

INDIA'S RESPONSE TO CLIMATE CHANGE: THE 2009 COPENHAGEN SUMMIT AND BEYOND

*Autri Saha and Karan Talwar**

The 15th Conference of the Parties (COP 15) of the United Nations Framework Convention on Climate Change (UNFCCC) in Copenhagen was meant to work out an international response to climate change and develop a cooperative long-term plan to address climate change. The outcome of the summit was a three-page 'Copenhagen Accord'. Termed by many as the 'dead deal', and bitterly criticized by many environmentalists, it fails to map a clear path towards a treaty with binding commitments. India's stand at the summit was that the focus should be on 'per capita' emissions and that future emission targets should take into account the historical 'wrongs' of the industrialized countries. In the wake of heightened concerns about rapid climate change and the devastating impacts that it can have on India, the 'per-capita' argument is increasingly losing force. This paper is an attempt to evaluate the contours and implications of this stand taken by India, and to probe into the question as to whether India is doing enough to combat climate change. We argue that India should abandon its present stand and negotiate to join a post 2012 International Agreement on Climate Change, provided it can secure a fair deal.

I. INTRODUCTION

The threat of global climate change is becoming more evident than ever before, for the impacts of climate change are increasingly being felt in various parts of the world, and it is already or will soon be the major environmental threat.¹ Doubts as to whether climate change is occurring has long been dispelled. Further it has been affirmed that climate change is primarily attributed to human activities that create greenhouse gas emissions.² As acknowledged by the

* 3rd and 2nd Year students respectively, W.B. National University of Juridical Sciences, Kolkata.

¹ Martin Khor, *Dire Warning By Scientists: GLOBAL TRENDS*, available at <http://thestar.com.my/columnists/story.asp?file=/2010/5/31/columnists/globaltrends/6370748&sec=Global%20Trends> (Last visited on April 4, 2010).

² See, Elizabeth Rosenthal & Andrew C. Revkin, *Science Panel Calls Global Warming 'Unequivocal'*, THE NEW YORK TIMES, February 3, 2007, available at <http://www.nytimes.com/2007/02/03/science/earth/03climate.html> (Last visited on August 4,

Intergovernmental Panel on Climate Change (*hereinafter* IPCC), it has “the potential to lead to future large-scale and possibly irreversible changes in Earth systems resulting in impacts at continental and global scales.”³

The phenomenon of climate change can manifest itself in numerous ways and can have profound implications on the physical and biological systems of aquatic, terrestrial, and marine environments.⁴ The projected hazards of the phenomenon of climate change include diseased crop yields, the disappearance of glaciers, extreme weather conditions like floods, droughts and storms, increased coastal flooding and species extinctions.⁵ Specifically with respect to India, climate change is projected to have serious adverse impact as it compounds the pressures on natural resources and the environment associated with rapid urbanization, industrialization and economic growth.⁶ In India, the sectors which are subject to the highest vulnerability are water resources, coastal eco-systems, biodiversity and agricultural productivity.⁷ However, despite such serious adverse impacts that climate change can cause, the global response to climate change have so far been bleak and inadequate.⁸

The problem of climate change was identified way back in 1979 as an “urgent” world problem in the first World Climate Conference.⁹ In the same year, the World Meteorological Organization (WMO), the United Nations Environment Programme (UNEP) and the International Council of Scientific Unions, together, established the World Climate Programme.¹⁰ However, it took the world almost thirteen years to put in place an international framework for tackling global warming. With the adoption of the United Nations Framework Convention on Climate Change (*hereinafter* UNFCCC)¹¹ at the Rio Earth Summit in 1992, the recognition of climate

2010) (“In a grim and powerful assessment of the future of the planet, the leading international network of climate scientists has concluded for the first time that global warming is ‘unequivocal’ and that human activity is the main driver”); *see also*, Intergovernmental Panel on Climate Change [IPCC], *IPCC Fourth Assessment Report: Climate Change 2007 (Nov. 2007)*, available at http://www.ipcc.ch/publications_and_data/publications_and_data_reports.htm#1 (Last visited on April 4, 2010).

³ Intergovernmental Panel on Climate Change, *Climate Change 2001: Impacts, Adaptation, and Vulnerability*, Summary for Policymakers 6 (2001) [hereinafter IPCC Working Group II], 6, <http://www.ipcc.ch/> (Last visited on August 4, 2010).

⁴ DR. A.N. SARKAR, *GLOBAL CLIMATE CHANGE AND SUSTAINABLE ENERGY DEVELOPMENT* 50 (2009).

⁵ E. Somanathan & Rohini Somanathan, *Climate Change: Challenges Facing the Poor*, *ECONOMIC AND POLITICAL WEEKLY*, August 1 2009, Vol XLIV No. 31, 51.

⁶ Devesh Kapur, Radhika Kholsa & Pratap Bhanu Mehta, *Climate Change: India's Options*, *ECONOMIC AND POLITICAL WEEKLY*, August 1 2009, Vol XLIV No. 31, 35.

⁷ *Id.*

⁸ DETER HELM & CAMERON HEPBRUN, *THE ECONOMICS AND POLITICS OF CLIMATE CHANGE* 2 (2009).

⁹ Albert Mumma, David Hodas, *Designing a Global Post-Kyoto Climate Change Protocol that Advances Human Development*, 20 *GEORGETOWN INT'L ENVTL. LAW REVIEW*, 619.

¹⁰ *Id.*

¹¹ United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107 (entered into force March 21, 1994).

change as a significant global environmental challenge began. It was endorsed by almost 194 parties, where they committed themselves to stabilizing atmospheric concentrations of greenhouse gas “*at a level that would prevent dangerous anthropogenic interference with the climate system.*”¹² Rather than imposing specific limitations on the amounts of GHG that member states may emit into the atmosphere, the 1992 Convention merely established a mechanism for more specific steps to be taken over time as scientific evidence evolves.¹³ The parties to the convention have met annually from 1995 in Conferences of the Parties (*hereinafter* COP) to assess progress in dealing with climate change. In 1997 the Kyoto Protocol was concluded which established for the first time, legally binding obligations for only industrialized developed countries to reduce their greenhouse gas emissions, while exempting the developing countries. However, the Protocol failed to achieve any tangible results for it exempted India, China and the United States- the three of the world's largest emitters.¹⁴ The Kyoto Protocol failed to make any appreciable difference to climate change.¹⁵

In December 2007, at the COP-13 to the UNFCCC in Bali, Indonesia, the countries agreed on a plan for producing a new agreement that would work alongside and eventually replace the Kyoto Protocol.¹⁶ In particular, the “Bali Road Map”¹⁷ called on Parties to develop strategies for a post-Kyoto agreement, where they agreed to jointly step up international efforts to combat climate change and get to an agreed outcome in Copenhagen in 2009. Thus, an ambitious climate change deal was expected to follow on the first phase of the Kyoto Protocol, which expires in 2012. The Copenhagen summit was required to frame a legal and policy framework that will enable the world to make the transition to climate-resilient, green global growth. In order to achieve this, it was expected that the Copenhagen summit would deliver a comprehensive and legally binding international agreement to tackle climate change.¹⁸

However, the recently concluded Copenhagen summit was anything but successful. The negotiations at the summit “*ranged from a failure to a disaster*”.¹⁹ The Conference has generated widespread disappointment among

¹² *Id.*, Article 2.

¹³ MUMMA & HODAS, *supra* note 9.

¹⁴ HELM & HEPBRUN *supra* note 8, 10.

¹⁵ *Id.*

¹⁶ UNDP, The Bali Action Plan: Key Issues In The Climate Negotiations, 2008, available at http://www.undp.org/climatechange/docs/UNDP_BAP_Summary.pdf (Last visited on April 4, 2010).

¹⁷ Bali Action Plan, available at <http://www.unisdr.org/eng/risk-reduction/climate-change/docs/Bali-Action-Plan-and-DRR.pdf> (Last visited on June 23, 2010).

¹⁸ The Guardian, *Copenhagen: Key Questions on Climate Deal: Amid The Chaos and Confusion of Frantic Negotiations on the Final Night of the Summit, What Kind of Deal Actually Emerged*, December 19, 2009, available at <http://www.guardian.co.uk/environment/2009/dec/19/copenhagen-key-questions-climate-deal> (Last visited on April 9, 2010).

environmentalists, since it not only failed to deliver tangible results to effectively combat the rapidly encroaching problems generated by global warming, but also spent a considerable amount of time to reach a nonbinding ‘Copenhagen Accord’²⁰ which took shaky steps against global warming although it directed a new start for rich-poor cooperation on climate change.²¹

India’s stand in the Conference was however very clear. India’s international negotiating position relies heavily on the principles of historical responsibility, as enshrined in UNFCCC.²² India has always maintained the stand that the ‘right’ to pollute the atmosphere should be apportioned to all the countries based on their pollution.²³ This ‘per capita’ equity approach provides the foundation for India’s position on climate change negotiations. Using this gauge, India and China are the only countries with population in excess of billions each and hence legitimately emit GHGs to a greater extent than other countries with lesser population.²⁴ But as their GHGs today are less than this proposed allocation they could ‘sell’ some of their ‘rights’ to the industrialized countries.²⁵

In this article the authors primarily seek to examine and evaluate India’s stand with respect to climate change, and advocate that the problem of climate change cannot be successfully addressed without an international agreement that includes all or almost all of the major contributors. Since the per-capita stand taken by India, has the effect of redistributing hundreds of billions of dollars from wealthy nations, above all from the United States, to developing nations, especially China and India, insistence on per capita allocations would effectively doom any climate change agreement. This is the central theme of the paper.

