# The state practice of India and the development of international law : selected areas

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# CHAPTER VII
# INTERNATIONAL CLIMATE CHANGE LAWS, POLICY AND PRACTICES OF INDIA

## 7.1. Introduction

There are some issues which are essentially two sides of the same coin. Environment and climate change is one such closely linked and inter-related issue.[668] India has well recognized that the "climate change is impacting the natural ecosystems and is expected to have substantial adverse effects in India, mainly on agriculture on which 58% of the population still depends for livelihood, water storage in the Himalayan glaciers which are the source of major rivers and groundwater recharge, sea-level rise, and threats to a long coastline and habitations. Climate change will also cause increased frequency of extreme events such as floods, and droughts. These in turn will impact India's food security problems and water security".[669] Therefore, it is essential to examine how the position of India is being shaped and how India shapes the climate change regime at the national and the international levels. This chapter aims to analyse India's participation in the negotiations of relevant international legal instruments; the obligations under these instruments and their implementation at the domestic level; the challenges and issues which define India's position on the climate change debates and concluding remarks.

Indian economy is one of the fastest growing economies in the world and is on its way to ensure a sustainable economic and social growth, as well as development of its 1.2 billion people. The success story of India's economic growth is closely intertwined with the energy use and the carbon emissions. India is the 5$^{th}$ largest carbon gas emitter after China, US, EU and the Russian Federation. Although its overall energy use and carbon emissions is less than 5% of the world, the post-1991 liberalization of economic development shows that the carbon emission has increased by 58% between 1994 and 2007.[670] India's per capita emission is about 1 tonne per year which is at least four times less than the world average. However, the per capita emission too, is showing significant increase since 1994. Thus, India faces a major challenge - how to comply with the goals of the climate change regime without compromising the need to push for rapid industrialization, urbanization and overall ecological and socio-economic development. The most important challenge India faces is the prevention and control of pollution at various levels while developing into a powerful world economy. The question for India is how much it can commit to improving itself and implementing climate change mitigation strategies.

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[668] As per the UNFCC, climate change is "a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods." Article 1 of the Climate Change Convention adopted in 1992. Environmental security was one of the most important issues identified by the Prime Minister of India during his address to the Indian Foreign Service Probations on 11 May 2011. See Press Release issued by Ministry of External Affairs on the call by IFS Probationers on Prime Minister Dr. Manmohan Singh. New Delhi, May 11, 2011.

[669] Climate Change – India's Perspective, Lok Sabha Secretariat, Reference Note No. 25/RN/Ref./August 2013.

[670] The emissions indicate an annual growth of 4.2% from the levels in 1994. Whereas India's CO2 emissions are only about 4% of total global CO2 emissions and much less if the historical concentrations are taken into account. Still India has been conscious of the global challenge of Climate Change L. Srivastava and N. Pahuja, "Emission reduction targets: a Pandora's Box in climate negotiations" *In* Pachauri R K (ed.) *Dealing with climate change: Setting a global agenda for mitigation and adaptation* 211-227 (2010).

During the Copenhagen Summit in 2009, India pledged to reduce by year 2020, its emissions per unit of Gross Domestic Product (GDP) called emission intensity, by 20 to 25 percent below that of the year 2005 levels. This would exclude the emissions from the agriculture sector, by increasing fuel efficiency standards by 2011, forest cover, and its electricity output derived from wind, solar, and small hydro projects to 20 percent, from the current level of 8 percent. India believes that it should take serious steps to curb its GHG (Green House Gas) emissions, but it also believes that the developed countries must work with the developing countries, under the principle of common but differentiated responsibilities (CBDR).[671] India needs to work on controlling pollution, and the industrialized countries need to invest in India in a more sustainable way, so as to ensure that they don't just use the country for manufacturing and developing technology but also help curb its emissions. India's ability to implement environmental policy on climate change at home is critical to its ability to participate in climate change law and policy at the international level. India needs to show domestic compliance with and support of international treaties, in order to lead by example. Thus, unlike other major carbon emitters, India has a unique set of challenges and issues which play a most crucial role in understanding India's climate change policy and practical approach.

### 7.2. Issues and Challenges

India faces a mammoth challenge in preventing and controlling pollution caps to mitigate GHG emissions and committing to such caps in international treaties. As mentioned earlier, India, like many developing countries, faces significantly higher level of tension between economic development and environmental protection than the developed countries. Global environmental issues, although they occupy the minds of policy-makers, require urgent attention on the most pressing matters like safe drinking water, providing arable land, indoor air quality, adequate housing, and accommodating populations. This makes India less demonstrative than the developed countries in terms of proposing environmental solutions to be codified in international agreements. Nevertheless, it has recognized its crucial role in the climate change debates and has been influencing the debates increasingly. In view of the above, India's participation in treaty negotiations and enforcement of agreed provisions at domestic level are crucial for the success of the operation of the climate change regime. The issues which shape India's position on climate change can be clubbed into three main categories: (1) ecological, socio-economic, (2) technological and financial, and (3) political.

#### 7.2.1. Ecological and Socio-Economic Challenges

[671] At the G8 meeting in June 2005, Prime Minister Manmohan Singh pointed out that per capita emission rates of the developing countries are a tiny fraction of those in the developed world. India wants a fair and equitable agreement based on the Principle 7 of the Rio Declaration, that "[i]n view of the different contributions to global environmental degradation, States have common but differentiated responsibilities." India maintained that the developed countries have the major responsibility to curb emissions because of their past emissions and respective capabilities. India emphasizes the need for an "equitable and efficient solution to climate change and suggest that efficiency can be obtained through a system of tradable emission quotas and equity through equal allocation of global environmental space to all human beings". This position of "common but differentiated responsibilities" is in consonance with India's leadership of developing world, especially in the areas of international economic and sustainable development laws. Jyoti K. Parikh and Kirit Parikh, *Climate Change: India's Perceptions, Positions, Policies and Possibilities*, *OECD Climate Change and Development*, 2002, p. 1. Under the Common but Differentiated Responsibility, country like India, is expected to gain from technology transfer and foreign investment in environmental friendly manner.

