

## Linkage of climate change, environment and sustainability (With special reference to India)

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### Abstract

Climate change poses an immediate threat to national security, calling on the military to incorporate climate change into broader strategic thinking about high-risk regions. Climate change is an ever-increasingly presence in our daily lives, and as such, resilience and mitigation measures addressing its consequences need to be incorporated into future strategies. The study focuses to establish linkage between the climate change impacts and implications in the lives of ordinary people. As greenhouse gas emissions blanket the Earth, they trap the sun's heat. This leads to global warming and climate change. The world is now warming faster than at any point in recorded history. Warmer temperatures over time are changing weather patterns and disrupting the usual balance of nature. This poses many risks to human beings and all other forms of life on Earth. As a result of global warming, the type, frequency and intensity of extreme events like tropical cyclones, floods, droughts and heavy precipitation events, are expected to rise even with relatively small average temperature increases. Climate change needs a global framework for international cooperation. Adaptation action is a vital part of this framework. Actions to enable adaptation to climate change pose opportunities to promote sustainable development. Developing countries needs resources in order to promote these actions. A successful framework must directly involve assistance for adaptation in developing countries and least developed countries, given that they will disproportionately bear the brunt of climate change impacts.

**Keywords:** Climate change, mitigation measures, global warming, sustainable, development, adaptation action

### Introduction

India's average temperature has risen by around 0.23°C during 2001-2010. The decades of this century, 2001-2010, have been recorded as the hottest decades ever. In the 2010-2016 period, 2010 and 2016 were among the warmest years on record for India, with 2016 being the warmest year during this period. However, the trends vary depending on the region's other situation. According to the India Meteorological Department (IMD), the frequency of heat waves and severe heat waves has increased in aggregate across India, while large areas depict no clear trend since the 1970s.

This rise in temperature is caused mainly due to greenhouse gases (GHG) induced warming leading to climate change. As awareness of the civilization's impact on the environment increases, people are becoming more aware than to accept clean lifestyles and caring environment. Individual actions impact our environment footprint. The way to move towards greener living is through the 3 Rs of waste management - Reduce, Reuse, Recycle. These are the three essential components of environmentally-responsible consumer behaviour. The goal of the 3 Rs is to educate people on how to prevent unnecessary waste and to limit the consumption of non-renewable resources. Climate change poses an immediate threat to national security, calling on the military to incorporate climate change into broader strategic thinking about high-risk regions. Climate change is an ever-increasingly presence in our daily lives, and as such, resilience and mitigation measures addressing its consequences need to be incorporated into future strategies.

### Objectives

- To establish linkage between the climate change impacts and implications in the lives of ordinary people
- To examine the impacts of climate change on human development

- To integrate the climate change and sustainable development
- To contribute to the collective community effort to mitigate climate change and its worsen effects

### Climate Change

Natural disasters, environmental degradation and biodiversity loss can devastate agriculture, cutting children off from nutritious foods and safe water. They can lead to dangerous environments and disease outbreaks and destroy the safe shelter; quality health care and education systems children need to survive and thrive. Climate change threatens the lives and livelihoods of billions of people. Natural disasters, environmental degradation and extreme weather patterns disrupt harvests, deplete fisheries, erode livelihoods and spur infectious diseases. The climate change knowledge network was developed to make the updated issues available. Fossil fuels – coal, oil and gas – are by far the largest contributor to global climate change, accounting for over 75 per cent of global greenhouse gas emissions and nearly 90 per cent of all carbon dioxide emissions.

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### Reviews

While to provide about carbon emission reduction the greenhouse reduction trading pilot was developed. The

Green House Gas Protocol Programme is an international alliance of corporate organizations. That functions under umbrella of World Business Council for sustainable development.

- Can contribute to food insecurity and increase the frequency and intensity of extreme weather events
- Can lead to massive displacement and migration and conflict over food, water and arable land and border disputes.
- Ultimately, reflects a lack of security in the daily lives of people. As climate change impacts worsen and temperatures rise, the threats to security have the potential to become more projecting.

### **Environment**

Cutting down forests to create farms causes emissions, since trees, when they are cut, release the carbon they have been storing. Each year approximately 12 million hectares of forest are destroyed. Since forests absorb carbon dioxide, destroying them also limits nature's ability to keep emissions out of the atmosphere. Deforestation, together with agriculture and other land use changes, is responsible for roughly a quarter of global greenhouse gas emissions.

As humanitarian action falls short of addressing the climate crisis, children and young people are bearing the brunt. They make up half of the world's population, but are least responsible for the greenhouse gas emissions, deforestation and other hazardous practices harming environment.

- Strengthen the resilience and continuity of social services to climate and environmental impacts, including humanitarian action in response to disasters.
- This will enhance the air quality and improving and protecting utilization of natural resources.
- Supports the renewable power industries growth
- Recycling and making alternative use of waste products and creating positive by products
- Reducing effluents and noise pollution
- Plantation of tree and forest-based activities
- Providing clean drinking water
- Improvement in sanitation related activities

### **Sustainability**

For capturing the goal of sustainable development, control of climate change is vital. Developing countries are the most vulnerable to climate change impacts because they have fewer resources to adapt: socially, technologically and financially. Climate change is anticipated to have far reached effects on the sustainable development of developing countries like India. 21<sup>st</sup> century may have more recovery schemes to be more clean, green and safe.