The paper begins with a brief overview of the Copenhagen summit, the debates which took place between the developed and developing countries, and the implications of the accord. Whether the accord was a success or a failure would also be assessed. Next, the authors will explore the stand taken by India, and argue that India should revisit its existing stand in order to effectively address the problem of climate change, for the per-capita stand runs into risks of serious objections both on grounds of welfare and fairness approach. The authors will

¹⁹ Editorial, *The End of Hope*, ECONOMIC AND POLITICAL WEEKLY, Jan 2, 2010, Vol. XLV No. 1, 5.

²⁰ Copenhagen Accord, FCCC/CP/2009/L.7, 18 December 2009.

²¹ Odeen Ishmael, *Climate Change Mitigation: A Dire Necessity for Latin America and the Caribbean*, *Guyana Journal*, January 2010, available at www.guyanajournal.com/Climate_change.html (Last visited on April 8, 2010).

²² *Supra* note 11, Article 3(1) (“The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities.”).

²³ DR. A.N. SARKAR, *supra* note 4, 52.

²⁴ *Id.*

²⁵ *Id.*

then advocate that there is a need to a global climate change mitigation treaty and that India should be willing to be a part of it. In the last part of the article, the authors will present and evaluate the present policies and legislations in India which in some way seek to address climate change. Lastly, the authors enumerate steps and suggestions, that India should undertake within its domestic sphere to address the adverse effects of climate change.

II. THE 2009 COPENHAGEN ACCORD AND ITS IMPLICATIONS

The December 2009 United Nations Climate Change Conference, commonly known as the Copenhagen Summit, was held at Copenhagen, Denmark, which included the 15th Conference of the Parties (COP 15) to the UNFCCC and the 5th Meeting of the Parties to the Kyoto Protocol. The deliberations under Copenhagen took place under a two-track procedure, one under the UNFCCC and another under the Kyoto Protocol. In terms of representation, it can also be divided into two phases—the initial phase when heads of delegations and Ministers had the leadership. Under this phase a set of draft decisions were made, heavily bracketed, and not recognized by all Parties, especially the USA, as a basis for negotiations.²⁶ In the second phase a small group of roughly 30 heads of State took the lead, and formulated the minimalist agreement known as the Copenhagen Accord.²⁷

A. THE DELIBERATIONS, DISCUSSIONS, AND ISSUES RAISED AT THE COPENHAGEN SUMMIT

1. The Shifting Politics Of Power

The focus on the emissions of the developing countries in the Copenhagen Summit represents a major reorientation of the climate change negotiations. From the initiation of negotiations in 1991 through the adoption of the Marrakesh Accords in 2001, the negotiating process focused exclusively on emissions reductions by developed countries. Although the United States aggressively pushed to address the issue of developing country participation, the 1995 Berlin Mandate, which launched the Kyoto Protocol negotiations, effectively took this issue off the table by specifically excluding any new commitments for non-Annex I countries. The same pattern continued even after the adoption of the Kyoto Protocol.²⁸ Although developing countries participated

²⁶ Emmanuel Guérin & Matthieu Wemaere, *The Copenhagen Accord: What happened? Is it a good deal? Who wins and who loses? What is next?*, available at www.iddri.org/.../Id_082009_guerin_wemaere_accord_copenhague.pdf (Last visited on April 4, 2010).

²⁷ Michel Colombier, *Why Such Mixed Results In Copenhagen?*, Europe Monthly Bulletin N°53, January 2010, available at www.confrontations.org/spip.php?rubrique351 (Last visited on April 4, 2010).

²⁸ Daniel Bodansky, *The Copenhagen Climate Change Conference: A Post-Mortem*, February 2010, available at <http://ssrn.com/abstract=1553167> (Last visited on 12 June, 2010)

actively, the primary axis of the negotiations was the split among developed countries between the European Union and the United States – the European Union pushing for strong emission reduction targets, implemented primarily through domestic measures, and the United States (together with its allies such as Australia and Japan) pushing for the unrestricted use of market-based mechanisms, including emissions trading. The more recent phase in the climate negotiations, which began after Marrakesh, has shifted the primary axis in the negotiations from European Union –United States to the Developed-Developing countries.²⁹ During the deliberations between December 9 and 18, 2009, the Ministerial Consultations were generally co-Chaired by two Ministers, one of a developed country, one of a developing country, on each of the issues (for example, UK and Ghana on issues of Finance) in order to achieve a consensus between two usually conflicting positions.³⁰

2. Deliberations and the debate between the Developed and Developing Countries

The UNFCCC recognizes the principal of “common but differentiated responsibilities”³¹ and respective capabilities, which is based on sound principles of practicality and equity. The asymmetric position of various players, characterized by divergent social and economic burdens justifies the selection of differentiated reduction targets. It is the *scope and application* of this guiding principle of the climate change movement that has been the subject of much debate, with the developed and the developing nations interpreting it in different ways to suit their convenience.

The stand taken by the developing countries is that their overriding objectives include eradication of poverty, enhancing economic well-being, improving public health, providing basic amenities and improving infrastructure. These constraints make it difficult for them to focus their full attention to climate change issues, while the developed nations face no such obstacles.³² They claim that the developed nations bear a historical responsibility for having built up most of the existing stock of Green House Gases (*hereinafter* GHG’s) in the atmosphere.³³ According to them, climate change is taking place not due to current level of GHG emissions, but as a result of the cumulative impact of accumulated GHGs in the atmosphere.³⁴ Developing countries argue that the final target should

²⁹ *Id.*

³⁰ *Id.*

³¹ See UNFCCC, *supra* note 22, Articles. 3(1) & 4(1).

³² Dean Nelson, *Manmohan Singh Blames West For India’s Climate Change Problems*, July 7, 2009 <http://www.telegraph.co.uk/news/worldnews/asia/india/5768824/Manmohan-Singh-blames-West-for-Indias-climate-change-problems.html> (Last visited on June 25, 2010).

³³ Public Diplomacy Division, Ministry Of External Affairs Government Of India, *The Road to Copenhagen-India’s Position On Climate Change Issues*, available at http://pmindia.nic.in/Climate%20Change_16.03.09.pdf (Last visited on June 12, 2010).

³⁴ *Supra* note 27.

be for each country to have the same pollution levels per person, or the same emissions per capita.

On the other hand, the developed nations assert that to avoid the problem of global warming, even the developing nations must undertake binding emission cuts.³⁵ According to them, even if industrialized nations stopped emitting greenhouse gases henceforth, the emissions rise in developing countries would make it impossible to stay under a two degrees temperature rise under a business as usual scenario.³⁶ They believe that adherence to a per-capita approach for determining emission levels is unfair as it rewards over-population and if India and China have the same per-capita emission levels as advanced nations, the world pollution levels will shoot high enough to destroy the Earth.³⁷ Their main concerns are carbon leakage and exposure to unfair competition from developing countries through the delocalization of carbon intensive countries.³⁸ The developed nations assert that to avoid the problem of global warming, even the developing nations must undertake binding emission cut.³⁹ The argument is further substantiated by the fact that in absolute terms, developing nations are rapidly contribution to GHG increase in the atmosphere, some even higher than the emissions of the developed countries.⁴⁰ The industrialized nations argue that the industrialized / developing countries dichotomy with regards to actions taken to counter climate change, which affects processes (negotiating groups) and United Nations decisions, has become absolute in the status quo scenario. Looking forward to putting in a joint action strategy by 2050, the definition of developing nations, constituting roughly three quarters of humanity, “group of countries not listed in an annex” dating from 20 years ago, simply cannot be continued to be accepted as valid.⁴¹

The deliberations at Copenhagen were characterized by political dove-tailing, unwillingness on the part of certain countries to compromise, extensive

³⁵ *Fact Sheet: 10 Frequently Asked Questions About The Copenhagen Deal*, available at http://unfccc.int/files/press/fact_sheets/application/pdf/10_faqs_copenhagen_deal.pdf. (Last visited on June 13, 2010).

³⁶ *Id.*

³⁷ Jeffrey A. Frankel, *Addressing the Leakage/Competitiveness Issue in Climate Change Policy Proposals*, available at citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.152.782, (Last visited on June 25, 2010).

³⁸ *Supra* note 27.

³⁹ John Vidal & David Adams, *China Overtakes US As World's Biggest CO2 Emitter*, <http://www.guardian.co.uk/environment/2007/jun/19/china.usnews> (Last visited June 25, 2010), (As per the Netherlands Environmental Assessment Agency, China produced 6,200m tonnes of CO2 last year, compared with 5,800m tonnes from the US. Britain produced about 600m tonnes). *See also GHG data from UNFCCC*, available at, http://unfccc.int/ghg_data/ghg_data_unfccc/items/4146.php (Last visited June 25, 2010).

⁴⁰ *Supra* note 27.

⁴¹ Andrew Porter, *China and America to Blame for Copenhagen Failure Says Brown*, available at <http://www.telegraph.co.uk/news/newstopping/politics/6859567/China-and-America-to-blame-for-Copenhagen-failure-says-Brown.html> (Last visited on June 17, 2010).

discussions including suggestions and counter-suggestions, a process described by the British Prime Minister as “best flawed, at worst chaotic.”⁴² On the one side, developed countries insisted that the post-2012 regime address the emissions of all of the major economies, developing as well as developed.⁴³ On the other side, developing countries argue that they are not historically responsible for the climate change problem, have less capacity to respond, and hence *should not be expected to undertake specific international emissions reduction commitments*.⁴⁴ The two most crucial issues on which consensus was sought to be achieved were sidelined by the time the discussions culminated, namely the issue of the Translation of the political declaration into a legally binding instrument next year, and that of 50% reduction of global emissions in 2050 and date of the peaking.⁴⁵

Under the two-track procedure of climate change, Brazil, South Africa, India and China (the so-called BASIC group) have insisted that developed country parties agree to a second commitment period under the Kyoto Protocol, but have opposed the adoption of a new legal agreement addressing their own emissions.⁴⁶ In contrast, some small island states support, as a complement to Kyoto, the negotiation of a new legal agreement that would be more comprehensive in coverage, including the United States and major developing countries such as China, India and Brazil.

