effort, and its implications for economic development.

India Scenario of Climate Change

Being such a huge country, India exhibits a wide diversity of temperatures; from the freezing cold winters in the Himalayas to the scorching heat of the Thar Desert. The above two regions play a very significant role in controlling the weather of India, making it warmer than to be expected with its latitude. The Himalayas participate in this warming by preventing the cold winds from blowing in, and the Thar desert attracts the summer monsoon winds, which are responsible for making the majority of the monsoon season of India. However, the majority of the regions can be considered climatically tropical.

The India Meteorological Department (IMD) designates four climatologically seasons

Winter, occurring from December to March. The year's coldest months are December and January, when temperatures average around 10–15 °C (50–59 °F) in the northwest; temperatures rise as one proceeds towards the equator, peaking around 20–25 °C (68–77 °F) in mainland India's southeast.

Summer or **pre-monsoon** season, lasting from April to June (April to July in northwestern India). In western and southern regions, the hottest month is April; for northern regions of India, May is the hottest month. Temperatures average around 32–40 °C (90–104 °F) in most of the interior.

Monsoon or **rainy** season, lasting from July to September. The season is dominated by the humid southwest summer monsoon, which slowly sweeps across the country beginning in late May or early June. Monsoon rains begin to recede from North India at the beginning of October. South India typically receives more rainfall.

Post-monsoon or **autumn** season, lasting from October to November. In the northwest of India, October and November are usually cloudless. Tamil Nadu receives most of its annual precipitation in the northeast monsoon season.

Top 10 Natural Disasters in the History of India

Despite the fact that humans have made tremendous progress in various aspects in terms of technological growths, yet there is one area where they have not been able to surpass and that is the supremacy of Nature. Nature has always proved much more powerful than the human race, even though there have been lot of technological and scientific advancements and achievements. In spite of development in weather forecast techniques, disasters at many times cannot be prevented. In today's age, the natural calamities in the form of floods, tsunamis, famines, cyclones, earthquakes are mainly due to global warming.

Volume : 5 | Issue : 8 | August 2016 • ISSN No 2277 - 8179 | IF : 3.508 | IC Value : 69.48

Year	Place	Effects of Climate Disasters
2014	Kashmir Floods	• Areas affected: Srinagar, Bandipur, Rajouri etc. • Death toll: 500 plus
2013	Uttara-khand Flash Floods	• Areas affected: Gobindghat, Kedar Dome, Rudraprayag district, Uttara-khand, Himachal Pradesh, Western Nepal • Death Toll: 5000 plus
2004	The Indian Ocean Tsunami	• Areas affected: Parts of southern India and Andaman Nicobar Islands, Sri Lanka, Indonesia etc. • Death toll: 2 lakh plus
2001	Gujarat Earth-quake	• Areas affected: Bhuj, Ahmedabad, Gandhinagar, Kutch, Surat, Surendrana-gar district, Rajkot district, Jamnagar and Jodia • Death toll: 20,000 plus
1999	Odisha Super Cyclone	• Areas affected: The coastal districts of Bhadrak, Kendrapara, Balasore, Jagatsin-ghpur, Puri, Ganjam etc. • Death toll: 10,000 plus
1993	Latur Earth-quake	• Areas affected: Districts of Latur and Osmanabad • Death toll: 20,000 plus
1876-1878	The Great Famine	• Areas affected: Madras, Mysore, Hy-derabad, and Bombay • Death toll: 3 crore
1839	Coringa Cyclone	• Areas affected: Coringa district • Death toll: 3.2 lakh people
1737	Calcutta Cyclone	• Areas affected: Low-lying areas of Calcutta • Death toll: 3 lakh plus
1770, 1943	The Bengal Famine	• Areas affected: Bengal, Odhisa, Bihar • Death toll: 1 crore

Solutions for the climate in India

India had adopted the National Environment Policy 2006 which provides for several measures and policy initiatives to create awareness about climate change and help capacity building for taking adaptation measures. On June 30, 2008 India unveiled its National Action Plan on Climate Change with a view to lay down the priorities and future actions of the government for addressing climate change and updating India's national programme relevant to addressing climate change. Eight national missions (solar mission, energy efficiency, sustainable habitat, water, Himalayan ecosystem, Green India, eco-green agriculture and knowledge) have been specifically outlined to simultaneously advance India's development and climate change-related objectives of adaptation and GHG mitigation (Green House Gas). India is committed to a path of sustainable development.

