

# Climate Change Policy, Federalism and Developmental Process in India

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## ABSTRACT

India is a federal polity which address issues of any nature through established federal mechanisms prescribed by the Constitution of India. Distribution of power between the Centre and states has been provided in the Constitution of India for the smooth running of the Government functions and policy. In order to legislate on environmental matters, the Indian parliament has relied upon two other constitutional provisions. These provisions are Article 253 and Article 51(c). Article 253 empowers parliament to make laws for implementing any treaty, agreement or convention with any other country/countries or for implementing any decision made at any international conference, association or other body. Article 51(c) mandates that the State shall endeavor to foster respect for international law and treaty obligations. There is a clear understanding in the context of Indian federalism that the entire discourse of federalism is heavily influenced by political considerations and policy necessities.

The propose study broadly aims to assess climate change as an overarching policy issue in Indian federal system and how such an emerging issues are being debated and tackled in various institutional and policy frameworks in the country since 2008 with the unveiling of first ever the National Action Plan on Climate Change. The study further seeks to analyze the role of the constituent units of federalism, i.e., the States in India, in mitigating the challenges of climate change with the roles assigned under the constitutional framework and also within new policy parameters enacted by the Centre to centralize climate change governance in the country. Climate Change as a major public policy issue has moved to the top of world's governance agenda. Due to its severity and wide implications, it is now assumed that the issue need be dealt with multipronged approach and mainstreaming in nation's developmental agenda. The mitigation and adaptation strategies should be integrated in developmental frameworks at national, sub-national and local levels. Decentralization of authorities in planning, resources management, and implementation are considered as mainstay of policy strategies in tackling climate change. The practice of federalism in India provides the scope for such integration of climate concerns in national, sub-national and local levels.

The National Action Plan on Climate Change (NAPCC) in its Eight (8) national missions has identified measures for the States which need to be implemented through their State Specific Action Plans on Climate Change (SAPCCs) in order to promote India's development objectives. The above backdrop draws conclusion that Climate Change as an overarching policy issue is going to define the contours of federalism in the country. While the concept of 'environment' is always remain as subsidiary power with the Centre and showed centralized tendency of governance, such centralization due to climate change has further challenged the federal governance of the country.

**Keywords:** Climate Change, Indian Federalism, Decentralization, National Action Plan on Climate Change.

## 1. INTRODUCTION

It is to be noted that climate change as an issue is not limited to a certain area or bounded by geographical locations. Hence, the impact is global. This makes it mandatory for all the nations-whether major contributors to climate change or not, to take steps to control the extent of climate change by reducing or at least limiting their carbon emissions to the current levels. India is a minor contributor to the global carbon emissions at around 3-4% of global levels. But it still needs to take steps to limit its emissions since they are on an upward trend due to the direct relationship between economic growth and greenhouse gas emissions. India is growing at very fast pace, but still needs to go a long way in solving its economic and social issues. Looking at its developmental aspects India need to go a long way with the expansion of rapid industrialization and urbanization. As per the recent statistical figures

more than a third of the population lives below the poverty line. Another concern is economic disparity between the rich and poor which increases rapidly. There is a strong need for the development of the country to solve its major problems of poverty, unemployment and illiteracy which are the basic elements of human development. The only way forward towards a developed nation high on the human development index is through massive economic growth which can only be achieved through industrialization.

The industrialization process mandates an increase in the greenhouse gas emissions. This would lead to a conflict between the goals of mitigating climate change and achieving economic development of the country. Thus, India has to find a fine balance between economic growth and reduction in emissions. The debate is whether these climate mitigation policies impact the infrastructure sector which is the main driver of economic growth in the country.

## 2. CLIMATE CHANGE AND ITS IMPACT

Climate change is one of the most debatable and challenges topic in this globalized era of 21<sup>st</sup> century. It is one of the key environmental challenges facing the world today. India along with other countries of the region are facing several problems. (Climate change is associated with various adverse impacts on agriculture, water resources, forests and biodiversity, health and coastal management (UNFCCC-2007)<sup>1</sup>. The Intergovernmental Panel on Climate Change (IPCC) was established in 1988, by the World Meteorological Organization (WMO) and the United Nations Environment Program (UNEP), to assess scientific information on climate change, as well as its environmental and socioeconomic impacts, and to formulate response strategies. Climate change is defined by the IPCC as any change in climate over time, whether due to natural variability or as a result of human activity (IPCC 2007)<sup>2</sup>.