In the build-up to the accord, a selected group of developed countries, which included Britain and United States, formulated their own draft text, along with a group of developing countries, which included both China and India. Though both included the need to limit temperature change to 2°C, they differed in other respects.⁴⁷ While the proposal by developed countries implicitly stated that the emissions of poor countries must decline, the proposal by developing countries supported the Kyoto Protocol, which only limits the emissions of developed countries. The Copenhagen Accord reflects a “lowest-common-denominator compromise between these two proposals”.⁴⁸

⁴² *Id.*

⁴³ *Id.*

⁴⁴ GUÉRIN & WEMAERE, *supra* note 26.

⁴⁵ Bodansky, *supra* note 28.

⁴⁶ Scott Barrett, *Nohopenhagen*, OUTLOOK, December 22, 2009, available at <http://www.outlookindia.com/article.aspx?263442> (Last visited on March 30, 2010).

⁴⁷ Scott Barrett, *Copenhagen: Yet Another Giant Beginning with an Uncertain End*, available at <http://yaleglobal.yale.edu/content/copenhagen-yet-another-giant-beginning-uncertain-end> (Last visited on April 1, 2010).

⁴⁸ Chris D, *Thoughts on the COP 15 Summit in Copenhagen*, available at <http://www.willstegerfoundation.org/index.php/expeditions/expedition-copenhagen/expedition-blog/item/681-thoughts-on-the-cop-15-summit-in-copenhagen> (Last visited on April 6, 2010).

B. THE COPENHAGEN ACCORD-A BRIEF GLANCE

The result of the Copenhagen Summit was a three-page, non-binding “Copenhagen Accord” that, while not perfect, provide the beginnings of an agreement to tackle climate change.⁴⁹ The Accord was negotiated by around 30 parties including Brazil, South Africa, India and China (BASIC) and the United States, but it was only ‘noted’ by the Parties, as there was no consensus.⁵⁰ The disputes and disagreements could not be resolved, leading to the agreement being, in substance, a lowest common denominator agreement.⁵¹ Concisely, the accord with regard to emission cuts states that representatives of more than 190 countries deliberated for several days to produce an accord which simply noted that the average world temperature rises should not exceed 2 degree Celsius (3.6 Fahrenheit),⁵² but without any binding commitments for the same.

A summary of the important points of the Accord are as follows-

- It recognized the commitment of the member states to urgently combat climate change in accordance with the principle of common but differentiated responsibilities and respective capabilities.⁵³
- The rise in global temperature limited to not more than 2°C, above pre-industrial levels.⁵⁴
- Annex I countries are required to “commit to implement” economy-wide emissions targets for 2020, and non-Annex I countries are required to implement mitigation actions.⁵⁵
- The emission targets of Annex I countries, and their delivery of finance for developing countries, are to be measured, reported and verified (MRV) and will be under “rigorous, robust and transparent” scrutiny accounting of both targets and finance.⁵⁶

⁴⁹ *Supra* note 20.

⁵⁰ GUÉRIN & WEMAERE, *supra* note 26.

⁵¹ Recent work suggests that global emissions should be around 44Gt² carbon dioxide equivalents in 2020 to be consistent with a 50-50 chance of keeping temperature increase below 2°C. Current emissions are around 47Gt². As mentioned in Nicholas Stern, *Action and Ambition for a Global Deal in Copenhagen*, 6th December 2009, available at www.unep.org/pdf/.../actionandambitionforglobaldealincopenhagen.pdf. (Last visited on June 26, 2010)

⁵² *Supra* note 20 ¶ 1.

⁵³ *Id.*, ¶ 1.

⁵⁴ *Id.*, ¶ 4.

⁵⁵ *Id.*

⁵⁶ *Id.*, ¶ 8.

- Recommended that the collective financial commitment of the developing countries be USD 30 billion between 2010-2012 and approach USD 100 billion by 2020.⁵⁷
- Adaptation to the ill-effects of climate change was an ancillary issue for which, it was agreed, that the developed countries would provide adequate, predictable and sustainable financial resources, technology and capacity-building to developing countries.⁵⁸

C. IMPLICATIONS OF THE ACCORD

1. The status and relevance of the accord

The 15th session of the UNFCCC Conference of the Parties at its culmination adopted a decision that “takes note of the Copenhagen Accord of 18 December 2009”.⁵⁹ To take note of an international document, in accordance with the practice of the United Nations, would mean that the COP was *neutral* and neither approved nor disapproved the Copenhagen Accord.⁶⁰ The Copenhagen Accord therefore is not an official outcome of COP15 but rather is an external document whose existence is only ‘*observed*’ by the COP. In late December 2009, the Danish Presidency circulated a *note verbale* to United Nations Member States’ missions inviting UNFCCC Parties to inform the UNFCCC Secretariat of their willingness to be associated with the Copenhagen Accord. So far, around 100 nations, the latest being India and China have given their assent.⁶¹

It is argued by some that as an international instrument to which UNFCCC Parties would unilaterally declare their association with, the Accord would create international law obligations for such associating Parties.⁶² Most

⁵⁷ *Id.*, ¶ 3.

⁵⁸ *Comments on the Copenhagen Accord: Summary*, South Centre Informal Note 52, 18 January 2010, available at www.southcentre.org/index.php?option=com_docman&task=doc... (Last visited on April 2, 2010).

⁵⁹ In the annex to its Decision 55/488, adopted on 7 September 2001, the General Assembly reiterated “that the terms ‘take note of’ and ‘notes’ are neutral terms that constitute neither approval nor disapproval”. This decision and interpretation has been reiterated by the General Assembly on many occasions since then.

⁶⁰ As of February 10, 2010, the UNFCCC Secretariat had received submissions of national pledges to limit green house gas emissions from 67 countries, representing more than 80% of global greenhouse gas emissions, including the United States, the EU member states, Japan, China, India, Brazil, South Africa and Indonesia.

⁶¹ *Id.*

⁶² *BASIC Countries Accede To Copenhagen Accord*, THE HINDU, January 24, 2010, available at <http://beta.thehindu.com/news/national/article94233.ece?textsize=small&test=2> (Last visited June 25, 2010).

countries however are of the opinion that the Copenhagen Accord is merely indicative of a nation's commitment and nothing more. According to the Environmental Law Minister, Mr. Jairam Ramesh,

“The Copenhagen Accord is not a legal document. It is a political agreement, a political statement. In conclusion, the understanding reached at Copenhagen was that the accord will facilitate two track negotiating process which is the only legitimate process to reach to a legally binding treaty in Mexico.”⁶³

At the very least, the Copenhagen Accord can (and most likely will) be seen, especially by the associating Parties, as an international political commitment that would be the basis for their political negotiating positions for any further international policymaking relating to climate change in other forums, including in the UNFCCC.

2. Weakness of the Accord

The first and foremost weakness of the Accord is its voluntary nature with regards to the quantitative commitments to reduce emissions, the time frame to be adopted in this regard, the selection of the base year,⁶⁴ method of calculation of the mitigation actions⁶⁵ and other such factors limit the potency of the Accord. In effect, each country is free to submit its own national emission reduction target, without such target being subjected to agreement by all Convention Parties, irrespective of the adequacy of the target, leaving room for maneuvering of targets.⁶⁶ It has been argued that this bottom's up approach on the definition of regional targets compromises on environmental effectiveness.⁶⁷ An obvious conclusion would be that future agreements would have to contend with the possibility of a temperature increase of more than 2 degrees, even after what could be termed 'successful global mitigation'.

The European Union has already established an emissions trading system, and has pledged to reduce its emissions by 20% from 1990 levels by 2020

⁶³ 1990 as the Kyoto Protocol provides or some other year such as 2005 (as US climate legislation provides) or 2000 (as Australia's emissions target uses).

⁶⁴ Whether the targets should be defined using international accounting rules suggested by the Kyoto Protocol... The USA, ranked two in the list of the highest polluters in absolute terms, has pledged mere 4% emissions cuts on 1990 levels, which is a very nominal commitment considering its position. That too, the commitment is made contingent on a legislation being passed domestically.

⁶⁵ Enrica De Cian & Alice Favero, 'Fairness, Credibility and Effectiveness in the Copenhagen Accord: An Economic Assessment', available at <http://www.feem.it/getpage.aspx?id=2784&sez=Publications&padre=73> (Last visited on June 17, 2010).

⁶⁶ *EU Leaders Reach New Climate Deal*, BBC NEWS, December 12, 2008, available at <http://news.bbc.co.uk/2/hi/7778787.stm> (Last visited on June 25, 2010).

⁶⁷ *Supra* note 65.

(and by 30% as part of a global and comprehensive agreement for the post-2012 period in which other developed countries undertake comparable efforts).⁶⁸ The United States House of Representatives has passed a domestic climate bill that would reduce United States emissions by roughly 17% below 2005 levels by 2020 (although the prospects for the Senate following suit are uncertain at best). And China and India have both adopted carbon intensity targets – in the case of China, to reduce its emissions per unit GDP by 40-45% from 2005 levels by 2020, and in the case of India, by 20-25%. Given these domestic developments, the prospects for Copenhagen might have seemed good. But it is the structuring of these national policies in an international agreement has proven extremely difficult.⁶⁹

It is to be noted that out of all the pledges made, China's commitment is of great relevance, as its emissions are 25 per cent more than that of the second largest emitter in the world, the USA. Since the targets have been expressed in terms of carbon intensity, it is not straightforward to evaluate what they translate to in terms of emission reductions. Measurement uncertainty over economic activities and greenhouse gases amounts to problems of verifying progress, especially when the conventional measure of 'quota targets' is not used. China's claims of substantial progress towards the 2010 efficiency target have been questioned as inconsistent with the published statistics.⁷⁰ Efforts to verify India's future claims of progress made would be further compounded by the fact that India's pledge includes all greenhouse gases and not merely CO₂, adding a source of uncertainty due to the difficulty in measuring them accurately.⁷¹

The assessment of how challenging and effective the emission reduction targets pledged by countries are is not an easy task. Historical evidence and the results of integrated business models⁷² have shown a mixed picture in which the accord can turn from business-as-usual to a serious climate policy. Two views exist on this issue, - the first suggesting that the pledges made by India and

⁶⁸ Massimo Tavoni, *Assessing the Climate Pledges of India and China: How much do they bite?*, available at <http://www.feem.it/getpage.aspx?id=2984&sez=Publications&padre=72> (Last visited on June 18, 2010).

