

# Analysis of Socio-Economic Effects of Global Climatic Change and Environmental Impacts

Dr.Kavashkar Sharma, Dr. Diwakar Singh  
Assistant Professor, Department of Earth Science,  
Assam University, Assam.

## Abstract

Nowadays, Climate change is probably predicted to fetch about major change in freshwater accessibility, the dynamic capacity of soils, and in designs of human settlement. Similarly, climate change is closely related to human health either directly or indirectly. On the other hand, considerable hesitations exist with regard to the extent and geographical distribution of these changes. Expecting circumstances for how climate-related environmental change may affect human societies and political systems essentially includes an even higher degree of ambiguity. Humanities have a long record of familiarizing to climate hazards and, climate fluctuations. Domestic asset assortments and livelihood choices are shaped by the requirement to manage climatic risks, exclusively in rural areas and for low income households. Similarly, disaggregated study exposed that demographic and conservational variables have a very thoughtful effect on the threat of civil encounter and hence peace. In outer layer, there may be multi-layered influence of climate change in its totality. Further, different visions, disputes and mitigation processes are discoursed principally in the consequence of Indians. In this route, The “National Action Plan on Climate Change” was established by Indian Prime Minister which incorporates a broad and widespread series of measures, and focuses on eight missions, which will be followed as key constituents of the approach for sustainable development. These include missions on solar energy, improved energy efficiency, sustainable environment, preserving water, sustaining the Himalayan ecosystem, generating a “Green India,” sustainable agriculture and, lastly, creating a planned knowledge platform for climate change. To conclude that the different methods concerning to green, eco-friendly and sustainable technology has been deliberated so as to alleviate the influence of global environmental damage initiating from increased industrialization and hence applicably address this global disaster which is being the basisreason of North-South disputes and global environmental politics. The idea of sustainable development was accepted by the World Commission on Environment and Development, and there is contract that sustainable development comprises a widespread and combined method to economic, social, and environmental processes.

**Keywords:** Climate change, sustainable development, civil conflict, Kyoto Protocol, green conservation, eco-friendly technology.

## I. INTRODUCTION

Climate change is a fact of life. It is essential to act instantly if we are to escape an irreversible build-up of greenhouse gases and global warming at a hypothetically huge cost to the economy and society worldwide. Global climate change is of major concern at global scale in present era of science and technology. In the present era of Science and Technology, due to the prompt pace of industrialization and urbanization, quantity of natural resources as well as quality of global environment has been changed completely. Economic globalization is the preferred target of many of the critics of globalization. It is different from other aspects of globalization, such as cultural globalization and communications. The importance of social, political, and cultural factors is only now getting more recognition. Integration is essential in order to articulate development trajectories that are sustainable, containing addressing the climate change problem. There is developing accent in the literature on the two way association between climate change mitigation and sustainable development. The association may not always be communally advantageous. In most illustrations, mitigation can have auxiliary remunerations or co-benefits that subsidize to other sustainable development goals. Development that is sustainable in many other compliments can produce conditions in which mitigation can be effectually chased. Even though still in initial stages, there is growing use of pointers to manage and measure the sustainability of development at the macro and sectorial levels. Construction of resolutions about sustainable development and climate change alleviation is no longer the sole purview of governments. There is aggregate recognition in the literature of a shift to a more inclusive model of governance, which embraces the assistances of various levels of government, private sector, non-governmental actors, and civil society.

## II. IMPACTS OF CLIMATIC CHANGE

Recent evidence and expectations specify that climate changes are hastening and will lead to wide-ranging alterations in climate variables. There will be variations in the mean and variance of rainfall

and temperature, extreme weather events, food and agriculture production and prices, water availability and access, nutrition and health status. The most adverse impacts are predicted in the developing world because of geographic exposure, confidence on climate sensitive sectors, low profits, and fragile adaptive capacity. Socio-economic influences, though commonly not well assumed, are likely to be thoughtful and will impress humans through a range of direct and indirect pathways. Climate proceedings can result in permanent losses of human and physical capital and may cause poverty traps. Climate change is familiarly related with human health. The World Health Organisation evaluates that the warming and precipitation trends due to anthropogenic climate change of the past 30 years previously privilege over 150,000 lives yearly.

Many established human diseases are associated to climate fluctuations, from cardiovascular mortality and respiratory illnesses due to heat waves, to change the transmission of infectious diseases and malnutrition from crop failures. The most susceptible households are those with possessions and livelihoods unprotected and sensitive to climatic threats and who have weak risk management capacity. While all households are showing to risks associated with climate change and could hypothetically be condensed susceptible, the poorer households are the most at risk. This is because their possessions and livelihoods tend to be highly unprotected and sensitive to the direct and indirect hazards connected with climate change, and because they lack access to formal and informal risk management engagements. Publics that depend on cultivation, livestock, and fisheries would be at danger. Within family unit, effects will sometimes fall unreasonably on vulnerable personalities such as children, women, elderly, and disabled. Developed management of climatic unpredictability becomes all the more significant as climate changes lower the incomes to possessions and livings and increases precariousness.