Forestry and technology provisions of any climate instrument are the most important ones as far as India is concerned.[672] This will require funding by the rich nations to developing nations to compensate for the deforestation drives which they inevitably carry out for the economic growth. On the one hand, India cannot afford to watch the destruction of forest unabated, and on the other hand, it cannot afford to overcome the domestic economic constraints. Climate change has and will continue to impact India's food security, water security, coastal security and the overall health and well-being of the Indian economy. This is a somber conclusion assessed from the 2004 NACC analysis on the effects of climate change in India. Climate change undoubtedly will create similar threats in the neighbouring regions of India which will directly impact the stability, security and India's overall relations with these neighbours. [673] Like many other nations in similar geographical situations, India does and will continue to experience declining crop yields, availability of fresh water supplies, rising sea-levels with their concomitant marine and coastal consequences, increased natural disasters like floods and droughts, biodiversity loss, and a greater risk of spread of various diseases.[674]

### 7.2.2. Technological and financial Issues

Like any other environmental treaty, India's stand on availability and transfer of sound environmental technology,[675] innovation and cooperation to deal with the adaptation and mitigation is fully appreciable. India pursues a regime, which could facilitate developing countries to obtain technological capacity-building as well as financial assistance to mitigate the concerns arising from the fullest implementation of the international climate change regime at the domestic level, vigorously at bilateral and multilateral level.[676] For example, although the Copenhagen Accord recognizes a fund to cater to these issues of the developing countries, the actual

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[672] N. W. Arnell, M.J.L. Livermore, S. Kovats, P.E. Levy, R. Nicholls, M.L. Parry and S.R. Gaffin, Climate and socio-economic scenarios for global-scale climate change impacts assessments: Characterizing the SRES storylines. *Global Environment Change*, 14, 3-20 (2004); R. J. Nicholls, "Coastal flooding and wetland loss in the 21st century: changes under the SRES climate and socio-economic scenarios", *Global Environment Change*, 14, 69-86 (2004).

[673] P. R. Shukla, M. Kapshe and A. Garg, *Development and climate: impacts and adaptation for infrastructure assets in India, OECD Global Forum on Sustainable Development: Development and Climate Change*, (Paris: OECD, 2005).

[674] The Energy Research Institute (TERI) – BCSD India: Corporate Action Plan on Climate Change: White Paper, 2009. The White Paper has been appreciated for marking "a fine beginning in identifying the challenges and opportunities that the National Action Plan on Climate Change (NAPCC) presents to the private sector", as mentioned by Mr Jayram Ramesh, Minister for Environment and Forest, Government of India in his message for the report. The Energy Research Institute (TERI) – BCSD India: Corporate Action Plan on Climate Change: White Paper, 2009, p. 2.

[675] Yahya A. Moin, "Emission Trading and the Kyoto Protocol: Not a Panacea but a Good Start", CISDL, *Legal Working Paper Series*, (Montreal: Centre International Sustainable Development Law, 2007); John Drexhage, Deborah Murphy and Jenny Glesson, *A Way Forward: Canadian Perspectives on Post-2012 Climate Policy*, (Winnipeg: International Institute for Sustainable Development, 2008); Ravi K. Srinivas, "Climate Change, Technology Transfer and Intellectual Property Rights", *Research and Information System for Developing Countries (RIS)*, New Delhi, *RIS Discussion Paper* 153 (2009); Joelle de Sepibus, "Reforming the Clean Development Mechanism to Accelerate Technology Transfer", (Bern: NCCR and World Trade Institute, 2009); Elizabeth Burleson, "Energy Policy, Intellectual Property and Technology Transfer to Address Climate Change", 18 *Transnational Law and Contemporary Problems* 1, 69-93 (2009).

[676] In 2010, the Adaptation Fund became operational following the COP/MOP in Poland. Since the Adaptation Fund generates proceeds via a levy on developing country projects rather than developed world donations, developing countries insisted that the fund board should have the capacity to distribute funds rather than the Global Environment Facility. While this was a successful argument, agreement to expand the sources of financing stalled. It is expected that future meetings may reassess expanding the adaptation levy to the Kyoto Protocol's emissions trading mechanisms.

implementation including pledges is yet to be fully materialized. This leaves a country like India in a mood to resist any climate change talks.[677]

### 7.2.3. Political Issues

India's stand on specific emission reduction requirements on the part of the developing nations,[678] details on funding to the developing nations and lack of agreement on monitoring, reporting and verifying (MRV) it, is understandable as the future of climate change rests on these three important pillars.[679] India and China have called upon developed nations to adhere and carry out specific measures to reduce the greenhouse gas emissions and provide funding to the developing nations. Furthermore, India, like China, considers that verification of Indian emission targets by developed nations or any international mechanism is an infringement of its sovereignty.

As per the International Energy Agency (IEA), China, US, EU, India and the Russian Federation, the major five greenhouse gas emitters, shall be included in any legal instrument "for chances of any success of such instrument".[680] India believes in not allowing the current financial crisis to push climate change debates aside. It asserts that if major powers could find ways and means to avert financial meltdown, these nations shall also ensure a similar commitment in ensuring the climate change goals, including providing means to the developing countries. As with similar issues, India emphasizes the importance of focusing on climate change adaptation as well as mitigation.[681]

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[677] Benedict Kingsbury and Bruce Rudyk (ed.), *Climate Finance: Regulatory and Funding Strategies for Climate Change and Global Development*, (New York: New York University Press, 2009).

[678] India along with BASIC members have opposed "unilateral approaches, such as the inclusion of emissions from the aviation sector in the EU Emissions Trading Scheme or establishing unilateral carbon accounting rules are inimical to multi-lateralism, and clearly not in line with the provisions and principles of the Convention, particularly the principles of equity and common but differentiated responsibilities and respective capabilities". Joint Statement issued at the conclusion of the Seventh Basic Ministerial Meeting on Climate Change. Zimbali, Durban, May 29, 2011.

[679] Henry D. Jacoby, Ronald G. Prinn and Richard Schmalensee, "Kyoto's Unfinished Business", 77 *Foreign Affairs* 4, 54-66 (1998); Daniel Egan Levy, "Corporate Political Action in the Global Polity: National and Transnational Strategies in the Climate Change Negotiations", in Richard Higgott and Geoffrey R. Underhill *Non-State Actors and Authority in the Global System*, 138-153 (London: Routledge, 2000); Harro van Asselt, "Dealing with the Fragmentation of Global Climate Governance: Legal and Political Approaches in Interplay Management", *Global Governance Working Paper No. 30*, (Amsterdam: Global Governance Project, 2007); Christopher K. Penny, "Greening the Security Council: Climate Change as an Emerging Threat to International Peace and Security, 7 *International Environmental Agreements: Politics, Law and Economics* 1, 35-71 (2007); Steve van der Heiden, *Atmoshpheric Justice: A Political Theory of Climate Change*, (Oxford: Oxford University Press, 2008).

[680] Elisabeth Burleson, Energy *Policy, Intellectual Property and Technology Transfer to Address Climate Change* above at p. 558. India's energy policy and strategies are directly affected by the climate change issues. Here the main challenge lies regarding the abandoning of coal, the most abundant source of energy found in India and use non-conventional/renewable energy sources, such as wind energy, nuclear energy as well as oil and gas. It also *impacts on which type of energy we use, how we generate power, how to reduce methane emissions by agriculture practices or forestry and so on. India's negotiations are important for us as a means to reduce or postpone future vulnerability by getting the developed countries to reduce their emissions.*

[681] "Developing countries must be supported financially, technologically, and with capacity-building resources so that they can cope with the immense challenges of adaptation," Foreign Minister S. M. Krishna said in a statement to the U.N. General Assembly, Statement by Foreign Minister S. M. Krishna, UN General Assembly, 2009.