Climate change refers to the heating up of the earth's atmosphere due to an increase in the level of greenhouse gases. Due to anthropogenic or human induced factors there has been a sharp increase in the level of greenhouse gases which leads to an increase in the temperature of the earth's surface causing various ecological imbalances in the world. The problem of climate change had its major emergence in the industrial revolution.<sup>3</sup> All the activities in the industrialization process necessitate an increase in carbon emissions. Thus, the development processes of a country as well as its carbon emissions go hand-in-hand. The problems of climate change faced by the world today are a cause of the rapid industrialization that took place in the last century.<sup>4</sup> Thus, the developed world is the major culprit of this crime which led to the exploitation of our atmosphere.<sup>5</sup> But, the developing countries more particularly India which have just recently begun their journey to the destination of development, are made to shoulder the responsibility of mitigating the adverse effects of climate change by reduction in the carbon emissions levels emitted by them. This is a cause of major hindrance in the development process of a country like India and can be seen as unfair on the part of the developed nations to slow down the pace of development in such nations at such a crucial stage. Hence, India need to maintain a balance between the reductions of emission level vs development. The entire discussions is how climate change as a public policy issue is located and addressed by its federal units i.e the states in India after the first ever national policy document National Action Plan on Climate Change (NAPCC). Again the study takes into consideration of one of the highlighted issues of developmental aspects and reduction of carbon emissions with an alternatives as to check the carbon emissions and climate change.

## 3. CLIMATE CHANGE POLICY AND INDIAN FEDERALISM: THE INSTITUTIONAL SET-UP

India's National Action Plan on Climate Change (NAPCC, 2008) maintains categorically that "Climate Change may alter the distribution and quality of India's natural resources and adversely affect the livelihood of its people."<sup>6</sup> With an economy closely tied to its natural resources base and climate sensitive sectors such as agriculture, water and

<sup>1</sup> United Nations Framework Convention on Climate Change, 2007, climate change: impacts, vulnerabilities and adaptation in developing countries.

<sup>2</sup> [https://www.ipcc.ch/organization/organization\\_history.shtml](https://www.ipcc.ch/organization/organization_history.shtml) - Accessed on 13th October'2016

<sup>3</sup> <https://www.epa.gov/climate-change-science/causes-climate-change> -Accessed on 2nd February'2017

<sup>4</sup> Kirti Bharadwaj, Impact of climate change policies on the growth of Indian economy, December, 2010, pp-3-4.

<sup>5</sup> Kirti Bharadwaj, Impact of climate change policies on the growth of Indian economy, December, 2010.

<sup>6</sup> National Action Plan on Climate Change, Government of India, 2008-09.

forestry, the country may face a major threat.”<sup>7</sup> The NAPCC goes on to say that the impacts of climate change could prove particularly severe for the country. With around 72 percent of its population residing in rural areas and dependent on agriculture and allied activities for livelihood, addressing climate change through current public policy and governance architectures outlined under Indian Federalism seems extremely inevitable not only to ensure food security and viable livelihood options for the vast majority of its population, but also for sustaining economic growth in the longer period of time considering the climate centrality of the region.

India is an energy starved country and with more than 70-80% of its energy requirements linked with international markets volatilities, challenging climate change through mitigation efforts would be further weakened without synchronization of national and sub-national policy efforts.<sup>8</sup> Besides, climate change will slower down the country’s large scale policy interventions on reducing poverty in the country, a challenge that need to be deliberated in the larger perspective of marginalized communities.<sup>9</sup>

In order to respond effectively to the challenge of the climate change, the Government has created an Advisory council on climate change chaired by the Prime Minister. The council has broad based representation from the key stake-holders including government, industry and civil society and sets out broad directions for the national actions in respect of climate change. To carry out the NAPCC successfully, there are various schemes and programmes implemented by respective ministries through Central Sponsored Schemes (CSS), Central Plans (CS), and Additional Financial Assistance to State Plans Schemes falling under broad national missions of NAPCC. Besides, independent administrative ministries and departments like Ministry of Environment, Forests, and Climate Change (MoEFCC), Ministry of Power (MOP), Ministry of Coal, Ministry of Rural Development, Ministry of Agriculture and Cooperation, Ministry of Urban Development (MoUD) and others are also coming up with policies and programme following the principles of “one-size-fits all” for the federal country.<sup>10</sup> The erstwhile Planning Commission and the Finance Commission in their respective interventions have also asked the states to comply Centre’s policy prescription on mitigating climate change.