### III. DISPUTES & MITIGATING STEPS OF CLIMATE CHANGES: INDIAN PERSPECTIVE

Last few years, the most topics in the journals, newspapers and magazines are Global warming and climate change. It covered the way to alleviate the impact of global climate change worldwide. The National Action Plan comprehends a comprehensive and widespread range of measures, and emphases on eight missions, which will be followed as key constituents of the approach for sustainable development. These comprise missions on solar energy, improved energy efficiency, sustainable habitat, preserving water, sustaining the Himalayan ecosystem, producing a Green India, ecological agriculture and, lastly, creating a strategic knowledge

platform for climate change. The operation for sustaining the Himalayan ecosystem will include measures for sustaining and safeguarding the Himalayan glacier and mountain ecosystem as it is the source of key perennial rivers. The Green India mission will enhance ecosystem services including carbon sinks, to be called Green India. The sustainable agriculture mission intends making agriculture more resilient to climate variations that are responsible for the change by recognizing and emerging innovative varieties of crops that are thermal-resistant and accomplished of enduring extreme weather. The mission on strategic knowledge will identify challenges and develop responses to climate change. The solar mission will be launched to significantly increase the share of solar power in the total energy mix while recognising the need for expanding the scope of other renewable and non-fossil options such as nuclear energy, wind energy and biomass. Under the national mission for enhanced energy efficiency, four new initiatives including a market-based mechanism to improve the cost-effectiveness of improvements will be put in place. With solid waste proving a major challenge, the action plan stresses recycling material and urban waste management, and developing technology to produce power from waste. The mission on sustainable habitats will include a major research and development programme, focussing on biochemical conversion, waste water use, sewage utilisation and recycling options wherever possible. The water mission will develop a framework to optimise water use through regulatory mechanisms.

### IV. SCHEMES TO CONFLICT GLOBAL ENVIRONMENTAL REVOLUTION

Based on scale, magnitude, and irreversible, global climate change constitutes a critical security issue. There is a need for action by all and a need for action now. Delay in acting on climate change now will mean that the costs of addressing it later, according to stern report, will be significantly greater. United Nations Industrial Development Organisation (UNIDO) made an alarming note that climate change will impact India more due to heavy dependence on fossil fuel and it will cause severe health hazards particularly more spread of vector borne diseases as well as shortage of fresh water will aggravate. UNIDO also predicted that greenhouse emission will soar if India sustains 8% growth rate. There are many initiatives that India can take to reduce carbon emission without sacrificing its priority of economic development. They are described as follows as:

1. Entirely all the novel coal generators must use super-critical boilers in the size range of about 800 MW, which can attain an efficiency of about 40%.

2. An additional improvement in efficiency is promising when the combined coal gasification technology is offered.
3. India should work together with foreign countries in the elimination of carbon dioxide from the flue gases of coal power station.
4. India must contribute extreme importance to develop the still objectively large unexploited hydrogen potential in the north-west, north and north east.
5. The most significant and useful non-carbon energy is nuclear power which can be given more prominence. Indo-US nuclear deal may be an essential step in this concern.
6. Solar energy in India provides immense option as energy source which should be given emphasis.
7. Energy efficiency will have to be achieved in Industry, transport, domestic appliances and agriculture. CFL and other electric appliances should be used by the society.
8. India must adopt, as a matter of deliberate choice, decentralised and regional development, which would minimise long distance transport of food articles, consumer goods, minerals, and industry items.
9. Responsible lifestyle of society is particularly important.
10. Healthier policy and prospectus preparation or Environmental Impact Assessment is a weapon which can be followed in the state of Orissa. This Environmental Impact Assessment should reach to the remote area where we can make them aware of EIA system.
11. Environmental Education may play a pivotal role in environmental management because self-analysis is a great way to learn. The Centre for Science and Environment's green schools audit their consumption of water, land, air, and energy. This appreciable step promises to instil mindfulness in human relations with nature.
12. Kyoto protocol should be enforced effectively in order to have uniform regulation of industrial emission. The world is on track to meet its Kyoto targets for greenhouse gases. But unfortunately the drop has little to do with climate policies
13. Although climate change is something which affects us all and which we need to address together in spite of debate between developed and developing countries
14. Industries should also take initiatives in the direction of climate change however, the generally failed to take concrete action. While a number of industries expect to contribute to mitigating their impact on climate change, only few seem to be approaching it in a structured and measurable manner.
15. R.K. Pachauri, Nobel laureate and Chairman, I.P.C.C. emphasized that role of Youngsters to spread climate change message while honouring the 60 Indian and 5 Sri Lankan youngsters
16. Also media may play an important role to spread the message of climate change among wide masses of people e.g. very successful film Al Gore's An Inconvenient Truth and the other film Age as Stupid which attacks consumerism, exploitation and human tendency to ignore unpleasant realities.
17. One recent UN report emphasized that fighting global warming is a moral imperative and the urgency of the global financial crisis is no excuse for global climate change.
18. Long term energy and resource security are increasingly becoming the focus of political and economic debate worldwide. Conflicts over energy and water will shape the decades to come and an efficient use of resources will become one of the dominant issues and an important strategy of green growth.
19. Plant based technologies or phyto-technologies should be promoted e.g. green belt development for air & vehicular pollution control (Phytoremediation technology). These technologies are particularly effective in abatement of aquatic industrial pollution.
20. Industrial ecology (IE) is an interdisciplinary field that focuses on the sustainable combination of environment, economy and technology. The central idea is the analogy between natural and socio-technical systems. It is the shifting of industrial process from linear (open loop) systems, in which resource and capital investments move through the system to become waste, to a closed loop system where wastes become inputs for new processes.
21. Cleaner production is a preventive, company-specific environmental protection initiative. It is intended to minimize waste and emissions and maximize product output. By analysing the flow of materials and energy in a company, one tries to identify options to minimize waste and emissions out of industrial processes through source reduction strategies.
22. Pollution prevention describes activities that reduce the amount of pollution generated by a