**7.2.3.1. Bali Summit:** The Bali Summit held in 2007 is known for its decision on climate-change adaptation fund, a victory for the vulnerable countries. India, at the Bali Summit, emphasized that the Action Plan should be comprehensive and must advance actions together on all of its building blocks - i.e. adaptation, mitigation, technology and finance. It further advocated that any outcome that erodes the differentiation among developed and developing countries as set forth in the United Nations Framework Convention on Climate Change (UNFCCC) and the Bali Action Plan or creates new differentiation among the developing countries, is not acceptable to India. According to India, UNFCCC and the Bali Action Plan should continue to be the basis for further work and for constructing a legally binding outcome at a future date.[682] The Summit agreed to have the Adaptation Fund separated from the Global Environment Facility (GEF), having its own structure and representatives. The Action Plan adapted disaster reduction strategies and means to address losses and damages associated with climate change impacts on developing countries, which are particularly vulnerable to the adverse effects of the climate change. At the Bali Summit too, India advocated the principle of common but differentiated responsibility and took forward the concept of equalizing per capita emissions of countries. India opposed the clubbing of India together with the three big polluters - including China. India attempted to ensure that the climate change issue is not overplayed as cautioned by the UNDP.[683] The Indian position took into consideration, the issues of climate change related to development and finance, as outlined in the Department of Economic Affairs paper.[684]

**7.2.3.2. Cancun Summit:** India's insistence to avoid a 'legally binding agreement' prevailed at the Cancun Summit.[685] The Indian standpoint that all countries must agree to a legally-binding agreement was shared by Brazil, South Africa, India and China – (BASIC),[686] Alliance of Small Island States (AOSIS), Least Developed Countries (LDCs) and SAARC members. Indian position was to take binding commitments on an appropriate legal form.[687] The Cancun Agreement contains seven main objectives, namely: (i) mitigation (ii) transparency of actions (iii) technology (iv) adaptation (v) forests (vii) capacity building and (viii) finance. India has adopted a definite position with each of the objectives. With regards to the emission cut, Indian position remained

[682] See Paper Submitted by India to AWG-LCA on Organisation and Methods of Work in 2010, p. 2. India articulated specific measurable indicators of achievement for the Bali Summit in its position paper.

[683] The HDR Report 2007/2008 of UNDP has also warned that "climate change will undermine international efforts to combat poverty..... Climate change is hampering efforts to deliver the MDG promise. .....Looking to the future, the danger is that it may stall and then reverse progress built up over generations not just in cutting extreme poverty but also in health, nutrition, education and other areas". This danger needs to be guarded against with full commitment and zeal.

[684] H. A. C. Prasad and J. S. Kochher, "Climate Change and India – Some Major Issues and Policy Implications" *Working Paper No. 2/2009-DEA*, Department of Economic Affairs, Ministry of Finance, India.

[685] The Cancun Agreements form the pillars of the largest collective effort the world has ever seen to reduce emissions, in a mutually accountable way, with national plans captured formally at international level under the banner of the UNFCCC. http://164.100.47.134/intranet/CLIMATE_CHANGE-INDIA's_PERSPECTIVE.pdf accessed on 16 March 2013.

[686] Ms Bomo Edith Edna Molewa, Minister of Water and Environmental Affairs, Republic of South Africa, said, "We had good discussions as BASIC group and regarding Agreements arrived at Cancun our emphasis will be on the issues of finance, technology and capacity building etc. We have to emphasis on finance to avoid some challenges which might arise at Durban." Press Release issued by Ministry of Environment and Forests on the Speech of Minister of State for Environment and Forests at the Basic Countries Conference. New Delhi, February 27, 2011.

[687] The delicate position of India was under severe criticisms at the domestic level. The then Minister of Environment and Forest, Mr Jairam, defended that "…nuancing of India's position will expand negotiating options and give India an all-round advantageous standing". *The Hindu*, 25 December 2010

consistent. That is, India will undertake voluntary mitigation actions, including reducing the emissions intensity of its GDP by 20-25 per cent by 2020 on a 2005 reference year; India will not take on any emission cuts or agree to any peaking year for its emissions.[688] Similarly, another matter of achievement for India on behalf of the developing countries was that the Summit agreed on "equitable access to sustainable development".[689] In the area of mitigation, India considered that its position was a major breakthrough as it led to "detailed formulation on international consultation and analysis (ICA) of developing countries' mitigation actions in a manner that is non-intrusive, non-punitive and respectful of national sovereignty". This broke an important deadlock and helped achieve progress on issues related to mitigation.[690] India also advocated strongly and successfully to create the Green Climate Fund to disburse $100 billion per year by 2020 to developing countries to assist them in mitigating Climate Change and adapting to its impacts.

**7.2.3.3. Durban Summit**: Unlike the three previous summits, the Durban Summit in 2011 saw a major turn-around for India. Its inability to ensure the "equity" and "common but differentiated" responsibility in the final text – the Durban Platform for Enhanced Action - became a major source of criticisms at the domestic level.[691] India, unlike at the Cancun Summit, lost the opportunity to drive the negotiations process and was unable to meet the resistance offered by the EU, which came out with an agenda that was scientifically unambiguous and directed its efforts to bring in fold a large number of developing countries.[692] India's non-acceptance of the binding commitments by 2015 is seen as a big setback for the country as well as for the whole world.[693] Regarding emissions, the Durban summit postponed making deep emission cuts beyond 2020. The principle of common but differentiated responsibility which has been in existence since 1992 (Rio Summit) was negated at the Durban Summit. India adopted a position to ensure that all governments commit to a comprehensive plan that would set in motion finally the realization of the Climate Change Convention: to stabilize GHG in the atmosphere at a level that will prevent dangerous interferences by human beings with the climate system and at the same time will preserve the right to sustainable development. Like other summits, India at the Durban Summit, too, advocated for much higher and sustainable support on part of developed countries towards developing countries for latter's abilities to meet the objectives of the Climate Change Convention.

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[688] Tobias F. Engelmeier and Isabelle-Jasmin Roth, "After Copenhagen and before Cancun: India on the Way to a Global Agreement on Energy and Climate Policies", *Dialogue on Globalisation*, Friedrich Ebert Stiftung, p. 2

[689] *Ibid.*

[690] *Ibid.*

[691] European Union, to the dismay of the USA and having isolated India and China succeeded in getting agreement from the LDCs and large number of developing countries.