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ According to the Energy Information Agency of the US Department of Energy, China has planned, outside of the negotiations of the accord to have 114 GW of wind and nuclear energy in place as compared to the current 14 GW.

⁷² As per the Energy Information Agency of the US Department of Energy (EIA-IEO09), the carbon intensities of China and India in 2022 would be 0.56 and 0.28 tCO₂/000\$; thus indicating that both countries would achieve a 40% reduction target without any additional effort. This is backed by the forecasts of the International Energy agency (IEA-WEo09) which forecasts figures in the same vicinity of 0.55 and 0.22 tCO₂/000\$ for China and India respectively. Also, China's Energy Resource Institute has predicted that the Carbon intensity in the baseline is expected to fall within the 40-45% band. In India, it has been shown that even without the implementation of any assistance under the accord, India would continue its de carbonization at a rate of 2% per year, in line with the accord commitments.

China are nothing that they would have achieved *over and above* what they planned to ordinarily achieve through domestic modifications and legislation.⁷³ According to this view, China and India were going to reduce their carbon intensity *anyway*, and these pledges are merely veiled attempts at not taking on any further responsibility.⁷⁴ The second view states that in order to respect the commitments made, India and China will have to undertake substantial policy changes and invest in carbon-free technologies and taxes on emissions. Several models used to predict the actual effort required have provided mixed results,⁷⁵ and it is difficult to say with conviction which of the two approaches is the correct one. Hence, one cannot say for certain that the commitments made are a strictly positive development from the point of view of global emission reductions.

In Copenhagen the discussions about financial support revolved around the typical issues: how much money, from what sources, and with what governance arrangements. The Copenhagen Accord addresses only the first of these issues, leaving the other two for future Resolution.⁷⁶ This is the second weakness of the Accord. The fact that the Accord could not be adopted by consensus will prevent the establishment of a number of institutions that it foresees, including the Copenhagen Green Climate Fund, which may now require a formal decision under the COP.⁷⁷ However, to circumvent the lack of formal adoption, Art. 7(2)(c) of the Convention of the UNFCCC,⁷⁸ which allows the COP to facilitate, at the request of several of its parties, the coordination of measures adopted by them to address climate change, could possibly be invoked. This is one of the plausible ways whereby the useful progress logged in the Accord can be taken on board of the United Nations process without requiring pure consensus. Yvo de Boer, the then head of the U.N. climate office, acknowledged that the accord did not specify how responsibility for the money would be divided up among industrialized countries.⁷⁹

⁷³ See *EMF 22* conducted by the Fondazione Eni Enrico Mattei (FEEM), *Supra* note 42.

⁷⁴ Bodansky, *supra* note 28.

⁷⁵ Dr Pierre Dechamps, *The Road from Copenhagen to Mexico*, Confrontations Europe Monthly Bulletin N°53 – January 2010, available at www.confrontations.org/spip.php?rubrique351 (Last visited on April 9, 2010).

⁷⁶ UNFCCC, *supra* note 22, Article 7 (2) (The Conference of the Parties, as the supreme body of this Convention, shall keep under regular review the implementation of the Convention and any related legal instruments that the Conference of the Parties may adopt, and shall make, within its mandate, the decisions necessary to promote the effective implementation of the Convention. To this end, it shall: (c) Facilitate, at the request of two or more Parties, the coordination of measures adopted by them to address climate change and its effects, taking into account the differing circumstances, responsibilities and capabilities of the Parties and their respective commitments under the Convention).

⁷⁷ James Kanter, *Copenhagen's One Real Accomplishment: Getting Some Money Flowing*, THE NEW YORK TIMES- December 20, 2009, available at <http://www.nytimes.com/2009/12/21/business/energy-environment/21iht-green21.html> (Last visited on April 9, 2010).

⁷⁸ Martin Khor, *The Real Tragedy at Copenhagen*, XLV (1) ECONOMIC AND POLITICAL WEEKLY 10, January 2 - January 8, 2010.

⁷⁹ *Supra* note 59.

Other criticisms of the Accord involve the fact that that most of the countries were not invited when the accord was drafted.⁸⁰ Hence objections were raised by several developing countries regarding the undemocratic procedures and also about the substantive content of the Copenhagen Accord.⁸¹ Thus the Parties were neutral and neither approved nor disapproved the accord. Further the accord failed to mention of any long term global emission cuts-although the 50% reduction in 2050, which was dropped at the last minute, was important to meet the 2°C temperature cap. Further, there is also no target for the long term cuts that the developed countries must take.⁸² It fails to provide any aggregate mid-term (e.g. 2020) emission reduction commitment for developed countries as the reference point that Annex I Parties' individual targets should collectively attain. All the countries are free to submit their own emission reduction target, without such target being agreed by all the Parties, regardless of the adequacy of such a target.⁸³ Thus the accord encourages low levels of national and aggregate mitigation by the Annex I Parties. It also does not impose any obligation on the developed countries to ensure that their own national mitigation targets could be compared to each other in terms of figures, legal nature, and timeframes.⁸⁴ The Accord though recognizes that global temperature should be below 2°C, it fails to elaborate on how this could be achieved. Further, though it also talks about equity, it fails to define clearly the manner and the modalities for achieving equity.⁸⁵

3. Positives from the Accord

In spite of the above weaknesses, a very promising outcome of the Accord has been the fact that several nations which were hitherto inactive about climate change mitigation have now taken up the issue.⁸⁶ The participating states have even agreed to list their national actions internationally and to subject their actions to some form of international scrutiny, even when their actions do not receive any international support. It must also be noted that the emerging countries made a concession on the verification of their actions. The formula used is that of "international consultations and analysis" which translates into these countries coming within the purview of the international regime, which is a big step forward. This provision ensures that they act and report in a transparent manner.⁸⁷

Further, the Accord articulates a quantified long-term goal for the first time (no more than 2° C temperature increase) and puts significant new

⁸⁰ *Supra* note 19.

⁸¹ *Supra* note 59.

⁸² *Id.*

⁸³ *Id.*

⁸⁴ GUÉRIN & WEMAERE, *supra* note 26.

⁸⁵ *Id.*

⁸⁶ *Supra* note 20, ¶ 4.

⁸⁷ Kanter, *supra* note 77.

funds on the table, both for the short and medium terms. For the first time, major developing countries have agreed to reflect their national emission reduction pledges in an international instrument, to report on their GHG inventories and their mitigation actions in biennial national communications, and to subject their actions either to MRV.⁸⁸

According to the United Nations Secretary General, Ban-Ki-Moon⁸⁹ the Accord was a big step forward from negotiations that took place in Bali, Indonesia 2007, where countries committed to control mechanisms but did not pledge any financial support, unlike the Copenhagen Accord where 100 billion dollars a year would be made available. An initial, fast-start fund worth \$10 billion annually would operate from 2010 to 2012.⁹⁰

The commitment made by India and China marks the first step from strict adherence to the principle of common yet differentiated responsibility.⁹¹ Wen Jiabao, the Chinese Prime Minister, specified that China's position was unconditional, stating that China would fulfill its commitment, irrespective of financial or technical support.⁹² China has said it will try to voluntarily reduce its emissions of carbon dioxide per unit of economic growth — a measure known as '*carbon intensity*' — by 40 to 45 percent by 2020, compared with 2005 levels. India set a domestic emissions intensity reduction target of 20 to 25 percent by 2020, compared with 2005 levels, excluding its agricultural sector.⁹³

4. Assessment of the Accord:

The parameter on which the success or the failure of the Accord is to be determined is mentioned in detail in the official website of the UNFCCC. The Copenhagen agreed that the outcome need not resolve all details, but it must provide clarity on four key issues: The **first** is clarity on the mid-term emission reduction targets that industrialized countries will commit to. **Second**, there must be clarity on the actions that developing countries could undertake to limit their greenhouse gas emissions. **Third**, it must define stable and predictable financing to help the developing world reduce greenhouse gas emissions and adapt to the inevitable effects of climate. And **finally**, it must identify institutions that will

⁸⁸ *Id.*

⁸⁹ John M. Broder, *Climate Goal Is Supported by China and India*, available at http://www.nytimes.com/2010/03/10/science/earth/10climate.html?ref=united_nations_framework_convention_on_climate_change (Last visited on June 18, 2010).

⁹⁰ GUÉRIN & WEMAERE, *supra* note 26.

⁹¹ Nitin Sethi, *India Vows 20-25% Carbon Intensity Cuts*, December 4, 2009, available at <http://timesofindia.indiatimes.com/india/India-vows-20-25-carbon-intensity-cuts/articleshow/5298030.cms> (Last visited June 24, 2010).

⁹² *Supra* note 36.