process, whether it is consumer consumption, driving, or industrial production. In contrast to most pollution control strategies, which seek to manage a pollutant after it is formed and reduce its impact upon the environment, the pollution prevention approach seeks to increase the efficiency of a process, thereby reducing the amount of pollution generated at its source.

23. The Ministry of Environment & Forests is implementing the National Plan for pollution control in the country. Abatement of industrial pollution is one of the major thrust areas of this plan. According to the latest data collected by the Central Pollution Control Board (CPCB), out of the 1551 large and medium industries in 17 categories of highly polluting industries, 1266 industries have installed the requisite pollution control facilities for complying with stipulated environmental standards. 130 industries have closed down and 155 industries are in the process of installing pollution control facilities.

24. Attaining Eco-efficiency in Industrial Sector: The term eco-efficiency was coined by the World Business Council for Sustainable Development in "Changing Course". It is based on the concept of creating more goods and services while using fewer resources and creating less waste and pollution.

25. An eco-industrial park (EIP) is an industrial park in which businesses cooperate with each other and with the local community in an attempt to reduce waste and pollution, efficiently share resources (such as information, materials, water, energy, infrastructure, and natural resources), and help achieve sustainable development, with the intention of increasing economic gains and improving environmental quality.

26. Industrial symbiosis is a type of eco-industrial development which is an application of the concept of industrial ecology. Industrial ecology is a relatively new field that is based on the ideology of nature. It claims that industrial ecosystem may behave similar to the natural ecosystem where everything gets recycled.

The process of varying development paths involves multiple actors, at multiple scales. The parts of different actors and joint actions in changing growth pathways need further research, predominantly the private sector and civil society. A key question turns around the complex process of decision-making, concepts of which need to be applied to sustainable development and mitigation. While future research must focus on multiple sectors, actors and scales, a key area of exploration will remain the role for international agreements. Integrating the role for international coordination mechanisms with reorganized policy approaches is

stimulating and necessitates further evaluation. An area of specific significance in this circumstance is international agreements that are not detailed to climate change but whose structure and implementation can affect growth paths. Future investigation will endure to inspect the implications of climate change mitigation for sustainable development. Appreciative of the sustainable development consequences in each of many sectors is developing, but further exploration will be wanted for key sectors and where least information is available. Synergies beyond those in air pollution require more attention, including water, soil management; forest management and others.

## V. CONCLUSION

A wide-ranging policy on anthropogenic climate change would necessitate addressing of major issues in their entirety and also succeeding an integrated approach. The paper is responsible for an analysis of the existing evidence concerning the influences of climate change on household level welfare as measured either by changes in poverty, in food security, in the value of farm possessions in income, consumption or health outcomes. From this review, the effects, even though they vary, are usually expected to undermine further the welfare position of poorer farmers and net buyers of food both in rural and urban areas. It is a key message of the present work that building knowledge on the expected impacts of climate change at the household level has to be systematically promoted. Nevertheless, the obligations for governments and the international development community, in partnership with the private sector, to adopt macro-level coping strategies should not be neglected. These top-down responses are absolutely necessary to enhance the capacity to confront the challenges that result from climate change, demographic trends and the comprehensive use of natural resources, and accomplish with what currently looks like the end of productivity growth that may be approaching.

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