[692] T. Jayraman, "Post-Durban, India has its task cut out", *The Hindu*, 20 December 2011. It is important to note that during pre-Durban press conference, the Indian Minister of Environment and Forests, Mrs Jayanti Natarajan, reiterated that "..".."…a long-term binding agreement cannot be a quid pro quo for a second commitment period. Can not. Should not. A new legally binding agreement is not required for climate change talks to continue, because a framework based on the principle of equity and common but differentiated responsibilities already exists in the form of the UNFCCC and the Kyoto Protocol." http://www.trust.org/alertnet/blogs/climate-conversations/indias-back-to-the-wall-at-durban/ accessed on 25 August 2012. It was quite clear that Indian position was to be built upon the equity.

[693] Praful Bidwai, "India was a big loser at Durban climate talks", *One World South Asia*, 7 January 2012.

### 7.3. Implementation of climate regime at domestic level

Although India has many domestic problems to address, it does have a strong legal framework for addressing environmental protection. India has a long history of environmental laws. Ordinary Indians can rely on the constitutional right to a healthy environment. Professor Badrinarayana writes, "[C]limate change presents a serious challenge to the Constitutional rights of Indians; rights which can only be taken away by the State and by proper legal procedure."[694] As mentioned above, India is a country where climate plays a pivotal role because its climate is tied to the economic welfare of the country in four major ways. Firstly, agriculture, which is very much climate-dependent, accounts for over 18% of the GDP and 65% of the employment provided in India.[695] Secondly, due to climate change, the Himalayan glaciers are in retreat, which is a threat to water security and to the perennial rivers in the North India. Thirdly, India is a fossil fuel dependent economy with the third largest coal reserve in the world. Since these are largely within India's forests, mining for the coal creates deforestation. Fourthly, India is peninsular and especially susceptible to sea level rise.[696] India is committed to curb reduction measures, but India would rather use a per capita plus approach that involves voluntary measures to include mandatory fuel efficiency standards, renewable energy initiatives, clean coal technologies, and lower methane farming, rather than having to reduce emissions based on its population alone.[697]

India has adopted various legal and institutional structural mechanisms to address the issue of climate change. India's National Environmental Policy adopted in 2006 provides an overview of all essential elements that responds to India's position on Climate Change.[698] The 2006 Policy advocates the principle of common but differentiated responsibility and respective capabilities of different countries. It identifies key vulnerabilities of India, namely, effect of climate change on water resources, forests, coastal areas, agriculture and health. It assesses the Climate Change adaptation need and encourages the Indian industry to participate in the Clean Development Mechanism. At structural level, the Prime Minister's Council on Climate Change has developed a coordinated, multi-stakeholder national level mechanism which oversees key policy decisions and has also developed the plans for the climate assessment, mitigation and adaptation. India has adopted a National Action

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[694] Deepa Badrinarayana, "The Emerging Constitutional Challenge of Climate Change: India in Perspective," 19 *Fordham International Law Review*, 1, 2 (Spring 2009).

[695] India has advocated that "emissions by poor who live on the margin of subsistence should be considered a basic human right and should be counted when ascribing responsibilities for emission reduction". Indian economy depends on agriculture which includes traditional practices to a large extent, which among other leads to the increase of carbon in the atmosphere. However, India cannot provide proactively concessions on this front as any concession can lead to aggravation of the intertwining problems of human rights, economic development associated with such practices. *Ibid.* 1.

[696] Rise in sea level will have direct positive correlation with the influx of environmental refugees in the inner part of India. This will add into socio-economic and cultural stability and order of the nation. Thus, in addition to the increased salinity in the ground water, directly attributable to sea-rise level, the environmental refugee problem directly affects and will continue to affect India's position in negotiating forums. India is facing various problems due to internally displaced persons, so this problem will aggravate India's dilemma further.

[697] See the statement of Mr Jayram Ramesh, Minister of Environment and Forest at the COP-15 Copenhagen Conference 2009.

[698] The Union Cabinet of India adopted the National Environmental Policy on 18 May 2006. This policy is considered to be the outcome of extensive consultations with experts in different disciplines, Central Ministries, Members of Parliament, State Governments, Industry Associations, Academic and Research Institutions, Civil Society, NGOs and the Public. See the National Environment Policy, 2006, Ministry of Environment and Forests, Government of India.

Plan on Climate Change, containing 8 national missions.[699] Apart from the ministerial or departmental efforts and those by the Planning Commission of India, India has established an Expert Group to prepare a strategy for a low-carbon economy for the 12th Five Year plan.[700]

India's interest and investment in climate change mitigation measures are increasing substantially. India has taken 24 initiatives to address climate change at home which are part of India's larger NAPCC. These initiatives consist of initiatives in the area of science and research; policy development; policy implementation; international cooperation and forestry. Reforestation is a priority on India's environmental agenda.[701] The Solar Mission and the Mission for Enhanced Energy Efficiency are also part of the NAPCC. Under the Plan, a National Environmental Protection Authority is also envisaged which would monitor and evaluate the implementation of environmental efforts in India. It is hoped that such efforts would add to the accountability and transparency in governmental efforts to deal with climate change issues.

India's ability to implement environmental policy on climate change at domestic level is critical to its ability to participate in negotiating climate change law and policy at the international level.[702] It can be concluded that India has sought to protect its environment and public health while still fostering economic development and growth. India, like any other developing country, can ill-afford to de-link the developmental needs such as poverty, health, energy access and education. As Prasad argues, India's "economic growth may not be associated with proportionate GHG emissions, though its emissions are bound to grow in short as well as medium term with the upsurge of the manufacturing sector and need for industrialisation to meet the growing demands of its huge population."[703] India, despite having a strong presence of service sector which will have much less impact on emissions as compared with the manufacturing and agriculture sectors, in the overall economic development, is bound to have significant GHG emissions as a result of cumulative growth in manufacturing and agriculture sectors. Furthermore, India's argument that sustainable patterns of production and

[699] The 8 National Missions are: National Solar Mission, National Mission on Enhanced Energy Efficiency, National Mission on Sustainable Habitat, National Water Mission, National Mission for Sustaining the Himalayan Eco-system, National Mission for a Green India, National Mission for Sustainable Agriculture and National Mission on Strategic Knowledge for Climate Change.

[700] The Planning Commission of India constituted the Expert Group which submitted its interim report in June 2011. India has already announced that it will reduce the emissions intensity of its GDP by 20-25 percent over the 2005 levels by the year 2020, through pursuit of proactive policies. India's Twelfth Five Year Plan, to be launched on 1st April, 2012 will have, as one of its key pillars, a low carbon inclusive growth. The Planning Commission Expert Group has been set up to develop a strategy for the same. "The hallmarks of India's inclusive growth and development strategy, which have a direct bearing on its foreign policy, include: A quest for rapid growth for wealth-creation for our peoples in order to bring to them the fruits of development – particularly education, health and social security; Pursuit of a growth model that creates employment and equal opportunities, and that is regionally balanced and sustainable; Construction of a modern, knowledge and science-based society; and Achievement of the development objectives within a democratic framework and through responsive governance." Speech made by Special Secretary (Public Diplomacy) Jayant Prasad at the Workshop on Science, Diplomacy and Policy at the National Institute of Advanced Studies and American Association for the Advancement of Sciences, Bangalore, 12 January 2011.