⁹³ *Supra* note 23.

allow technology and finance to be deployed in a way that treats the developing countries as equal partners in the decision-making process.⁹⁴

According to the authors the Accord has been partially successful on these grounds. The unresolved parts now have been pushed to the COP 16 that takes place in Mexico. A serious flaw lies not with the recently concluded accord, but with the UNFCCC convention itself. A dramatic shift has to be made from the free-riding and political maneuvering that is currently seen. Every emitter irrespective of whether it qualifies as a developing or developed nation has to undertake strong emission cuts, for which carbon-free mitigation technologies have to be researched, developed and vigorously implemented. The panacea to all the problems lies in a legally binding agreement with stringent and uniform international verification and monitoring, which will ensure that all countries respect their commitments. Within the framework of the UNFCCC, such a shift seems unlikely. It is for this reason that the authors argue that the developing nations drop the per capita approach and a time limit be set for the formulation of a uniform, internationally monitored binding agreement, which will be further elaborated in the next part of the paper.

III. THE 'PER-CAPITA' DEBATE: EVALUATING INDIA'S STAND

India's stand in the Copenhagen Summit was very clear. The bedrock of India's stand is that the planetary atmospheric space is a common resource of humanity and each citizen of the globe has an equal entitlement to that space.⁹⁵ According to India, the Copenhagen outcome must be concluded on the principle of equity, recognizing that every citizen of the globe has an equal entitlement to the planetary atmospheric resource. In furtherance of the principle of equity, India proclaimed that comparisons in the polluting nature of economies should be seen based on per-capita emissions and not the basis of emissions in absolute terms. India has therefore, strongly relied on the principles of historical responsibility.⁹⁶

It must be noted at this point that as per The Center for Global Development (CGD), India is the 3rd largest emitter in absolute terms.⁹⁷ India has, in its national submission, called for multilateral negotiations to focus on the

⁹⁴ SARKAR, *supra* note 4, 52.

⁹⁵ *India Third Biggest CO2 Emitter In World; NTPC Tops List*, INDIA TODAY, August 31, 2008, available at <http://indiatoday.intoday.in/site/Story/14249/LATEST%20HEADLINES/India+third+biggest+CO2+emitter+in+world;+NTPC+tops+list.html> (Last visited on June 25, 2010).

⁹⁶ *PM: India's Carbon Emissions Will Not Exceed Levels Of Developed Countries*, October 27, 2009, available at <http://www.carbonoffsetsdaily.com/news-channels/india-carbon-market-news/pm-indias-carbon-emissions-will-not-exceed-levels-of-developed-countries-27207.htm> (Last visited on June 14, 2010).

⁹⁷ *Climate Change: The Per Capita Debate For India*, December 8, 2009, available at http://www.ndtv.com/news/india/climate_change_the_per_capita_debate_for_india.php (Last visited on June 26, 2010).

long-term goal for stabilization, which would include mitigation actions. This 'per capita' approach provides the foundation for India's position on climate change negotiations while negotiating how the burden of reducing greenhouse gases should be shared. This approach has been continuously backed by successive governments in India including Prime Minister Manmohan Singh. India has further proposed that India's per capita emissions will not at any stage, exceed those of the developed countries.⁹⁸ India's stand has not found acceptance with most nations, with only Angela Merkel of Germany publicly saying that equal per-capita emission targets seems a fair solution. And so far India and other developed countries have stuck to their stand that it's only fair that all countries eventually have the same per-capita emission levels.⁹⁹

A. DEFENCE OF THE 'PER-CAPITA' APPROACH

India's per-capita stand could be defended on the ground that every person on this planet should begin with the same entitlements, and the fact that people find themselves in a nation whose existing emissions rates are low or high should not be a factor in deciding emission rights.¹⁰⁰ Further, it is reasoned, that it is hardly fair, that a poor nation with a huge population is required to adhere strictly to its current emissions level, when developed nations with similar populations are permitted to emit far more.¹⁰¹ Also there could be no reason why the existing distributing of wealth, as they are reflected in current emissions, will form the groundwork for climate change policy. More bluntly, Why should the United States be given emissions rights that dwarf those of India, which has a much larger population?¹⁰²

The 'per-capita' approach stand is also inherently linked to the argument of "right to development".¹⁰³ If the per-capita approach is not followed, then the poor developing nations might possibly have great difficulty in achieving the levels of development which has already been attained by the developed nations. Therefore, it is argued that a climate change agreement based on existing national emissions rates would invariably violate the "right to development" even if it would be both effective and efficient.¹⁰⁴

⁹⁸ Eric A. Posner & Cass R. Sunstein, *Should Greenhouse Gas Permits Be Allocated on a Per Capita Basis?*, 97 CALIF. L. REV. 51, 2009.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ See Declaration on the Right to Development, G.A. Res. 128, U.N. GAOR, 41st Sess., Supp. No. 53, U.N. Doc. A/41/53 (Dec. 4, 1986).

¹⁰² Posner & Sunstein, *supra* note 98.

¹⁰³ See e.g., Juan-Carlos Altamirano-Cabrera, Michael Finus, *Permit Trading and Stability of International Climate Agreements*, 9 J. Applied Econ. 19 (2006) (arguing for one person, one vote analogy); Paul Baer et al., *Equity and Greenhouse Gas Responsibility*, 289 Science 2287 (2000) (arguing that the per capita approach is justified by the principle of "equal rights"), as cited in Posner & Sunstein, *supra* note 98.

¹⁰⁴ Tables generated by World Resources Institute, Climate Analysis Indicators Tool, available at <http://cait.wri.org/cait.php?page=yearly> (Last visited August 14, 2008)

According to those who subscribe to the fairness approach, a climate change agreement would be unfair if it made development more difficult for poor nations, especially because development is designed to remove citizens in poor nations from difficult conditions, and to allow poor nations to achieve something closer to parity with wealthy nations. A per capita approach would hence be the most fair under this analysis, because it counts every citizen as no less and no more than one, in a way that respects the moral irrelevance of national boundaries.¹⁰⁵

However India's stand cannot be justified. India's rapidly growing emissions rank it among the world's leaders on an absolute basis despite the fact that its per capita emissions are less than a third of those of China, about a sixth of those of France, and about one-fifteenth of those of the United States. Based on 'per-capita' emissions, India is ranked it one hundred twenty-second in the world.¹⁰⁶ If the 'per-capita' approach is followed, both China and India, would be significant at a significant advantage, for their emissions rights would be worth large sums of money, but the industrialized developed nations having a high per capita emissions would be at a disadvantage.¹⁰⁷ Conceding to the fact that any global climate change agreement to reduce greenhouse gas emissions will provide more benefits to some nations in comparison to others, and will impose more costs on some nations than on others; in these circumstances, per capita emissions rights give the appearance but not the reality of fairness.¹⁰⁸

B. CRITIQUES OF THE 'PER-CAPITA' APPROACH

The critiques have pointed out some serious defects to the 'per-capita' approach taking by India. The defects are namely three-fold.

Firstly, the per capita approach appears to be a welfare approach only as long as more populated states tend to be poorer. But not all heavily populated states are poor, and consequently not all the scarcely populated states are rich.¹⁰⁹ Viewed from this angle, the per capita approach seems to be "a crude and even arbitrary way to redistribute wealth, especially compared to the pure redistributive approach, which gives few or no permits to rich states and all or most of the permits to poor states, regardless of population size".¹¹⁰ This is the principal

¹⁰⁵ Posner & Sunstein, *supra* note 98.

¹⁰⁶ *Id.*

¹⁰⁷ For instance, the United States is both large and rich, with a population of 301 million and per capita GDP of \$ 46,000. Bhutan, on the other hand, is both small and poor, with a population of two million and a per capita GDP of \$ 1,400.

¹⁰⁸ Posner, Sunstein, *supra* note 100.

¹⁰⁹ See e.g., Climate Change Risk Report: Country-by-Country Risk Analysis and Mapping: 2008/2009 (2008) [hereinafter Climate Change Risk Report] available at http://www.maplecroft.com/Maplecroft_climate_change.pdf (Last visited on August 4, 2010) ;

¹¹⁰ William D. Nordhaus & Joseph Boyer, *Warming the World*, 91(2000) as cited in Posner & Sunstein, *supra* note 98.

problem with this approach. Clearly, there are certain small states that are rich, and certain poor states that are large, and there are states which are in between. There appears to be no statistically significant correlation between population and per capita GDP.

Secondly, the permits are distributed to both 'greenhouse gas winners' and 'losers'. As a result of climate change, some poor states will end up becoming far poorer while other poor states would be less vulnerable.¹¹¹ Likewise, grave economic effects from climate change might be imposed on some rich states, while other rich states would be less vulnerable. Some states may even be net gainers from climate change.¹¹² If distribution is the central concern, there is no reason why the two highly populated poor nations would receive the same number of permits from a program from which one nation would stand to gain a lot and another a little - or from which one would gain a lot and another would actually lose. Ideally, permits should be distributed taking into account all such consequences, but the per capita approach fails to cater to any of these consequences.

Thirdly, the permits are allocated to the *governments* of poor developing states, as opposed to the *citizens* of poor developing states. This distinction is important since nearly all poor states have a class of wealthy elites, who usually control the government, or have considerable influence over it. Given the fact that the governments in these states already are unresponsive about redistributing wealth from the elites to the poor, it is questionable as to whether that they will use the wealth generated by the permit scheme to help the poor. They may well prefer to help the rich.¹¹³

A climate change treaty, could be said to have two effects, first, it generate revenues: for permit sellers, and secondly, it generates benefits for consumers, e.g. people benefit from abatement of climate change. From this angle, a treaty based on per-capita approach seems to be fair. However the problem with this argument is that the effects of climate change are extremely variable - hurting some people very badly, having no effect on others, and benefiting still others.¹¹⁴ From the standpoint of fairness, it would be strange to ignore these harmful effects while considering only the revenue effects. The analogy to common property is not helpful; it distracts from the relevant question, which is the distribution of all treaty effects across the world's population.

Once we take these various factors into account, the immediate attractiveness of the per capita approach disappears. As commented upon by Eric A. Posner and Cass R. Sunstein,

¹¹¹ Posner & Sunstein, *supra* note 98.