The last 2014 general election showed an important milestone where the regional parties played a pivotal role in influencing the formation of government at the Centre. The politics and relations between parties ruling at the Centre and States also influence some environmental perceptions and decisions that are both directly and indirectly linked with the aspect of climate change. Climate change also featured prominently in the manifestos of two leading national parties – BJP and Congress. The stance of both the parties in the election was same –based on the principles of co benefit and common but differentiated responsibility. The third front, too, proposes to take ‘steps to control emission of greenhouse gases’. Parties, in this respect, seem to focus on renewable energy and energy efficient technologies. However, it is felt that the commitment shown by the leading parties towards environment and sustainability is still very low (da Costa 2014).<sup>11</sup>

### **Distribution of Power between Centre and States in certain environmental and climate change domain matters:**

#### **Union/Centre**

- Residuary powers (those not mentioned in either of the lists)
- Atomic energy, mineral resources necessary for its production
- Inter-State Rivers and river valleys
- Ports
- Regulations and development of oilfields, mineral oil resources; petroleum, petroleum products; other inflammable liquids
- Regulation of mines and mineral development

<sup>7</sup> Nayak Nisikant, Panda Gyan Ranjan, A Chapter on the Neo-Liberal Policy Priorities on Food Securities in India, Pointer Publisher, Jaipur, 2015.

<sup>8</sup> United Nations Framework convention on Climate Change, 2009-10.

<sup>9</sup> The Energy and Resources Institute Report, 2007. (Teri study included the costs of air pollution, which is a significant cause of mortality and morbidity in the economical weaker sections of rural and urban India).

<sup>10</sup> Nilima Chandiramani, Environmental Federalism: An Indian View Point and Ministry of Environment, Forest and Climate Change (MoEF), Government of India, 2009.

<sup>11</sup> Da Costa, 2014, Nisikant Nayak and Gyana Ranjan Panda, 2015, the Neo-Liberal policy Priorities on Food Securities in India.

**State**

- Public health and sanitation; hospitals; dispensaries
- Communication (roads, bridges etc. incl. inland waterways)
- Land
- Water
- Agriculture
- Fisheries
- Tax on sale and consumption of electricity

**Concurrent**

- Vagrancy; nomadic and migratory tribes
- Prevention of cruelty to animals
- Forests
- Protection of wild animals and birds
- Electricity<sup>12</sup>

In the above backdrop, there is significant role certain institutions in addressing climate change. The 14th Finance Commission was established by Government of India in January 2013 to make recommendations on distribution of resources between the Union and States. An innovative approach was taken by the Finance Commission in responding to the consideration on balance management of ecology, environment and climate change. The recommendation made by the finance commission includes management of ecology, environment and climate change for sustainable economic growth and development. Important climate policy actors are the Planning Commission and the Financial Commission. They play an important role in India's centralized policy-making, including the central long-term planning performed by the Planning Commission and, in connection to this, the centralized public revenues (Saez 2002). The planning commission's attempt to develop Environmental Performance Index in 2012-13 is an important milestone in this respect as it aims to facilitate allocation of central government funds to the states. The Planning Commission's environmental performance index includes five criteria such as air pollution, water quality, forest cover, waste management and climate change. These criteria supported by certain indicators such as amount of nitrogen oxide, amount of Sulphur oxide, total forest cover, bio-medical and hazardous wastes etc. includes the preparation for the state action plan for climate change.

Looking at the practical aspect it can be said that a clear-cut legislative responsibility for climate protection in India is lacking. The reason for this, as in other countries, is that the constitutional distribution of legislative powers and administrative responsibilities between the Union Government and the states was obviously established long before the emergence of this problem. In such cases with respect to India, the rule is applied that the Centre has the residual power to legislate on any subject not covered in constitution (Saez 2002).

Furthermore, legislative responsibilities for climate policy derive from different legal sources. Primarily climate change is a global concern and, by nature, an international affair, thus subject to international agreements. Due to the international scope of the problem, as well as the constitutional competency of the Union Government for international agreements and treaties, the main responsibility for climate change agreements lies with the Union Government. As is the case in other areas of international affairs, the national legislator is fairly powerful – a noteworthy aspect as regards climate policy, for the legislator may make “any law for the whole or any part of the territory of India for implementing any treaty, agreement or convention with any other country” this even applies to decisions made at any international conferences.”

Gupta 2001 highlights the fact that the Indian constitution provides the federal government (centre) with strong legislative powers and executive rights which have been used largely for environmental legislation: “In fact, two major environmental statutes in India, namely, the Air (Prevention and Control of Pollution) Act of 1981 and the Environment (Protection) Act of 1986, have been enacted under this very provision by citing the United Nations

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<sup>12</sup> Integrating Environment, ecology and climate change concerns in the Indian fiscal federalism framework, Prepared for thirteenth finance commission report, Government of India, The Energy and Research Institute, 2009.

