The European Union, India and Climate Change Negotiations: From Copenhagen Climate Summit (2009) to Warsaw Climate Summit (2013)

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DECLARATION

I declare that the dissertation entitled "**The European Union, India and Climate Change Negotiations: From Copenhagen Climate Summit (2009) to the Warsaw Climate Summit (2013)**" submitted by me in partial fulfilment of the requirements for the award of the degree of **MASTER OF PHILOSOPHY** of Jawaharlal Nehru University is my own work. The dissertation has not been previously submitted for the award of any other degree of this or any other university.

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CERTIFICATE

We recommend that this dissertation be placed before the examiners for evaluation.

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DEDICATED TO MY LOVING PARENTS

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ABBREVIATIONS

GHG	Green House Gases
IPCC	Intergovernmental Panel on Climate Change
UNFCCC	United Nations Framework Convention on Climate Change
JUSCANZ	Japan, United States, Canada, New Zealand, Australia, Iceland, Israel, Leichtenstein, Norway and Switzerland
CDM	Clean Development Mechanism
ETS	Emissions Trading System
EU	European Union
NAPCC	National Action Plan on Climate Change
CBDR	Common But Differentiated Responsibility
BASIC	Brazil, South Africa, India, China
UNEP	United Nations Environment Programme
AWG-LCA	Ad hoc Working Group on Long term cooperative Action under the Convention
BAP	Bali Action Plan
EAP	Environmental Action Programme
SEA	Single European Act
BSA	Burden Sharing Agreement
EEA	European Environment Agency
EC	European Commission
ECCP	European Climate Change Programme
COP	Conference of the Parties
REDD	Reducing Emissions from Deforestation and Forest Degradation

Chapter 1

Introduction

Background

Climate means the weather condition that prevails over an area, generally or for a long period of time. The Earth's atmosphere is made of many gases. Nitrogen and oxygen are the two major gases of the Earth's atmosphere and the other gases occur in small or negligible quantities and these gases are carbon dioxide, water vapour, methane, ozone, halocarbons and nitrous oxide. These gases are also called the greenhouse gases (GHG). Nitrogen and oxygen do not have much effect in controlling or regulating the Earth's climate. It is the greenhouse gases which impacts our climate. The Earth receives energy from the Sun and radiates back some of the heat into space. Now the greenhouse gases absorbs some of the energy (infrared radiation) which is reflected back to space and plays an important part to keep the surface of the Earth warm and to sustain life on Earth. Without these greenhouse gases, the earth would have been cold and freezing. This is called the 'greenhouse effect'. Today, due to our excessive use of the fossil fuels for our energy needs, the quantity of the greenhouse gases have risen than the required level and this has led to global warming and eventually leading up to climate change.

Climate change is a serious threat for all. The effects of climate change are dangerous and can have disastrous consequences. Mankind's heavy impact on the environment is the main cause of global warming, which in turn has led to climate change. It should be noted that climate change and global warming are two different things. Global warming refers to the increase in the average temperature of the Earth due to the increase of the greenhouse gases(GHG) in the atmosphere by the burning of the fossil fuels. Climate change on the other hand, refers to the change in the climatic conditions of the world over a period of time. This is caused by global warming.

The Inter-Governmental Panel on Climate Change(IPCC) defines climate change as "change in the state of the climate that can be identified by changes in the mean

and/or variability of its properties and that persists for an extended period, typically decades or longer. It refers to any change in climate over time, whether due to natural variability or as a result of human activity". The United Nations Framework Convention on Climate Change(UNFCCC), however, has different version for climate change. It defines climate change as a change in the climate which is attributed directly or indirectly by the human activities and this has the ability to alter the atmosphere of the Earth over a period of time.

Climate change can be viewed from two aspects – (i) anthropogenic origin and (ii) natural causes. The anthropogenic origin of climate change refers to the human or man-made causes and it coincides with the Industrial Revolution. Global warming of the Earth is mostly caused by anthropogenic components (Mann 2009: 194). Increase in the industrial activity of mankind over the years has increased the concentration of the GHG in the atmosphere. Between 1970- 2004, there has been a rise in the global GHG emissions due to increase in human activities in sectors such as energy supply, transport and industries (IPCC Synthesis Report 2007: 36). The report further explains that human activities have resulted in the increase of four long-lived GHG which are – Nitrous oxide (N2O), methane (CH4), carbon dioxide (CO2) and halocarbons which are a group of gases containing fluorine, chlorine or bromine. This accumulation of GHG in the atmosphere traps the heat from the Sun which heats up the Earth and leads to climate change. Climate change affects people and the environment around us. The effects of climate change can be long term and are potentially harmful and irreversible. (Stern 2008:1).

Recent study has shown that climate change has caused tremendous effects on the natural as well as human system of the world. Findings have shown that the change in the precipitation level or the melting of the snow and ice has led to the change in the hydrological systems of the world. This has led to shrinking of the glaciers, affecting the runoff of the water resources downstream, the rising of sea levels and decline of the permafrost in the high latitude regions. Secondly, climate change has caused extreme change in the weather causing droughts, heat-waves, floods, cyclones, etc. Also this change in the weather has affected the crop yields which in turn can lead to food security of the world. Third, climate change has also affected human mortality rate as there has been increase in heat and cold related deaths in the world. Fourth,

there high chances of extinction of certain species (both fauna and flora) due to climate related events (IPCC SPM Report 2014: 4-6).