[701] India aims to add 0.8 million hectares of forest per year as well as improved forest management, conservation, and regeneration and to boost local capacity and job creation for some of India's poorest communities

[702] Although India, like in other areas, has good laws in climate change too, but the fact remains, that "even though we have the best laws of the land even from an international perspective, they have been characterized by on observance." Address of Minister of Environment and Forests Jairam Ramesh at the India Today Conclave: "THE WAY TO A GREEN GDP". New Delhi, March 18, 2011. This assessment by the highest authority in the field of environment and climate change raises serious concerns with regards to India's ability to meet climate change goals.

[703] Prasad and Kochhar at 16.

consumption are fully consistent with high living standards and human well-being, including health standards, needs to be backed by strong empirical analysis.[704]

Some pertinent questions are: Is India able to exercise restraint and endeavour to cap the carbon emissions at the cost of rapidly developing economy? It is well known that the climate change is taking place as a result of the cumulative impact of the accumulated GHGs in the atmosphere created by the carbon-based industrial activities in the developed world over the past two centuries. Does the Indian position demonstrate its firm standing as far as the level playing field in curbing the greenhouse gases by developed countries is concerned, i.e. historic responsibility of developed countries?

Although India is not a major emitter of GHGs, either as total volume of emission or as per capita or per GDP basis, it is known that the planetary atmosphere is a common resource and each citizen should have an equal share leading to the concept of convergence of per capita emissions by different countries. In this regard, it is important to observe that India informed the UNFCCC Secretariat announcing a target to reduce emissions per unit of Gross Domestic Product (GDP) (called emission intensity) by 20 to 25 percent below 2005 levels by 2020; excluding the emissions from the agriculture sector. To meet and exceed this goal, India pledged to increase fuel efficiency standards by 2011, forest cover, and electricity output derived from wind, solar, and small hydro projects to 20 percent from the current level of 8 percent by 2020.

**7.4. India and the Implementation of the Kyoto Protocol at the national level:** Kyoto Protocol requires reduction of six major GHGs, namely, Carbon Dioxide, Methane, Nitrous Oxide, Hydro Fluorocarbons, Perfluoro carbon and Sulphur hexafluoride.[705] UNFCC agreed with common but differentiated responsibilities. It has been known that the largest share of historical and current global emissions of GHGs have originated from industrialized countries. As mentioned earlier, the per capita emissions of developing countries, including India are relatively low, however, the share of these nations will increase in the process of social and economic development.

The Clean Development Mechanism (CDM),[706] defined in Article 12 of the Kyoto Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Protocol (Annex B Party) to

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[704] National Rural Health Mission is one of the important strategic missions India has adopted which will partially address the climate change debate, as health is one of the specific areas of concerns for India. The Indian position on adaptation fund and strategies combined with capacity building of developing countries shows that the India has to incur enormous expenditure which would have direct impact on health improvement and prevention of diseases. Thus, unless the developed countries or the global community at large have pool of resources to address problems raised due to lack of adaptation fund, developing countries like India may have to divert very useful resources otherwise meant for areas like health. J. P. Majra and A. Gur, "Climate Change and Health: Why Should India be concerned?" 13 *Indian Journal of Occupational and Environmental Medicine* 1, 11-16 (2009), p. 1.

[705] The detailed rules for the implementation of the Kyoto Protocol were adopted at COP 7 in Marrakesh, Morocco, in 2001 and also known as "Marrakesh Accords".

[706] The Article 12 of the Kyoto Protocol defines the Clean Development Mechanism as "The purpose of the clean development mechanism shall be to assist Parties not included in Annex I in achieving sustainable development and in contributing to the ultimate objective of the Convention, and to assist Parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments under Article 3."The clean development mechanism (CDM) defined in Article 12 provides for Annex I Parties to implement project activities that reduce emissions in non-Annex I Parties, in return for certified emission reductions (CERs). The CERs generated by such project activities can be used by Annex I Parties to help meet their emissions targets under the Kyoto Protocol. Article 12 also stresses that such projects are to assist the Developing country host Parties in achieving sustainable development and in contributing to the ultimate

implement an emission-reduction project in developing countries. Such projects will generate revenue from sale of saleable certified emission (CER) credits, each equivalent to one tonne of CO2, which can be counted towards meeting Kyoto targets.

India undertook several measures to give effect to the Kyoto Protocol. Under the UNFCC, State Parties are required to send national communications reporting on their carbon emissions and climate mitigation activities. India, however, has not been required to send these reports as regularly or in as much detail as rich nations, especially for those actions that are not internationally funded. Here too, India is prepared to provide more detailed information, including self-funded actions on climate change, which show India's growing interest, especially in the view of the pre- and post-Copenhagen efforts.

The Indian GHG Inventory covers five sectors, namely, energy, industrial processes, agriculture, forestry and wastes. India has developed emission factors for methane emissions from paddy cultivation, CO2 emissions from Indian coal, etc. India has established a Technology Information Forecasting and Assessment Council which aims to foster capacity building in the areas of environmentally sound technology transfer. With an aim to preserve forests and biodiversity, India has intensified its efforts for the rehabilitation of degraded areas, conservation of biodiversity and protected areas including 75 national parks and 421 wildlife sanctuaries covering 146,000 square km.[707] To protect and monitor prevention of erosion of its fragile ecosystems, India has established a Standing Committee under the Coastal Zone Regulation Notification of 1991. At academic and research institutions level, India has been developing climate change scenarios which would be useful to forecast necessary strategies for the country in collaboration with the Indian Meteorological Department and independent research agencies. Furthermore, to benefit from global research and policy developments, India's scientific institutions and scientists have been actively participating in the International Indian Ocean Expedition, Monsoon Experiment, Indian Ocean Experiment, World Climate Research Project, Global Observing System and International Geosphere-Biosphere Programme.

By introducing several new measures in the last decade, India is keeping itself prepared for various climate change scenarios, including, the capacity of renewable energy installations; improving air quality in major cities; and enhancing afforestation. These measures contribute to the sustainable development through climate-friendly path. The Kyoto Protocol has envisaged three innovative flexibility mechanisms which aim to reduce the overall costs of achieving emission targets, namely Emission Trading[708] (article 6),[709] joint

objective of the Convention. CDM has three goals, namely, to contribute to the achievement of sustainable development, contribute to the achievement of UNFCC goals and help Annex B parties in meeting their emission targets.