Conference on the Human Environment at Stockholm in 1972”.<sup>13</sup> The major arenas for climate politics, and the formulation of an overall national strategy in India is located at the federal level - no different from other countries in the world. Involved in climate policy are the Prime Minister, a number of federal ministries, the Union parliament, the business sector, civil society actors as well as research institutes. Important climate policy actors are, moreover, the Planning Commission and the Financial Commission.<sup>14</sup> They play an important role in India’s centralized policy-making, including the central long-term planning performed by the Planning Commission and, in connection to this, the centralized public revenues (Saez 2002).

Despite the obvious dominance of the centre, the Indian states might still be regarded as more significant climate policy players; they are equipped with a higher degree of self-rule, as it appears at first glance. Their role results from the wide-ranging legislative powers which have been afforded to them. These powers relate to issue areas relevant to climate policy – indeed, cross-cutting ones -, such as water, land use and agriculture. The states generally exhibit vital importance in the implementation of all policies. They might use these legislative powers despite the fact that “anything on the State List is fair game as far as the centre is concerned” (Gupta 2001: 4) The Indian Constitution lists three groups of legislative issue areas and distinguishes them according to legislative powers. The Union list comprises 97 subjects over which the national legislator has exclusive powers. To mention just a few issue areas relevant to climate policy, amongst them are trade representation, United Nations Organization, agreements and conventions with foreign countries, atomic power, mineral and oil resources and control of industries. The State List comprises 66 issue areas where the state governments have exclusive jurisdiction including public health and sanitation, agriculture, land improvement and water. Energy falls under concurrent legislation involving both levels of government and, as will be shown later, the states are setting up independent incentive systems in the energy sector.<sup>15</sup>

As for the implementation - comparable with Germany - without the state’s implementation efforts, little progress could be achieved in the prioritized areas of the Indian National Climate Action Plan. In Germany without the Bundeslander’s implementation efforts, little progress could have been achieved in the prioritized areas of the German sustainability strategy, such as energy, climate, environmentally-friendly mobility, healthy production and nutrition, innovation, reducing land use and conserving open spaces. This also applies to the implementation of European policies related to climate policy. Summing up the brief institutional analysis, it can be said that, despite the Centre’s strong legislative powers and executive rights, the subnational state level disposes of a number of important legislative powers relevant to climate policy.

### 3.1. Emerging climate policy in India

India is increasingly becoming an important actor in the processes of global climate governance. Despite its low per capita emission, it is the world’s fourth largest economy and fifth largest greenhouse gas (GHG) emitter, accounting for about 5% of global emissions (PEW Center on Global Climate Change 2008). At the same time, India, which is divided into 28 subnational states and 7 union territories, belongs to the group of the most vulnerable countries in the world with regards to climate change (Yohe et al. 2006, Malone/ Brenkert 2008). Challenged in a variety of ways, India is expected to experience widespread damage as a result of climate change (NIC 2009, IPCC 2007). India vulnerability to climate change is demonstrated by: a) the threatening melting of the Himalayan glaciers, b) the increasing scarcity of water as well as c) the changing monsoon patterns and their impact on agriculture and thereby affecting the livelihoods of a major part of the population (IPCC 2007). Hence, climate change is an urgent and visible problem, one that is currently causing heavy social and economic pressures and, concomitantly, calls for climate change adaptation policies. The benefits of taking early action against climate change may outweigh these costs.

In international negotiations, India has repeatedly resisted binding mitigation targets. At an official level, it is often argued that such targets would interfere with the priorities and needs of the country, namely economic growth and poverty mitigation. As a developing country with low per capita emissions, India demands the right to catch-up economically and resists greenhouse gas mitigation obligations that could interfere with this goal. This official

<sup>13</sup> MoEF Data, Government of India, 2009.

<sup>14</sup> Integrating Environment, ecology and climate change concerns in the Indian fiscal federalism framework, Prepared for thirteenth finance commission report, Government of India, The Energy and Research Institute, 2009.

<sup>15</sup> Constitution of India.

governmental stance is shared by a broad domestic advocacy-coalition that has been called the “growth-first stone Waller’s” (Dubash 2009). However other voices from civil society and the scientific community call for an active climate protection policy and involvement in internationally binding targets to cope with climate change (Rai, Victor 2009, Dubash 2009).