¹¹² *Id.*

¹¹³ *Id.*

¹¹⁴ *Id.*

“We agree that as a matter of actual practice, these defects (the above three defects) are not necessarily fatal to the per capita approach. Everything depends on the alternatives. One might argue in response that while the per capita approach is not ideal, it is still superior to a system that is its most likely alternative - one that uses status quo energy consumption as the baseline and thus favors people living in wealthy and wasteful countries. Perhaps this response is correct. But it must acknowledge the underlying problem, which is that the per capita system is only indirectly connected to the underlying normative goal - indeed, so indirectly that it is conceivable in principle that it has worse distributive effects than the status quo approach.”¹¹⁵

The per-capita approach also has serious drawbacks from the point of view of ‘ex ante’ efficiency¹¹⁶ standpoint. It is to be noted that the ex-ante effects of a climate change treaty denotes its effect on future programs, including those effects which might have nothing to do with greenhouse gases and carbon emissions. A climate change treaty based on the per capita approach could create two perverse incentives: First, encouraging population growth and second, discouraging economic growth.

According to many authors, the per capita approach would establish that the most highly populated states would obtain the greatest benefits from international cooperation, and the state with the larger population would be able to claim a larger portion of the surplus. This could incentivize the governments in pursuing fertility policies that maximize the size of the population. From the perspective of climate change, this would result in grave consequences, as increasing a country’s population would mean that more people will consume more of the earth’s resources. According to Posner,

“Given the relatively low amount of international cooperation, and hence the relatively low amount of treaty-making, one might doubt that the incentive to expand population in order to obtain future treaty advantages is particularly strong.”¹¹⁷

¹¹⁵ *Id.*

¹¹⁶ These perverse population incentives have long been recognized. However, many scholars seem to think that these incentives can be eliminated as long as allocations of permits are made with reference to a past distribution of population rather than to future populations. See e.g., Peter Singer, *ONE WORLD* 35 (2002); Ann P. Kinzig & Daniel M. Kammen, *National Trajectories of Carbon Emissions: Analysis of Proposals to Foster the Transition to Low-Carbon Economies*, 8 *GLOBAL ENVTL. CHANGE* (1998) 36. Such an approach would not address the perverse incentives of the precedent for future treaties, when high-population states will invoke the climate treaty as a basis for demanding more favorable treatment.

¹¹⁷ Rio Declaration, Principle 15 available at <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid=1163> (Last visited on September 13, 2010).

This problem is a cost of the per capita approach that should however be kept in mind.¹¹⁸

The Second effect, many authors opine is that the per capita approach would establish that poorer states would obtain the greatest benefits from international cooperation. This may seem somewhat desirable but its adverse effect is that governments that adopt policies that promote economic growth would be penalized by this principle. Therefore, as seen above, from the standpoint of ex ante efficiency, the per capita approach has serious drawbacks. However, the above drawbacks cannot be gauged without knowing the extent of the effects. A climate change agreement may have small consequences for population growth, and very little effect on incentives in the context of other international agreements. In that case perhaps the shortcomings of the approach will not be of a substantial concern. But what is important to note here is that these shortcomings must invariably be investigated so as to obtain a full account of the welfare effects of the per capita approach.

All of the above arguments go to show that the 'per capita' stand of India cannot be justified either on grounds of fairness or on grounds of welfare principles. Hence there is a need to revisit this stand and India should definitely change its stand and do the needful to prevent climate change. Hence the 'per-capita' approach cannot be used to allocate emission standards to countries in an international agreement for climate change. The next part of the article will briefly highlight the architectures and elements that should be present in an international agreement to tackle climate change.

IV. LOOKING TO THE FUTURE- NEED FOR A POST 2012 INTERNATIONAL AGREEMENT ON CLIMATE CHANGE

According to the authors, climate change could be tackled effectively by enacting an international agreement on climate change. This is the only solution to resolve the dead-lock which exists between the developed countries. An international agreement is essentially required because the impacts of climate change do not respect borders. All countries, whether developed or developing, will experience the harmful impacts of climate change. No single country can solve the climate change problem alone. Therefore, in the interest of all nations, governments around the world must reach a consensus on the need to achieve large cuts in greenhouse gases in the coming years. Unless and until a binding agreement is signed between the respective states, which provides for emission cuts, climate change will continue to occur.

This could be termed as a precautionary measure, to not cause further damage to the environment. It is imperative that countries realize the importance of the application of the precautionary principle, which was expounded in the Rio

¹¹⁸ HELM & HEPBRUN *supra* note 8, 10.

Declaration, 1992, stating, “lack of full scientific certainty should not be used as a reason for postponing cost-effective measures to prevent environmental degradations.”¹¹⁹ Because threats resulting from climate change are of a serious and irreversible nature, it is time that the nations around the world start devising a binding agreement between them without delaying, and waiting for more scientific proofs of climate change.

Before, enumerating the components of an international agreement to climate change it is to be noted that the Kyoto Protocol, which was adopted in 1997, is the only legally binding regime providing for emission cuts for the developed countries exempting the developing countries. However, the Protocol turned out to be completely inadequate to deal with climate change.¹²⁰ The Kyoto has so far delivered little and has failed to make any appreciable difference to climate change.¹²¹ Therefore, the defects of the Kyoto Protocol should be avoided while devising an international agreement on climate change. The fundamental flaw of the Protocol was that it allocated emissions reduction entitlements to some countries but not to others, i.e. only on the developed countries leaving developing countries without emission reduction and/or avoidance obligations.¹²² This is because climate change is a global phenomenon, affecting all the countries, though the degree of effect varies. Being a global phenomenon, the effective mitigation of climate change cannot be achieved unless all countries act to reduce and/or avoid GHG emissions.¹²³

Any international agreement aimed at the mitigation of climate change must cater to three principal aspects- first, secure sufficient participation to be effective; second, achieve agreement on rules that are meaningful, so that if they were followed, climate change would indeed be mitigated; and third, ensure compliance with the rules. Therefore, the agreement must strive to solve problems of *participation*, *effectiveness*, and *compliance*. It is to be noted that solving all three problems simultaneously is particularly difficult, since achieving one goal is likely to make at least one other objective harder to meet.¹²⁴

¹¹⁹ *Id.*

¹²⁰ Scott Barrett, *Towards a Better Climate Treaty*, available at http://papers.ssrn.com/abstract_id=318681 (Last visited on June 21, 2010) ; *see also*, Robert N. Stavins & Scott Barrett, *Increasing Participation and Compliance in International Climate Change Agreements*, available at http://papers.ssrn.com/abstract_id=351602 (Last visited on June 22, 2010).

¹²¹ *Id.*

¹²² Robert O. Keohane & Kal Raustiala, *Toward A Post-Kyoto Climate Change Architecture: A Political Analysis*, SSRN, available at <http://ssrn.com/abstract=1142996> (Last visited on June 22, 2010).

¹²³ Vijay Joshi & Urjit R. Patel, *India and a Carbon Deal*, XLIV (31) ECONOMIC AND POLITICAL WEEKLY, August 1, 2009, 72.

¹²⁴ *Id.*

ELEMENTS TO BE INCORPORATED INTO THE POST-KYOTO AGREEMENT

The first and foremost element of a climate change agreement is that it should be global and comprehensive.¹²⁵ The agreement should not only cover the developed countries, but also the developing countries. Participation of the developing countries is important for they are expected to contribute two-thirds of the global emissions in the rest of this century.¹²⁶ The agreement should be such that the United States is also willing to be a part of it. Being the world's largest emitter of greenhouse gases, a major trading partner of the Kyoto signatories and the world's largest economy the participation of the United States is required to achieve meaningful global action.¹²⁷

By placing all countries under the emission reduction obligation, it would also eliminate the main objection of the United States regarding the Kyoto Protocol, leading it not to ratify the Protocol. If binding responsibilities are not imposed on all countries, the agreement has no chance of succeeding in its ultimate objective of dealing with climate change.

The agreement should essentially cover three types of countries—those with historically low responsibility and low potential for future GHG;¹²⁸ those with historically high responsibility for emissions and a high potential for future emissions;¹²⁹ and lastly those with historically low responsibility for GHG emissions but high potential for future GHG emissions.¹³⁰ The first category of countries would be entitled to the highest allocations of emissions rights under a post Kyoto Protocol climate change mitigation regime, while the second category of countries would be allocated the lowest emissions entitlements. The third category should be allocated moderate emission entitlements.¹³¹ Hence, this gives effect to the principle of sustainable development and the principle of intra-generational equity, allocating the largest development rights (represented by emission entitlements) to the poorest countries.¹³²

The above method of allocation also makes the framework of the agreement equitable. It enables to distribute the cost fairly, which is crucial both

¹²⁵ Keohane & Raustiala, *supra* note 122.

¹²⁶ Mumma & Hodas, *supra* note 9 (providing examples like predominantly the African countries, and other small countries in Asia).

¹²⁷ *Id.* (Annex I countries).

¹²⁸ *Id.* (Large newly industrializing countries of China, India, Brazil, Mexico, South Africa, and other rapidly industrializing economies).

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ Joshi & Patel, *supra* note 123.