[707] More detail facts and figures available at www.moef.nic.in.

[708] The proponents of carbon trading believe that such markets can be useful in gaining experience and developing standard framework for monitoring emissions. It can also help in discovering the price of reducing GHGs [greenhouse gases]. But opponents feel that stress should be on undertaking real reductions by cutting fossil fuel use causing GHG emissions rather than on purchasing the right to pollute by buying emission allowances. *Carbon on sale, Equity Watch, Centre for Science and Environment,* 15 June 2001.

[709] "For the purpose of meeting its commitments under Article 3, any Party included in Annex I may transfer to, or acquire from, any other such Party emission reduction units resulting from projects aimed at reducing anthropogenic emissions by sources or enhancing anthropogenic removals by sinks of greenhouse gases in any sector of the economy."

implementation (article 6)[710] and clean development mechanism (article 12).[711] CDM, although at the nascent stage, has enormous potential.

### 7.5. Climate Change Negotiations and India

As far as India's negotiating position and strategies are concerned, it centers around three main interests. First, it would like to have no legally-binding emissions reduction target. Second, it would not like to have legally-binding peaking year for the country. Third, a distinction between supported and unsupported mitigation actions by the developing countries with respect to measurement, reporting and their verification (MRV). Although India's statement at Copenhagen ensured that the developing countries' mitigation actions will be subject to domestic MRV, and that respect for national sovereignty will be safeguarded under its provisions for international consultations and analysis of the domestic mitigation actions that are implemented with their own resources and independent from international finance and technology support,[712] India and China are wary of such an implementation.

These three interest areas are in direct conflict with the demands and expectations of the Industrialised West. During the Copenhagen Summit, it became apparent that any major achievement would be possible on the basis of a majority or two-thirds majority voting, as consensus[713] was impossible to reach. By adopting the voting

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[710] Joint implementation (JI) under Article 6 of the Kyoto Protocol provides for Annex I Parties to implement projects that reduce emissions, or remove carbon from the atmosphere (Carbon sequestration), another Annex I Parties, in return for emission reduction units (ERUs). The ERUs generated by JI projects can be used by Annex I Parties towards meeting their emissions targets under the Protocol.

[711] CDM is largely seen as a program for sustainable development, involving Hugh opportunities for foreign investment. Kiran Nair provides latest status on the flexibility mechanism. The paper concludes that "the flexible mechanisms are still in their infancy stages and will require more time and changes in the system in order to mature into an efficient method of encouraging the abatement of GHGs at the lowest possible cost. The development of more emissions trading systems similar to the EU ETS will see the maturing of the carbon market, and eventually, would ideally lead to a unified global emissions trading system. This would yield the benefits of encouraging the abatement of GHGs across the globe by providing low emitters with a financial incentive to do so and will also encourage the implementation and adoption of cleaner and more sustainable technologies. The Clean Development Mechanism has so far provided the opportunity for an information exchange between Annex B countries, which, generally speaking possess greater expertise with regards to renewable energy technologies, and non-Annex B countries. The numerous CDM projects that have already been implemented have already seen this exchange of expertise in the field of renewable energy technologies, especially in countries such as India, China, Brazil and Mexico. With the improvement in the efficiency and organization of the CDM system to be brought about by future changes, there exists a great potential for CDM projects to promote the successful implementation of renewable energy technologies all over the globe. Like the other flexible mechanisms included in the Kyoto Protocol, Joint Implementation has so far only produced mediocre results, although there exists a lot of room to improve the system. It probably has been the least successful of the flexible mechanisms, but there exists a lot of potential to implement environmentally sustainable projects, especially in Russia, once the system of approval and implementation streamlines its organizational procedures and improves its efficiency. http://www.nowum-energy.com accessed on 25 August 2012.

[712] R. K. Pachauri, *Climate Change and Technology Transfer*, (The Energy Resource Institute, 1998).

[713] It is quite interesting to note that during the Copenhagen conference, the Accord prepared by the US, China, India, Brazil, and South Africa make no mention of a legally binding instrument. It has not been surprising then the Accord was simply 'recognised' instead of 'adopted' by the participating nations. At the Copenhagen Conference, [t]he three-page accord that Mr. Obama negotiated with the leaders of China, India, Brazil and South Africa and then presented to the conference did not meet even the modest expectations that leaders set for this meeting, notably by failing to set a 2010 goal for reaching a binding international treaty to seal the provisions of the accord. Elisabeth Burleson, *Energy Policy, Intellectual Property and Technology Transfer to Address Climate Change* above at p. 551. India together with several developing countries succeeded in getting Kyoto Protocol from completely killed off at Copenhagen.

strategy, developed nations can tackle the resistance of countries like India and China. However, India has resisted and is ought to resist such moves because of its experience with disarmament or arms control is a disappointing one. As countries like India and China are on the receiving end on the climate change issue, it is expected that they will strongly prefer consensus on substantive matters. Thus, a deadlock is likely to follow and which in turn, will have significant adverse impact on moving ahead with the predictable, stable and adequate funding for mitigation, adaptation, capacity-building[714] and innovation cooperation. India, together with China and Brazil, has demanded that the developed countries allow the developing countries equitable space for development as well as providing them with finance, technology and capacity-building support, based on their historical responsibility for climate change.

Some of the pertinent issues on which India needs to take an active stand and create consent of developing countries are – the acceptable concentration levels to the developing nations, reducing the risks for both developed and developing nations and thus obtaining a fair share of the global environmental space.[715] It is known that developing countries' share in emission levels is much below (almost un-comparable), but they are most vulnerable to rising impacts of global warming. Their development is ought to come at the cost of increasing emissions, a situation which is clearly unacceptable to the developed world. India, therefore, needs to champion the cause of developing nations in consultation with emerging economies of China, Brazil, South Africa, Malaysia, among other countries.[716]

India needs to take a strong and assertive stand because climate change has significant adverse impacts on agriculture of many developing countries. Not only this, but climate change has impact on agriculture yields, GDP and welfare.[717] Therefore, India can ill afford to lag behind in taking aggressive stand at the policy forums.

Having experienced large scale disasters like cyclones, earthquakes, irregular monsoon and heavy economic and human losses in the last decade; India can ill afford not to highlight these problems in its negotiating positions. India has well laid-out its energy plan of action. However, the plan focuses on the use of coal, even as other non-conventional and renewable sources of energy are being pursued with definite strategies, plan of action and economic investments. On the one hand, India has to bear higher costs due to import of non-

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[714] Donna G. Craig, Nicholas A. Robinson and Koh Kheng-Lian, Koh (ed.), *Capacity building for environmental law in the Asian and Pacific region: approaches and resources*, 261-271 (Manila: Asian Development Bank, Manila, 2002).