Despite the domestic debate and perceived ambiguity in regard to these issues, climate policy in India began unfolding in 2008, as the country has taken significant steps to mitigate greenhouse gas emissions. Since 2008, India has a National Action Plan on Climate Change in place. This plan states national objectives, “national missions”, principles, and it outlines both existing as well as future policies and programs, ones that address climate mitigation and adaptation (Government of India 2008). Worth mentioning is that Indian climate policy includes a range of sector-based mitigation policies (Mehra 2008). For quite some time India has a variety of institutions and programs in place promoting a sustainable energy mix and increased energy conservation (Mehra 2008, Dubash 2009, Pew 2008). These policies are related in part to the historic development of Indian renewable energy and energy conservation policies dating back to the 1970s. A number of policies dedicated to climate mitigation by reducing or avoiding GHG emissions have been in existence for quite some time. These, however, were driven not by climate concerns, but rather by energy security concerns (PEW 2008, Dubash 2009).

It can be noted that Indian mitigation policies are in place presently, but – as in many of the older industrialized countries – are pursued with less impetus and are subordinated to policies that promote economic growth and development.

#### 4. MAJOR POLICIES IN INDIA TO MITIGATE CLIMATE CHANGE

India though not bound by legal agreements to cut down its carbon emissions, has taken major steps in reducing its carbon emissions. India signed the United Nations Framework Convention on Climate Change on June 10, 1992 and ratified it on November 1, 1993. India hosted the eighth Conference of Parties to the UNFCCC in October 2002 in its capital city of Delhi. It signed and ratified the Kyoto Protocol, one of the most important international agreements on climate change on August 26th, 2002. In pursuance of the goals of implementing the provisions of the UNFCCC Convention, a project was initiated towards preparation of India's National Communication on sources of greenhouse gas emissions (NATCOM) to the UNFCCC through the United Nations Development Programme.

The Global Environmental Facility is funding many projects that India has taken up with the aim of reducing greenhouse gas emissions. These projects are mostly related to small-scale projects which are largely based on renewable energy sources. Various policies and laws<sup>16</sup> enacted by the government at the national level for mitigating climate change are given and discussed as follows:

- **The Environment (Protection) Act, 1986** obligates the central government to protect and improve environmental quality, control and reduce pollution from various sources, and prohibit or restrict the setting and /or operation of any industrial facility on environmental grounds.
- **The Environment (Protection) Rules, 1986** lay down procedures for setting standards of emission or discharge of environmental pollutants.
- **The objective of Hazardous Waste (Management and Handling) Rules, 1989** is to control the generation, collection, import, storage, handling and treatment of hazardous waste.
- **The Manufacture, Storage, and Import of Hazardous Rules, 1989** define the terms used in this regard, and sets up an authority to inspect yearly, the industrial activity connected with hazardous chemicals and its storage facilities.
- **The National Environmental Tribunal Act, 1995** was created to award compensation for damages to persons, property, and the environment arising from any activity involving hazardous substances.
- **The National Environment Appellate Authority Act, 1997** was established to hear appeals with respect to restrictions of areas in which classes of industries etc. are carried out or prescribed subject to certain safeguards under the EPA.
- **The Environment (Siting for Industrial Projects) Rules, 1999** lay down detailed provisions relating to areas to be avoided for siting of industries, precautionary measures to be taken for site selecting as also the

<sup>16</sup> <http://edugreen.teri.res.in/explore/laws.htm>.

aspects of environmental protection which should have been incorporated during the implementation of the industrial development projects.

- **The Municipal Solid Wastes (Management and Handling) Rules, 2000** apply to every municipal authority responsible for the collection, segregation, storage, transportation, processing, and disposal of municipal solid wastes.
- **The Ozone Depleting Substances (Regulation and Control) Rules, 2000** have been laid down for the regulation of production and consumption of ozone depleting substances.
- **The Biological Diversity Act, 2002** is an act to provide for the conservation of biological diversity, sustainable use of its components, and fair and equitable sharing of the benefits arising out of the use of biological resources and knowledge associated with it.
- **The Wildlife Protection Act 1972 and Amendment 1991** provides for the protection of birds and animals and for all matters that are connected to it whether it be their habitat or the waterhole or the forests that sustain them.
- **The Forest (Conservation) Act and Rules, 1981**, provides for the protection of and the conservation of the forests.
- **The River Boards Act, 1956** enables the states to enroll the central government in setting up an Advisory River Board to resolve issues in inter-state cooperation.
- **The Merchant Shipping Act, 1970** aims to deal with waste arising from ships along the coastal areas within a specified radius.
- **The Water (Prevention and Control of Pollution) Act, 1974** establishes an institutional structure for preventing and abating water pollution. It establishes standards for water quality and effluent. Polluting industries must seek permission to discharge waste into effluent bodies. The CPCB (Central Pollution Control Board) was constituted under this act.
- **The Water (Prevention and Control of Pollution) Cess Act, 1977** provides for the levy and collection of cess or fees on water consuming industries and local authorities.
- **The Water (Prevention and Control of Pollution) Cess Rules, 1978** contains the standard definitions and indicate the kind of and location of meters that every consumer of water is required to affix.
- **The Coastal Regulation Zone Notification, 1991** puts regulations on various activities, including construction, are regulated. It gives some protection to the backwaters and estuaries.
- **The Factories Act, 1948 and Amendment in 1987** was the first to express concern for the working environment of the workers. The amendment of 1987 has sharpened its environmental focus and expanded its application to hazardous processes.
- **The Air (Prevention and Control of Pollution) Act, 1981** provides for the control and abatement of air pollution. It entrusts the power of enforcing this act to the CPCB.
- **The Air (Prevention and Control of Pollution) Rules, 1982** defines the procedures of the meetings of the Boards and the powers entrusted to them.
- **The Air (Prevention and Control of Pollution) Amendment Act, 1987** empowers the central and state pollution control boards to meet with grave emergencies of air pollution.