¹³² Mumma & Hodas, *supra* note 9.

for obtaining participation and ensuring compliance by the nation states.¹³³ Further, this framework also provides a way out of the dead-lock that has so far stalled discussions on climate change mitigation since its inception.¹³⁴

The agreement should also be comprehensive, for two other reasons—first, to prevent the problem of leakage. An agreement covering only a few countries and excluding others would lead to the migration of carbon-intensive industries to the countries which are excluded from the agreement, thereby negating the emission reduction in the participating countries. Second— if significant trading partners are excluded, then the competitiveness concerns would erode the willingness of companies in participating countries to comply with emission targets.¹³⁵

The next criterion for any agreement on climate change should be that the agreement should not only take into account the historical responsibility, but also the projected future emissions, unlike the Kyoto Protocol.¹³⁶ The agreement should also be efficient, and should operate through the market and strive to achieve a world-wide common price for emissions. This would lead both to cost-effective emission reduction and appropriate price signals for the development of carbon-clean technology.¹³⁷

The agreement should also have a provision for technology transfer and capacity building to enable poor countries to embark on a sustainable development path based on low carbon energy efficient and renewable energy technologies.¹³⁸

Another important criterion for an agreement addressing climate change is that it should be enforceable. The agreement should not be like the Kyoto Protocol, where even though emissions commitments are legally binding, Article 18 of the Kyoto Protocol prohibits adoption of a compliance mechanism entailing “binding consequences” unless adopted by means of an amendment.¹³⁹ The Protocol thus contains “irreconcilable elements”.¹⁴⁰ While on one hand, it demands substantial reductions in emissions by some countries, on the other hand, it denies parties the means for enforcing these obligations (except through an amendment).¹⁴¹ In other words, there is nothing in the agreement that actually

¹³³ Joshi & Patel, *supra* note 123.

¹³⁴ Mumma & Hodas, *supra* note 9; *see also* Joshi & Patel, *supra* note 123, 72.

¹³⁵ Joshi & Patel, *supra* note 123.

¹³⁶ Mumma & Hodas, *supra* note 9.

¹³⁷ Kyoto Protocol to the United Nations Framework Convention on Climate Change, UN Doc FCCC/CP/1997/7/Add.1, Dec. 10, 1997; 37 ILM 22 (1998), Article 18.

¹³⁸ Stavins & Barrett, *supra* note 120.

¹³⁹ *Id.*

¹⁴⁰ Barrett, *supra* note 123; *see also* Stavins & Barrett, *supra* note 120.

¹⁴¹ Joshi & Patel, *supra* note 123.

makes even the ratifying countries do what they said they would do.¹⁴² It is imperative that the agreement must also provide for some meaningful disincentives for non-compliance.¹⁴³

India should strongly advocate and help in achieving an international agreement for climate change. This is because, India is more vulnerable to climate change than the United States, China, Russia, and indeed most other parts of the world. Among other developing states, India might possibly be very seriously impacted by the adverse effects of climate change.¹⁴⁴ The three main areas of impacts are those on agriculture, sea level rise resulting in submergence of coastal areas, and increased occurrence of extreme events. Each of these concerns poses serious threat to India.¹⁴⁵ The losses would be particularly severe, possibly calamitous, if contingencies such as drying up of North Indian rivers and disruption of monsoon rains continue to happen.¹⁴⁶ Hence India should not only be willing to be a part of the global agreement, but should also encourage other nations to do the same.

V. STEPS INDIA SHOULD TAKE TO ADDRESS CLIMATE CHANGE WITHIN THE DOMESTIC SPHERE

A. EXISTING CLIMATE CHANGE LEGISLATIONS AND POLICIES IN INDIA

In order to tackle the consequences of climate change, over the years, India has developed several legislations and pursued numerous policies, focusing on energy conservation and deployment of renewable energy technologies.¹⁴⁷

In the absence of a specific legislation addressing the problem of climate change, the most important legislation which could be linked to climate change is the Air Prevention and Control of Pollution Act 1981¹⁴⁸ (*hereinafter* Air Act) enacted by the Central Government under Article 253 of the Constitution of India.

The above Act is important for addressing climate change, for there is a direct link between air pollution and the climate change. It is in fact due to the

¹⁴² Kapur, Khosla & Mehta, *supra* note 6.

¹⁴³ *Climate Change: India's Perceptions, Positions Policies and Possibilities*, OECD 2002, available at www.oecd.org/dataoecd/22/16/1934784.pdf (Last visited on April 2, 2010).

¹⁴⁴ Kapur, Khosla & Mehta, *supra* note 6.

¹⁴⁵ Ministry of Environment & Forests, Ministry of Power, Bureau of Energy Efficiency, Government of India, India: Addressing Energy Security And Climate Change, available at envfor.nic.in/divisions/ccd/Addressing_CC_09-10-07.pdf (Last visited on April 2, 2010).

¹⁴⁶ The Air Act, 1981.

¹⁴⁷ Staurt Bell & Donald McGillivray, *Environmental Law*, 511 (2008).

¹⁴⁸ *Supra* note 35, 10.

emission of six green houses gases-namely, nitrous oxides, carbon dioxide, CFCs, PFCs, methane and ground-level ozone, that the infra-red radiation emitted by the earth's surface is trapped thereby raising the air temperature, and leading to global warming, hence climate change.¹⁴⁹ The only way to prevent climate change is to reduce emissions dramatically.¹⁵⁰

The Air Act, provides for Central and State Control Boards to handle matters connected with improvement of air quality, monitoring activities, enforcement through fine and criminal prosecutions. State Governments can designate particular areas as air pollution control areas¹⁵¹ and every industrial operator within that area is required to obtain a permit from the state board.¹⁵² The state boards in consultation with the central boards can lay down standards for emission of air pollutants from plants and automobiles.¹⁵³ Further, it also empowers the Magistrate to restrain an air polluter from discharging emissions, after an application has been made by the board¹⁵⁴ and allows the board to close down an industry, or withdraw its supply of power or water, if the directions of the Board are not followed.¹⁵⁵

In response to the Water and Air Acts, the Indian legislature promulgated the Environment Protection Act, 1986(*hereinafter* EPA) to cure deficiencies and gaps left in India's core body of environmental law.¹⁵⁶ The Air Act operates in tandem with the EPA, which enables the Central Government to take any measures as it deems for the protection of the Environment.¹⁵⁷ The Government can lay down emission standards¹⁵⁸ which are found in schedules appended to the Environment (Protection) Rules, 1986 (*hereinafter* EPR). Since under Section 24 of the EPA, the EPR norms take precedence and hence in practice the state boards usually re-notify the EPR standards under the Air Act. Further, the rules framed under the EPA prescribe emission norms for specific industries,¹⁵⁹ and general emission standards¹⁶⁰ which apply in absence of industry specific norms.¹⁶¹ Schedule VII of the EPR deals with National Ambient Air Quality

¹⁴⁹ *Supra* note 146, § 19.

¹⁵⁰ *Id.*, § 21.

¹⁵¹ *Id.*, § 17(g).

¹⁵² *Id.*, § 22A.

¹⁵³ *Id.*, § 31A.

¹⁵⁴ Vahbiz P. Karanjia, *Why India Matters: The Confluence Of A Booming Economy, An Activist Supreme Court, and a Thirst For Energy*, 20 VILL. ENVTL.L.J. 49, 2009.

¹⁵⁵ Environmental Protection Act, 1986 § 3(i) – 3(xiv)

¹⁵⁶ *Id.*, § 3(iv), § 6(2).

¹⁵⁷ *Id.*, § 11.

¹⁵⁸ *Id.*, § 12.

¹⁵⁹ Environmental Protection Rules, 1986, Rule 3.

¹⁶⁰ Schedule VII.

¹⁶¹ Schedule IV.

Standards (*hereinafter* NAAQS), which provides for separate standards and concentrations for industrial, residential, and rural areas and sensitive regions¹⁶² and are intended to protect public health, vegetation, with an adequate margin of safety. Another major area where standards have been issued under the EPA is emission standards for motor vehicles.¹⁶³

Ozone Depleting Substances (Regulating) Rules, 2000, was enacted by the Central Government in exercise of powers conferred by sections 6, 8 and 25 of the EPA. The Act prohibits any person from production and consumption of ozone depleting substances,¹⁶⁴ from importing or exporting to any country not specified in Schedule VI,¹⁶⁵ and if specified in Schedule VI, then a licence has to be issued by the authority, but the grant of licence shall not result in consumption which exceeds the specified limit.¹⁶⁶ It also regulates the sale, stock or exhibit for sale or distribute¹⁶⁷ any ozone depleting substance unless he is registered with the authority specified in column (4) of that Schedule, and also the purchase¹⁶⁸ of ozone depleting substances. The Act also deals with Regulation on the use, manufacture, import, export of ozone depleting substance.

Apart from the above Acts and Rules, India has also pursued various policies and publicly funded programs focusing in particular on energy conservation and deployment of renewable energy technologies.¹⁶⁹ Some of these are:

Reforming Energy Markets (Electricity Act 2005, Tariff Policy 2003, Petroleum & Natural Gas Regulatory Board Act, 2006, etc.) involving removal of entry barriers in exploration, extraction, transmission of primary and as well as secondary energy; Introducing price reform and tax reforms to encourage optimal fuel choices; Providing feed in tariffs for renewable energy in particular solar energy, wind and biomass; New and Renewable Energy Policy, 2005 promoting use of sustainable and renewable energy sources, and facilitating speedy deployment of renewable technology through indigenous design, and manufacturing; Rural Electrification Policy, 2006, encouraging renewable energy technologies where grid connectivity is not feasible or cost-effective; Energy

¹⁶² Ozone Depleting Substances (Regulating) Rules, 2000, § 3.

¹⁶³ *Id.*, § 4.

¹⁶⁴ *Id.*, § 5.

¹⁶⁵ *Id.*, §6.

¹⁶⁶ *Id.*, §7.

¹⁶⁷ PRODIPTO GHOSH, *Is India a Solution to the Problem or a Problem to the Solution?* 19 CLIMATE CHANGE: PERSPECTIVES FROM INDIA, (Sunita Narain et al., ed., 2009).

¹⁶⁸ The Bureau of Energy Efficiency (BEE) (It has been working with key industries which include cement, aluminum, paper and pulp, to establish voluntary energy-efficient practices. It is also devising standards for energy labeling, building codes, certification programs, etc. See *generally*, Bureau of Energy Efficiency, Engagement of Retainer Consultant for National Energy Conservation Awards 2008 programme of BEE).