These climate positive actions to countries may be suggested for rebuilding the economies –

- Green transition
- Green jobs and sustainable and inclusive growth
- Green economy
- Investment in sustainable solutions
- Confronting all climate risks
- Cooperation among countries planning and development

### **Linkage & Impacts**

As greenhouse gas concentrations rise, so does the global surface temperature. Since the 1980s, each decade has been warmer than the previous one. Nearly all land areas are

seeing more hot days and heat waves. The ocean soaks up most of the heat from global warming. The rate at which the ocean is warming strongly increased over the past two decades. As the ocean warms, its volume increases since water expands as it gets warmer. Adapting to climate change will entail adjustments and changes at every level – from community to national and international. Communities must build their resilience, including adopting appropriate technologies while making the most of traditional knowledge and diversifying their livelihoods to cope with current and future climate stress. Planning for climate change must involve consideration of climate related risks including those which have a slow onset, such as changes in temperature and precipitation leading to agricultural losses and drought and biodiversity losses, and those which happen more suddenly such as tropical storms and floods. It is now recognized that climate related risks are already happening and past and current experiences in dealing with climate variability and extreme events provide valuable information for reducing vulnerability and enhancing resilience to future climate related adverse impacts.

According to the India Meteorological Department (IMD), a heat wave is considered if the maximum temperature of a station reaches at least 40 degrees Celsius or more for Plains and at least 30 degrees Celsius or more for Hilly regions. However, it also notes the temperatures at which heat waves are declared differ from place to place based on the temperature climatology of the region.

Climate change is expected to have major health impacts in India-increasing malnutrition and related health disorders such as child stunting - with the poor likely to be affected most severely. Child stunting is projected to increase by 35% by 2050 compared to a scenario without climate change.

The heatwave added pressure to the many challenges faced by society in camps and conflict zones, such as water shortages, difficulties to access medicines and poor living conditions for the large population that lives in makeshift tents. With limited institutional support and options to adapt, the heat increases health risks and hardship.

Heat impacts certain groups like construction workers, transport drivers, farmers, fishermen etc. disproportionately. It both impacts their livelihoods and causes a reduction in income, and results in personal health risks.

Existing heatwave action plans and strategies are challenged by rapidly growing cities, increase in informal settlements and exposed populations, reduction in green spaces and rise in energy demands.

### **Conclusion**

Generating electricity and heat by burning fossil fuels causes a large chunk of global emissions. Most electricity is still generated by burning coal, oil or gas, which produces carbon dioxide and nitrous oxide – powerful greenhouse gases that blanket the Earth and trap the sun's heat. Manufacturing and industry produce emissions, mostly from burning fossil fuels to produce energy for making things like cement, iron, steel, electronics, plastics, clothes and other goods. Mining and other industrial processes also release gases, as does the construction industry. Climate change is a catalyst for rising costs for human health, the global economy and the Earth's life support system. As climate change increases the potential for climate related risk, it is also vital that risk management is incorporated into

adaptation planning at different stages, and that climate change is incorporated into disaster and risk management activities. Developing countries are already suffering from the impacts of climate change and are the most vulnerable to future change. Climate change needs a global framework for international cooperation. Adaptation action is a vital part of this framework. Actions to enable adaptation to climate change pose opportunities to promote sustainable development. Developing countries need resources in order to promote these actions. A successful framework must directly involve assistance for adaptation in developing countries and least developed countries, given that they will disproportionately bear the brunt of climate change impacts.

## References

1. Bhutan, National Adaptation Programme of Action, The United Nations Framework Convention on Climate Change, 2006.
2. <http://carbonwatch.com>
3. [www.cseindia.org](http://www.cseindia.org)
4. Dhar, S. Carbon Emission Trading in India: A Study on Accounting and Disclosure Practices, Chartered Accountant, 2012:61(6):937-943
5. [www.downtoearth.org.in](http://www.downtoearth.org.in)
7. Haines A and Patz J A. Health effects of climate change, 2004:291(1):99 – 103.
8. IPCC. Special Report on Emissions Scenarios. Intergovernmental Panel on Climate Change Secretariat, 2000. Geneva, Switzerland.
9. IPCC. Fourth Assessment Report. Intergovernmental Panel on Climate Change Secretariat, Geneva, Switzerland, 2007.
10. Kashif Abbass, Mohammad Zeeshan Qasim, Huaming Song, Munsir Murshed, Haide Mahmood & Ijaz Younis, *et al.* A Review of the Global Climate Change Impacts, Adaptation Sustainable Mitigation Measures, Environmental Pollution and Research, 2022:29:42539-42559
11. Krishnasheety S, Dattatreya S, Carbon Finance and India, Research Journal of
12. Commerce & Behavioral Science, 2013, 2(8). <http://www.theinternationaljournal.org>
13. Patz J A. Global warming. Health impacts may be abrupt as well as long term, 2004,
14. BMJ. 328:1269 –1270
15. <http://planning.commission.nic.in>
16. <https://unfccc.int/resource/docs/publications/impacts.pdf>
17. UNDP. Human Development Report, 2006. Beyond Scarcity: Power, poverty and the global water crisis, 2006, United Nations Development Programme
18. <https://www.un.org/sustainabledevelopment/climate-change>
19. WHO. The World Health Report 2003 – shaping the future. 2004, World Health Organisation, Geneva
20. <https://www.worldweatherattribution.org>