## 5. CLIMATE CHANGE AND DEVELOPMENTAL PROCESS IN INDIAN CONTEXT

While achieving “Development”, remains as a major challenge of the Developing Countries; most of them are not in a position to ensure basic human need such as food, shelter, clothing and minimum “standard of living” to all of their citizens. Getting rid from Poverty, Employment, Literacy, and lack of basic access to primary Health Care and Education, Free from Malnutrition, Stabilizing Population, Reduction in Infant Mortality Rate, ensuring Safe Drinking Water and Sanitation: still remains far-off for the more than the Ninety per cent population of the world today.

On the other hand, due to higher Green House Gas emissions, earth is experiencing a higher rise in temperature (40 Centigrade in 100 years), which drastically influencing the changes in the weather patterns, resulting in melting the Ice-caps, causing flash floods, droughts, cyclones, hurricanes, abnormal increase or decrease in rainfall, arising water scarcity, desertification, change in crop-yield, sea level rise or coastal flooding, causing diseases, and many unexpected natural disasters including the changes in major river systems and even adversely affecting Bio-diversity.

As a priority, Development certainly comes first. Because Climate Change Policy, cannot solve the problems and need of a developmental prospects of a country and at the same time initiatives for Adaptation and Mitigation for Climate Change, can also not be ignored; since this is closely linked to the process of development at each stage. The climate of the future is going to be different form the climate of the past; hence from our experience and traditional knowledge, built over the years, we should able to adopt appropriate Climate Change Policies and subsequently implement the Mitigation Strategies; otherwise the poorest of the poor would suffer the most, since they are the ones, most vulnerable to climate change process. The most of the Developing Countries, unfortunately do not have sufficient either financial resources or technological know-how to support their minimum developmental programmes and in such a situation, Adaptation and implementing Mitigation Policy would certainly be an additional burden for them. In fact, Capacity Building assumes prime importance in such a context for the Developing World.

India has the world's second largest population and fourth largest economy, with a per capita annual GDP of \$ 2.4. While our economy has been among the fastest growing in the world in the last two decades, the major part of this growth is due to the service sectors, including information technology, bio-technology, and media and entertainment. The nation aims to reduce the poverty rate to 15 per cent, provide full employment, and ensure food, energy and economic security and double per capita income – all by 2012. In order to achieve these goals, India has developed an open, market-based economy.

India's carbon emissions per capita, is the lowest in the world, averaging only one-quarter of the global average and one -twentieth the U.S. rate. While India places a higher priority on development needs, policies driven by economic and environmental challenge have reduced growth in greenhouse gas (GHG) emissions. The greatest challenge has been economic liberalization and restructuring to improve living standards of the people. Pressure from citizen activists to reduce air pollution has also led to sufficient legal interventions in mandating strong clean air measures that affect energy systems. India ratified the United Nations Framework Convention on Climate Change (UNFCCC) in 1993 and the Kyoto Protocol in 2002.

First, our per capita Green House Gas emissions are only a fraction of the world average, and an order of magnitude below that of many developed countries. This situation will not change for several decades to come. We do believe that the ethos of democracy can support equal per capita rights to global environmental resources. In Five-year Planning process, India stated placing “ Environment Protection “, due importance right from its fifth Five-year Plan. The Ninth Plan (1997-2002) recognizes the synergies among environment, health, and development, and identifies as one of its core objectives, as the need for ensuring environmental sustainability of the development process through social mobilization and participation of people at all levels (Planning Commission 1997).