[715] Through delays, rich OECD countries are occupying global environmental space. During 1990 to 2020 (during which period they were supposed to act, haven't acted and are not likely to act) OECD countries would have emitted more than India would emit in the next 30 years, assuming a 5% increase in India's GHG emissions every year. Parikh at 19.

[716] Climate change, if it is permitted to happen, will impose a heavy burden on future generations in all countries not just on the citizens of developed countries. Even after 50 years, Indian nationals are likely to be poorer than those of the OECD today. Thus, by not taking actions now the burden is transferred not just to rich citizens of the OECD of the next generation but also to poorer Indians of tomorrow who would be poorer than today's citizens of OECD.

[717] Considering a range of equilibrium climate change scenarios which project temperature rise of 2.5°C to 4.9°C for India, Kumar and Parikh (2001a) estimated that (a) without considering the carbon dioxide fertilization effects yield losses for rice and wheat vary between 32 and 40%, and 41 and 52%, respectively; (b) GDP would drop by between 1.8 to 3.4%. Their study also showed that even with carbon fertilization effects, losses would be in the same direction but somewhat smaller. Using an alternative methodology Kumar and Parikh (2001a) showed that even with farm-level adaptations, the impacts of climate change on Indian agriculture would remain significant. They estimated that with a temperature change of +2°C and an accompanying precipitation change of +7 %, farm level total net-revenue would fall by 9%, whereas with a temperature increase of +3.5°C and precipitation change of +15%, the fall in farm level total net-revenue would be nearly 25 %. *Ibid*. p.6.

coal energy sources, while on the other hand, its reliance on and easy and cheaper availability of coal as the sustainable source of energy, will continue. The poor masses of India will continue to rely on coal as the sole energy source, which will directly add to CO2 emission. As per the ongoing negotiations, India needs to sell carbon quotas and make maximum benefits out in the next two decades. Thus, India can not afford to waste time by contributing to the prolongation of negotiations, but at the same time, it is not in position to extract maximum benefits in the current scenario. Hence, India's negotiating strategy largely depends upon how the Indian negotiators carve out an interest-protection based position for India. As far as India's emissions profile is concerned, it is governed by different sectors, such as power, steel, transport, by different expenditures groups like rural, urban, low, middle and high income as well as different purposes such as different fuels – coal, oil and gas. These actors and sources contribute India's domestic and international position on the issues directly. Therefore, India's position with regards to the emission profile rests on how India is able to deal with these actors and sources.

Infrastructure is considered to be the most important user sector in the current economic growth scenario of India and it directly adds to the carbon emissions, as this sector uses energy intensive materials such as aluminum, bricks, cement, glass, lime and so on. As the infrastructure remains and will remain the most important source of economic growth and likely to attract huge foreign direct and indirect investments, India's position is constrained to this extent. Although Indian policies and plans chalk out various means and methods for energy conservation, renewable energy sources promotion, afforestation and waste land development, fuel substitution, India can achieve sustainable economic growth only by increased energy usage. There is a negative correlation between India's needs and world's expectations in this regard. The more and more India relies upon the energy sources, especially the traditional ones and promotes infrastructural growth, less and less will it be able to meet the world's expectation. Therefore, India needs to carve out a position, which, while promoting India's economic growth also caters to the world's demands.[718]

One important domestic area which has significant importance for India's position at international level, concerns to price reforms, subsidy removal and joint ventures in consumer goods. India has withstood the demands of developed countries with regards to the subsidy regime which has been applicable to the energy sector. However, with the import liberalization and growing energy needs, India is facing tough competition and efficiency upgrades. India has adopted various reform measures to gradually remove subsidy from coal, diesel and electricity. However, these removals create civil unrest among the subsidy beneficiary groups which Indian policy-makers, regardless of the government, can ill-afford to stop. Hence, India is forced to take a very tough stand in the international negotiations.

### 7.6. Concluding remarks

India has signed or ratified 14 international conventions which have a direct or indirect bearing on the climate change regime. The signature and ratification of the major legal instruments on environment and climate change show India's affirmative stand and commitment to create international consensus on these issues, despite the heavy burden expected of it and several emerging market economies. The Indian position shows that it has adopted a comprehensive approach to the climate change issue, namely by announcing legal and policy measures

[718] Most, if not all, energy saving methods will come at the cost of human welfare, which India can ill-afford to ignore.

to mitigate, adapt, fund and innovate the measures to mitigate the climate change. The Indian position has moved away from reactive to proactive and cooperative. India earlier stood up to the previous position that it would be unable to quantify the targets for reducing greenhouse gases emissions as that will impact its poverty reduction goals.[719] However, since then India has inclined towards adopting broad indicative numbers, without being obliged by international law. India, despite its reservations with regards to the domestic MRV, also agreed to provide more detailed and regular information on the domestic climate change efforts which would contribute to additional transparency.

It can also be concluded that despite its increasingly proactive engagement on climate issues, India has not wavered from its position - that equity concerns must underlie the international climate negotiations.[720] This position of a common goal of global climate stabilization, with each country having a different responsibility to address the problem reinforces India's consistent position on such other issues in international law at large. A note of caution on India's inflexible stand is essential that although India's inability and avowed developmental goals are appreciable, it shall be clear that the cost of inaction would be higher than the cost of mitigating climate change. Thus, it needs to make a judicious balance between these two equally important options.

Although it is in India's interest to act to mitigate the impacts of climate change, India cannot and shall not allow other countries to overlook the history and unequal responsibilities of the developed versus the underdeveloped countries. Any approach other than this can lead to India's subjugation and compromise its obligation to meet national developmental goals. India cannot afford the climate change diplomatic niceties to sell out its commitment to vast poverty. The Indian approach in climate change shall be having same fundamental tenets as its nuclear doctrine policy which respects India's overall stand, concerns and vulnerability. The climate change is no way lesser important to strategic security issues. Hence, India shall have the same affirmative stand.

Damages, mitigation costs and discount rates, will remain the three most important factors in determining the domestic policy on climate change for India.[721] After examining various climate change solutions for India, it can be concluded that India must utilize a holistic approach to address climate change that includes domestic and international components.

It is important that solving the climate change problem needs to be linked to enhancing socio-economic development and sustainable consumption and production. India has dual-responsibility, it must commit, both domestically and internationally, to curb emissions and protect the environment. It can be seen that the principles of equity, the right to development, full compensation for the incremental costs of mitigation and commitments

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[719] "India cannot and will not take emission reduction targets because poverty eradication and social and economic development are first and over-riding priorities," Environment Minister Jairam Ramesh said in June 2010, Bangkok.

[720] The major emitter nations are bound to proactively engage India and China to reach Climate Change Convention goals.