National Missions

National Solar Mission: The NAPCC aims to promote the development and use of solar energy for power generation and other uses with the ultimate objective of making solar competitive with fossil-based energy options.

National Mission for Enhanced Energy Efficiency: Current initiatives are expected to yield savings of 10,000 MW by 2012. Building on the Energy Conservation Act 2001

National Mission on Sustainable Habitat: To promote energy efficiency as a core component of urban planning

National Water Mission: With water scarcity projected to worsen as a result of climate change, the plan sets a goal of a 20% improvement in water use efficiency through pricing and other measures.

National Mission for Sustaining the Himalayan Ecosystem: The plan aims to conserve biodiversity, forest cover, and other ecological values in the Himalayan region, where glaciers that are a major source of India's water supply are projected to recede as a result of global warming.

National Mission for a "Green India": Goals include the afforestation of 6 million hectares of degraded forest lands and expanding forest cover from 23% to 33% of India's territory.

National Mission for Sustainable Agriculture: The plan aims to support climate adaptation in agriculture through the development of climate-resilient crops, expansion of weather insurance mechanisms, and agricultural practices.

National Mission on Strategic Knowledge for Climate Change: To gain a better understanding of climate science, impacts and challenges, the plan envisions a new Climate Science Research Fund, improved climate modeling, and increased international collaboration. It also encourages private sector initiatives to develop adaptation and mitigation technologies through venture capital funds.

Conclusion

The climate change would increase the number of people suffering from death, disease and injury from heat waves, floods, storms and droughts. Floods are low-probability, high-impact events that can overwhelm physical infrastructure and human communities. Major storm and flood disasters have occurred in the last two decades.

India had adopted the National Environment Policy 2006 which provides for several measures and policy initiatives to create awareness about climate change and help capacity building for taking adaptation measures. To effectively address the concerns of climate change and to follow the path of sustainable development, the global energy diet, which is fossil fuels centric, must be changed. Climate change is the defining issue of our times. It should be addressed by all countries with a shared perspective, free from narrow and myopic considerations. We urgently need a new economic paradigm, which is global, inclusive, cooperative, environmentally sensitive and, above all, scientific. Sustainable development based on the poor and optimal harnessing of scarce resources of water, air, energy, land, and bio-diversity will have to be sustained through more cooperative endeavours. Then alone we could make some headway in saving our lone planet from the brink of climate disasters.

References:

[1] https://en.wikipedia.org/wiki/Climate_of_India *Author:* WikiMedia, MediaWiki, *Pub:* Wikipedia, *Year: 2016*

[2] https://unfccc.int/resource/docs/publications/impacts.pdfAuthor: martin Luther, Pub: UNFCCC, Year: 2007

[3] http://www.undp.org/content/dam/india/docs/undp_climate_change.pdf Author: Sunita Narain, Pub: UNDP India, Year: 2009

[4] http://www.mapsofindia.com/my-india/travel/top-10-natural-disasters-in-the-history-of-india *Author: Rumani Saikia Phukan, Pub: Compare Infobase Limited, Year: 2015*

[5] http://www.c2es.org/international/key-country-policies/india/climate-plan-summary *Author: N AP CC Government of India, Pub: Center for Climate and Energy Solutions, Year: 2008*

[6] http://www.mainstreamweekly.net/article6130.html *Author*: Sharat Poornima, *Pub: Mainstream Weekly, Year: 2015*