The Approach Paper to the India's Tenth Five-year Plan (2002-2007) links economic development and poverty with environmental degradation. As the poor are dependent on nature for their livelihoods, they are highly vulnerable to natural calamities, environmental degradation, and ecological disasters. Any economic development, which destroys the environment, may aggravate problems of poverty, unemployment, and disease. Moreover, the Approach Paper also emphasizes that India would target a high rate of economic growth (8% GDP), simultaneously striving for enhancement of human well-being. This includes adequate levels of consumption of food and other consumer goods, access to basic social services (education, health, drinking water, and basic sanitation), expansion of economic and social opportunities for all individuals and groups, reduction of disparities, and greater participation in decision-making. This is the key challenge for the Indian economy at the start of the new millennium.

Although the countries of the developing world are more vulnerable to climate change, their contribution to the greenhouse problem has been much smaller than that of developed countries. Historically, developed countries have been responsible for more than 60% of GHGs (greenhouse gases) added in the last 100 years (WRI 2001). This is



recognized in the UNFCCC, which follows the principles of 'common but differentiated responsibilities' and 'respective capabilities' in addressing its ultimate objective of stabilizing atmospheric GHG concentrations. In 1990, India accounted for approximately three per cent of global GHG emissions. The major part of India's emissions came from fossil-fuel-related CO<sub>2</sub> emission. In per capita terms, India emitted 1.19 tons of CO<sub>2</sub> – equivalent, compared to Japan's 8.8 tones and US's 19.8 tones in the same year (ADB-GEF-UNDP 1998). Ten year later, India's CO<sub>2</sub> emissions from fossil flue combustion continue to be much lower than those of key Developed Countries. In per capita terms, India's emissions constitute just a fraction of the world average. Despite its low share in atmospheric GHG concentrations, and its overriding development priorities, India is undertaking numerous initiatives that contribute significantly to international efforts for atmospheric protection, thus putting the country on the path of climate-friendly development.

### **5.1. EFFECT ON DEVELOPMENT**

The regulations that India has formulized for the achievement of lower levels of greenhouse gas emission have a restraining effect on the development of the country with special emphasis of a negative nature on the infrastructure sector. The power sector is one of the major contributors to the country's total emissions. This is the sector most affected by these policy regulations. These policies prove to be a hindrance in the rapid development of the power sector. The major problems faced by the power sector due to these policies such as:

#### **1. Delay in projects:**

The power sector requires massive capacity additions for the fulfillment of the objective of energy security for the country. India being a developing country requires basic infrastructure facilities like power for all for the overall well-being of the citizens of the country. This requires setting up of power plants instantaneously. This is mandatory for retaining the pace of economic development of the country, which India has been experiencing since the past decade. Environmental policies and regulations to mitigate climate change pose a major problem in this regard. The Ministry of Environment and Forest gives clearances for setting up of new projects whether conventional-source based or non-conventional source based. These clearances can take anywhere between 2-5 years to materialize. This results in long gestation periods of the projects discouraging private players in the market as well as postpones the requisite capacity addition for the growth of the country.

#### **2. Higher Costs of Development**

The energy sector is already in poor financial capacity and there is a need of financial support. This necessitates the entry of the private sector to fulfill both the objectives of decreasing energy deficit and attaining energy security. However, the costs incurred for projects in much higher due to the environmental policies that are in place. For example, Hydro projects require the incurring of resettlement and rehabilitation costs, costs of replenishing the amount of forest cleared costs of obtaining environmental clearances etc. All these increase the overall costs of projects and deter the private sector from investing in the development of the power sector. These high costs are a step backward from the path of promotion of private investment in the sector.

#### **3. Shift to Renewable Sources**

India having one of the lowest levels of per capita income in the world, our shift to dearer sources of electricity namely the renewables is a shift in the perspective from the policy of affordable electricity to all. In today's scenario, India is looking towards developing non-conventional sources of energy like Solar, Wind, Hydro and others. These sources of electricity require heavy amounts of R&D in order to develop more efficient technologies for the reduction in price of per unit power generated by these resources. India does not have the capital to invest in R&D activities in this sector at a massive scale. Since the renewable sources of energy are in the nascent stage, the tariff of the electricity generated by these resources is very high as compared to the conventional sources of energy like coal and gas.

This can be seen as a loss in focus of a developing country like India which has problems of an ever-increasing population, high levels of poverty, lack of basic necessities like food and shelter for a chunk of the population as well as a gaping disparity in the distribution of wealth in the country. A country with huge financial constraints which is unable to provide for the minimum amount of food and shelter to every citizen of the state, a shift to expensive sources of electricity seems like a huge mistake.