[721] Professor Hsu winnows down all of the variables of climate change down to just three – damages, mitigations costs, and discount rates – to help policymakers and analysts keep their eye on what it is that can change a country's decision environment. Professor Hsu's theory describes the decision for nations considering mitigation measures to reduce GHG emissions as consisting of four simple factors: (1) its perceived damages from climate change, (2) its costs of mitigation, (3) the rate at which it discounts the welfare of future generations, and (4) the prospect of other countries agreeing to mitigation.193 He says that it is critical to include the U.S, China, and others because the future of the negotiations and an effective global climate regime depend on the ability of the developed nations such as the U.S. and rapidly developing economies such as China and India to agree on emissions reduction targets and binding mitigation obligations and for the developed countries to provide adequate financial and technological aid to the developing countries.

of industrialized nations to greater reductions, remain the core negotiating international law principles for India. India is unlikely to take any substantial commitments in future. Energy is the critical source for India's economic development and thus remains a main cause for its willingness to take on further emission reduction commitments. It can be also concluded that climate change has become a very important domestic agenda and India's vulnerability to climate change is growing. However, the climate change still can be considered a major foreign policy issue than an exclusive domestic issue.

The Climate Change negotiations suggest that India would continue to adhere to the principle of equity and Common but Differentiated Responsibilities (CBDR).[722] While India's insistence upon the implementation of these principles is understandable, India is yet to set specific measurable guidelines and criteria which would define its overall legal and policy framework. The question remains how India would be able to achieve its own target without having a firm framework in place, the framework which complies with international obligations without comprosmising its traditional position. International pressure is unlikely to yield much substantial results. It is also unlikely that India will align its position with US in return for long-term benefits.[723] As the analysis of India's policy and practical approach to international environmental law shows, India as a nation aspires to ensure environmental and climate justice at international level. Serving industrialized nations by exporting cheaply manufactured goods is not in a long term interest of India. Industrial energy needs and rising living standards will continue to create higher and higher energy demands in various core and ancillary sectors. India needs to work on both approaches - a top-down and bottom-up approach and the challenges in deploying both approaches are far more serious as mentioned above than previously thought. A top-down command-and-control approach will enable India set caps within India for controlling emissions while the bottom-up approach employed by civil society institutions, industrial houses, will help these actors and institutions to achieve goals of socio-economic development. Finding alternative sources of energy will have positive results in this regard. A robust framework with concerted and coordinated approach will ensure and maintain a stronger voice of India at the climate change negotiations. India lacks coherent negotiating strategy in climate change area and this is one of the weaknesses over which India will have very little say due to compulsions of political economy. This sustainable ambivalent position will directly and negatively affect India's credibility and leadership role in holding up the principles of sustainable development and climate change, especially among developing countries. As Arun Sukumar argues, "New Delhi would do well to reassess its notion of equity, as other developing nations have rightfully done. When, in 2011, Ethiopia announced its intentions to be 'carbon neutral' by 2025, it effectively abandoned the premise that low emitters can forever point fingers at industrialised countries. Just as developed nations bear responsibility to assume more ambitious commitments, India should treat its differentially positioned population in equitable terms. The pernicious effects of climate change will be

[722] India considers these principles 'non-negotiable" and made this clear at Durban Summit in 2011. See the statement of Environment Minister Ms Jayanthi Natarajan at Durban Summit. India considers that "the global efforts to address climate change must be anchored to the basic principles of "equity" and "Common but differentiated responsibility (CBDR) and respective capabilities. Equitable burden sharing that provides for an equal sharing of the resource of the atmosphere for all human beings is a natural expectation we have from the on-going negotiations". Address by Foreign Secretary Mrs. Nirupama Rao on 'Key Priorities for India's Foreign Policy' at the International Institute for Strategic Studies. London, 27 June 2011.

[723] A strategic report produced by Deloitte, *Shale Gas: A Strategic Imperative for India"*, October 2010 provides necessary statistical details which can be used to draw a conclusion as to how and why India and US will work together for shale gas exploration and export for mutual benefits and how in the process both countries are likely to dilute the climate change goals and objectives, similar to their bilateral agreement dealing with non-surrender of each others' national diluting the effectiveness of the Rome Statute.

most acute among India's vulnerable sections. If the West owes a historic obligation to the rest in confronting climate change, so too does India towards its impoverished."[724] An independent study carried out to assess India's National Action Plan on Climate Change suggests few significant concerns. First, the focus of India will remain on sustainable development with mitigation as a co-benefit. However, the policies to implement the obligations will lead to avoided emissions, without clear emission targets in the mission. Secondly, there is no mention of the mitigation level. In general, the plan lacks link between sustainable development goals and objectives which is the central to India's overall international position.[725]

[724] http://www.thehindu.com/opinion/lead/change-the-climate-for-indias-poor/article4788457.ece accessed on 31 July 2013.

[725] Sujatha Byravan and Chella Rajan, 'An Evaluation of India's National Action Plan on Climate Change', www.indiaclimatemissions.org. Accessed on 31 July 2013.

**Status of India in Multilateral Treaties on Environment and Climate Change**

**As on 10 September 2013**

| No | Legal Instrument | Entry into Force | Accession / Ratification |
|---|---|---|---|
| 1 | Vienna Convention for the Protection of the Ozone Layer | 22 September 1988 | 18 Mar 1991 (A) |
| 2 | Montreal Protocol on Substances that Deplete the Ozone Layer | 1 Jan 1989 | 19 Jun 1992 (A) |
| 3 | Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer | 10 Aug 1992 | 19 Jun 1992 (A) |
| 4 | Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer | 14 Jun 1994 | 3 Mar 2003 (A) |
| 5 | Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer adopted by the Ninth Meeting of the Parties | 10 Nov 1999 | 3 Mar 2003 (A) |
| 6 | Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer | 25 Feb 2002 | 3 Mar 2003 (A) |
| 7 | Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal | 5 May 1992 | 24 Jun 1992 (R) |
| 8 | United Nations Framework Convention on Climate Change | 21 Mar 1994 | 1 Nov 1993 (R) |
| 9 | Kyoto Protocol to the United Nations Framework Convention on Climate Change | 16 Feb 2005 | 26 Aug 2002 (A) |
| 10 | Convention on Biological Diversity | 29 Dec 1993 | 18 Feb 1994 |
| 11 | Cartagena Protocol on Biosafety to the Convention on Biological Diversity | 11 Sep 2003 | 17 Jan 2003 (R) |
| 12 | United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought And/Or Desertification, Particularly in Africa | 26 Dec 1996 | 17 Dec 1996 (R) |
| 13 | Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade | 24 Feb 2004 | 24 May 2005 (A) |
| 14 | Stockholm Convention on Persistent Organic Pollutants[726] | 17 May 2004 | 13 Jan 2006 (R) |

[726] India (28 March 2006) Declaration: "Any amendment to Annex A, B or C shall enter into force only upon the deposit of its instrument of ratification, acceptance, approval or accession with respect thereto."