¹⁶⁹ *Id.*

Conservation Act, 2001, aiming to reduce specific energy consumption in diverse sectors, and set up the Bureau of Energy Efficiency (BEE):¹⁷⁰ Energy Conservation Building Code, 2006: This code is aimed at ensuring energy efficiency in every building with more than 500 kVA connected load or air-conditioned floor area over 1000 square metres; 50,000 MW Hydroelectric Initiative, 2003: has identified around 162 new hydro-electricity projects having 50,000 MW potential. Other programs include promoting solar thermal water heaters, solar PVs, wind power generation, biomass gasifiers, biogas and manure management, fuel cells, Biodiesel Purchase Policy, energy recovery from urban wastes etc.¹⁷¹

India has also designed a National Action Plan on Climate Change (*hereinafter* NAPCC), which provides the framework for India's climate change policy. NAPCC while emphasizing on adaptation to climate change and priority for economic development it also lays out in broad terms the over-all framework for actions in different spheres of its energy system in response to climate change.¹⁷² Specifically it lays down eight national missions as the way forward.¹⁷³

Together, these are the pieces of environmental legislation which provides a framework for the Indian people, as well as the judiciary, to enforce environmental protections.

B. Further Steps that India Should take to deal with Climate Change

Irrespective of what happens at international negotiations, India should address the growing challenges arising out of a changing climate, within the domestic sphere.

There is an urgent need to enact specific laws which is aimed at mitigating Climate change India should enact laws like those of 'Climate Change and Sustainable Energy Act, 2006' and the 'Climate Change Act 2008' which has been enacted in the United Kingdom, to create a statutory framework to reduce

¹⁷⁰ Varun Rai & David G. Victor, *Climate Change, and the Energy Challenge: A Pragmatic Approach for India*, XLIV (31) ECONOMIC AND POLITICAL WEEKLY, 78, August 1, 2009.

¹⁷¹ Prodipto Ghosh, *India's Actions and Perspectives on Climate Change*, available at www.ncaer.org/popuppages/.../neemrana-presentation13.pdf (Last visited on April 6, 2010) (The missions are: National Solar Mission; National Mission for Enhanced Energy Efficiency; National Mission on Sustainable Habitat; National Water Mission; National Mission for Sustaining the Himalayan Ecosystem; National Mission for a Green India; National Mission for Sustainable Agriculture; National Mission on Strategic Knowledge for Climate Change).

¹⁷² *Id.*, 35.

¹⁷³ Atmospheric Brown Cloud or the Asian brown cloud as it is commonly called is a layer of smog over South Asia and the northern Indian Ocean. Research in the past few years has revealed that it has a strong net warming effect, and has resulted in increasing regional warming by approximately 50%.

GHGs and other emissions. The State governments should also enact such legislations to minimize emissions and set out emission reduction goal.¹⁷⁴ It should also set a long-term target to reduce emissions of greenhouse gases, and the long-term target should be further supported by an interim target and a framework of annual targets intended to drive the policies necessary for achieving the long-term target.

Any strategy to address climate change in India, must address the role of atmospheric brown cloud (*hereinafter* ABC).¹⁷⁵ Reducing the brown, black carbon from the atmosphere may be one of the quickest ways to tackle climate change.¹⁷⁶ Biomass burning is said to be the key contributor to the ABC, and methods should be devised to reduce biomass burning. A short-term or a transitional method of burning biomass more cleanly is through improved cooking stoves, which consumes less fuel, reduces indoor air pollution and emissions from cook-stoves. They should replace the traditional three-rock stoves used in the rural house-holds. The government should design a low-cost cook-stove programme, which will reduce ABC and mitigate climate change.¹⁷⁷ Apprehensions regarding the cost of cook-stove programme, which could be solved by assistance from outside, or the Indian Government, could just make the market attractive for some of the major corporations trying to roll out large scale cook-stoves programme in the country.

India also needs to deploy resources towards augmenting domestic research capacity, so that the impacts of climate change in different sectors can be gauged properly.¹⁷⁸ Presently there is hardly any conclusive research on the impacts of climate change. There is also a requirement to put resources in universities and for climate related research, which could also promote greater awareness, involvement, constructing behavioral preferences and ultimately to the interest in building institutions of advanced climate research.¹⁷⁹

Further initiatives like designing programmes for replacing street lights with LED lighting, substituting conventional fossil fuels by alternative fuels (municipal, industrial waste, biomass) in the cement kilns, providing for stricter vehicle emission norms, modifying current policies and vehicle taxations that disincentivize public transport use, raising efficiency standards for new and existing power generators, alter taxation standards to re-incentivize renewable energy use could be undertaken.¹⁸⁰ Also prevention based environmental policy

¹⁷⁴ *Supra* note 173 (Brown and Black carbon in the atmosphere lasts only a few days or weeks as opposed to decades for carbon dioxide and GHGs).

¹⁷⁵ *Supra* note 170.

¹⁷⁶ Kapur, Khosla & Mehta, *supra* note 6, 35.

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*, 38-40.

¹⁷⁹ *Id.*

¹⁸⁰ *Air Pollution with Special Reference to Vehicular Pollution in Urban Cities*, available at envfor.nic.in/soer/2001/ind_air.pdf (Last visited on April 6, 2010).

needs to be strengthened. Issues such as cleaner technology and land use planning incorporating environmental considerations need to be given priority.¹⁸¹ Since vehicles significantly contribute to air pollution, vehicular pollution control should be given top priority. A practical strategy should be developed which reduces both emissions and congestion, which are dictated by command and control, and/or the market based principles.¹⁸²

Further air quality parameters also need to be monitored such as ozone, benzene, dry deposition of sulphates and nitrates. Private/Community participation in monitoring activity should also be encouraged. Also emission load mapping at regular intervals for all the urban areas is required.¹⁸³ Further, the government should formulate new schemes and programmes for efficient management of urban air pollution.

Since vehicles contribute significantly to the total air pollution load in most urban areas, vehicular pollution control deserves top priority. A practical transport strategy should be devised both at the national and the state levels, that reduces both emissions and congestion, using a mixed set of instruments, which are dictated by command and control, and/or the market based principles.¹⁸⁴

To attain quantifiable results, it is important that the municipalities in the towns and cities must implement a variety of tools, techniques and encourage residents regarding the need to reduce GHG emissions. Without the coordination of the Centre, State, the municipalities, the proliferation of programs and initiatives may lead to confusion, possible diffusion of resources, less than perfect communication within and among government entities, and missed opportunities. These are some of the steps which if undertaken, can mitigate the problem of climate change to a great extent.

¹⁸¹ *Id.*

¹⁸² *Id.*

¹⁸³ *Karnataka Industrial Areas Development Board v. Sri. C. Kenchappa and Ors*, AIR 2006 SC 2038 (here the court specifically acknowledged the problem of climate change and global warming, while discussing the consequences of environmental degradation, and stated that if gas emissions continue at the present rate, it would lead to worldwide flooding and unprecedented rise in the sea level. It also took note of the problem of depletion of ozone layers); *Bombay Dyeing and Mfg. Co. Ltd. v. Bombay Environmental Action Group and Ors*, AIR2006SC1489 (here the court while dealing with major threats to the environment, pointed out among others, the phenomenon of climate change and global warming is a growing problem and that the need to protect the environment has become a priority); *Balachandra Bhikaji Nalwade v. Union of India and Ors.*, 170(2009)DLT251 (the Delhi High Court specifically reiterated what the UNFCCC states about climate change, while discussing the precautionary principle).

Finally India also needs to advertise these ongoing efforts, and highlight its commitment to helping address the global challenge of climate change. Indian negotiators should move from a defensive to a proactive position. They should bring forward India's efforts to address a global problem while simultaneously tackling national concerns, such as poverty alleviation and development.

VI. CONCLUSION

From the above discussion it is clear that a lot needs to be done by India to combat the problem of climate change. Though the judiciary in India has been very proactive in protecting the environment and in acknowledging the problem of climate change,¹⁸⁵ still a lot has to be done with reference to enacting different laws and policies in order to effectively address climate change. The steps which have been suggested above could one of the means of combating climate change within the domestic sphere.

The international response to climate change has so far been very inadequate. With climate change creating devastating impacts all over the world, there is an urgent need to address climate change not only at the domestic level, but also at the international level. The Copenhagen Summit, which was supposed to devise a comprehensive, legally binding international agreement, was a failure, and the only outcome was a 'non-binding' Copenhagen Accord.

Nevertheless, the summit cannot be termed as a complete failure. Despite all the weaknesses of the Accord, it represents the beginnings for an agreement to tackle climate change. Further, it also shifts focus on to the emissions of the developing countries representing a major reorientation of the climate change negotiations.

The stand of the developing countries, including India, that emission rights should be allocated on a per-capita basis should be abandoned, since the stand can neither be justified from a welfare or fairness perspective. Per-capita allocations cannot be the sole basis for allocating emission rights. If this stand is not abandoned, it would thwart any future international agreement, for the developed countries, especially the United States, would not be willing to be a part of the agreement. Essentially aggregate emission of a country should be taken into account while allocating emission targets.

An international community needs to come up with an international agreement on climate change, without further delay, for this is the only way that the problem of climate change could be dealt with. The agreement should be comprehensive, and should provide for binding emission targets for both the industrialized developed and developing countries. The agreement should take into account the future projected emission of a country, it should be equitable and efficient, and should also be enforceable. These are the elements which form the backbone of a climate change agreement.

A binding agreement was supposed to be devised in the Copenhagen Summit, but unfortunately, the Copenhagen Accord miserably failed to map a clear path towards a treaty with binding commitments. It is hoped that at the next climate talks in Mexico, this year, a global climate change mitigation treaty is signed by the Parties. As for India it should abandon its present stand of per capita emissions, and should actively engage itself in combatting climate change, by willing to be a part of such a global agreement.