India is taking up a number of programs for the development of the renewable sector in the country. With programs like the Jawaharlal Solar Mission, India is incurring huge expenditure to harness these resources though it is a known fact that the tariffs of these resources is in many cases is almost 4 times that of conventional power produced from coal or gas.

#### 4. Requirement of Technology Upgradation

The steps taken towards mitigating climate change mainly include technological upgradation which requires huge investments in R&D. This again poses a dilemma for developing nations like India. They neither have the financial pool kept idle to invest in developing such technologies and so have no choice but to buy these expensive technologies from the developed countries. Such huge investments to reduce carbon emissions act as an impediment to economic growth. In countries like India, where there is always a fiscal deficit, it does not seem justifiable to invest into obtaining technology to undo the damage done by the industrialized world. Even though India's share of carbon emissions is bound to increase due to rapid economic growth that it is experiencing, the obligation of India to mitigate the climate change should be minimal as of this moment.

#### 5. Shift of Focus from Development

The issue of climate change is closely related to the developmental process. Development of a country requires the setting up of major industries and providing all modern amenities to its citizens. India, also wants to develop rapidly. It is plagued with problems that all developing countries face- poverty, illiteracy, lack of sanitation and health facilities, lack of public transport, electricity woes, food shortages etc. All these problems have one solution- rapid economic growth and development of the country.

The power sector is the major contributor to a country's total annual GHG emissions. So, for India, pursuing the goal of climate change mitigation is a conflict of interest in achieving its developmental goals. Thus, the objective of the future should for the time being be the development of this sector since this would shoulder the responsibility of taking India towards higher rates of economic growth. The climate mitigation steps involving high costs can be delayed for some time for the more important goal of development since after India is developed, it would be equipped with the requisite financial and technological base to abate its carbon emissions to a larger and more fruitful extent.

#### 6. CONCLUSION

Climate change is a global problem. It affects everyone, the rich and the poor, the developing and the developed without any favoritism. The contributors-major or minor; are all affected by the adverse impact of climate change. Thus, there is consensus in the world that there is an urgent to abate carbon emissions. As we have seen, putting the extra financial burden on the developing countries is a cause of major financial crisis in these countries. India's power sector, already plagued with problems does not have to intensify its problems multifold by committing itself to inject huge financial resources in developing alternate forms of energy or clean environment-friendly technology.

Though India understands the gravity of the situation, the mitigation of climate change at the cost of its development seems like an unfair bargain. The major emitters of the previous century which increased their carbon emissions incessantly to pursue the path of rapid development cannot expect developing countries to forget their own development. India, being a fast growing economy has many obligations towards its own citizens to provide them with better standards of living which can only be obtained through a massive expansion of the economy. The wealth of the country needs to be increased and distributed in a holistic manner to decrease the problems of poverty and low standard of living prevalent in majority of the population. India's infrastructure sector which is the major driver of economic growth cannot be unnecessarily burdened with the monumental task of mitigating climate change and incurring huge financial expenditure in the process when it itself is financially starved and in need of assistance from private sector.

Thus, India being a minor contributor to the world's GHG emissions and having one of the lowest per-capita emissions in the world, should be allowed to follow the development path and achieve high levels of GDP growth rate in order to meet the demands of its population and provide its citizens with a high standard of living without incurring huge financial expenditure on climate change mitigation which proves to be an impediment in the growth story of the country. They should be allowed to emit at an increased rate as necessitated by the development process the same way in which developed countries did in their developing phase.

Climate Change has emerged as one of the most serious environmental concerns of our times, which is a global phenomenon with diverse local impacts. There is a need to pay adequate attention to the concerns of developing

countries on vulnerability and adaptation issues; hence Adaptation is the key theme for the eight Conference of Parties of UNFCCC at New Delhi, let us expect this should not be a substitute for Mitigation for cutting back emissions. The New Delhi Declaration should provide us with a sound basis for global cooperation, reflecting the consensus that addressing the challenge of climate change as an integral part of achieving sustainable development to create a better world for all our people.

Summing up the brief institutional analysis, it can be said that, despite the Centre's strong legislative powers and executive rights, the subnational state level disposes of a number of important legislative powers relevant to climate policy. The National Action Plan on Climate Change (NAPCC) and State Action Plan on Climate Change (SAPCC) are the two policy documents which addresses the issues of climate change in both the National and at the State level.

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## BIOGRAPHIES



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