The Report mentions that by 2080s the planet is expected to experience floods each year due to the rise in the sea level and the millions of people will be affected by this. The worst hit regions will be the densely populated low-lying areas of Asia and Africa (IPCC Synthesis Report 2007: 48).

History of Climate Change Negotiations

Environmental politics on climate change has become an important issue on international negotiations and since the 1970s the issue of climate change has been raised.

Bodansky divides the development of climate change regime into five periods until the Kyoto Protocol. The first period was the emergence of a scientific consensus. The theory of global warming was put forward by a Swedish chemist called, Svante Arrhenius a century ago but this did not arise as a global issue until the 1990s (Bodansky 2001:24). By 1979, the first ever World Climate Conference was held in Geneva organized by the World Meteorological Organization (WMO). This was a scientific conference and attended by scientists of various disciplines. However this conference was unsuccessful and it failed to attract any policymakers. Even in 1985, when the WMO held a major workshop on climate change at Villach, Austria, the US officials who went for the workshop were sent without any specific instructions. Hence it failed miserably to identify that climate change was a serious problem at that time (Bodansky 2001:24).

The problem of climate change was only looked from a scientific perspective and during the 1960s, the scientists were able to identify that the concentration of the GHG were increasing and their findings showed that the increase in the GHG concentration in the atmosphere was due to anthropogenic emissions. It was identified as a serious problem than they had earlier imagined (Bodansky 2001: 25-26).

By mid- 1980s, with the growth of technology, some of the environmentally concerned scientists tried to promote the seriousness of climate change on the

international agenda, through workshops, conferences, articles, etc. As further studies were conducted, depletion of the ozone layer, deforestation, hazardous wastes, etcwere identified as a serious environmental problem. This created a sense of public concern around the globe (Bodansky 2001: 27). This was the second period which Bodansky identifies as agenda-setting.

What was significant about these scientific observations and the conferences held by the WMO was that it led to the formation of the IPCC and United Nations Environment Programme (UNEP) in 1988 and by 1992 the United Nations Framework Convention on Climate Change (UNFCC), an international environmental treaty, was signed by the countries. This treaty had no legally binding agreements to cut down the GHG emissions but it set as a framework for future negotiations on international environmental treaties (or protocols).

Initially climate change was dominated only by non-governmental actors who were environmental scientists but by 1988, the awareness created by these scientists, global warming and change in the climate became an inter-governmental issue. The governments began to play a crucial role in environmental politics. International organizations like the UN identified climate change as a "common concern of mankind". Other important international conferences or summits also acknowledged that the time had come to create an "institutional authority to preserve the Earth's atmosphere and combat global warming" (Bodansky 2001: 28). This was the third period which Bodansky identifies as the period of early international responses. Fourth, during the 1990s, the UNFCCC was created to foresee the international climate change negotiations. The role of non-governmental actors however declined during this phase. Fifth, by 1997, the Kyoto Protocol was adopted and it legally binds the developed nations to cut down their GHG emissions. The Kyoto Protocol came into force in 2008 and the first commitment ended in 2012. The Kyoto Protocol was amended in 2012 to accommodate the second commitment period from 2013 to 2020 and as of now, it has not entered into a legal framework.

In 2007, the Bali Roadmap was adopted during the 13th Conference of Parties (COP) which was held in Bali. The goal of the Roadmap was to have a "forward-looking decisions that represent the work that needs to be done under various negotiating 'tracks' that is essential to reaching a secure climate future." The Bali Roadmap

consisted of three major documents which talked about concluding the "Dialogue on Long-term Cooperative Action under the Convention" and also the establishment of the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA); second, the decision on the second review of the Kyoto Protocol; third, was the conclusions adopted by the "Ad-hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol" (Harmeling and Bals 2008: 8).

The Bali Roadmap included the ambitious Bali Action Plan (BAP), which is a wide-ranging negotiating process to tackle climate change through long-term cooperative actions, now and beyond 2012. The Bali Action Plan looks in four key areas to address the issues of climate change – mitigation, adaptation, technology and financing. Mitigation refers to the control and reduction of GHG emissions; the second pillar of the BAP reflects the growing concern that climate change is a serious threat and developing countries, especially the low lying regions and small island states, will need a special attention to tackle the challenges of the climate change. Technology and finance relates to the mitigation and adaptation actions by the developing countries with the help and support from the developed countries and future international commitments or agreements need to balance the different aspects of socio-economic and geo-physical characteristics of these four pillars (Clemencon 2008: 73).

In 2009, the UNFCC held a conference in Copenhagen, for climate change mitigation beyond 2012. The Copenhagen Accord contained a political respond to the climate change both for short and long term periods. It included limiting the Earth's temperature to increase no more than 2 degree Celsius above the pre-industrial levels and this was subject to review by 2015. However, this agreement came to a standstill as there was no consensus between the developing and the developed countries on the emission targets.

In 2010 the UNFCCC held another meet in Cancun, Mexico and the outcome of this meet was that a "Green Climate Fund" and "Climate Technology Centre" was called for by the parties, to help the developing countries to face the challenges of climate change and adaptation. The conference recognized that the climate change was an urgent threat to the human and the planet, which needs to be addressed urgently and come up with long term solutions and cooperation to face it. The 2011 UNFCCC,

which was held in Durban, was a defining moment for climate change negotiations. The parties agreed to come up with a fresh legal agreement to deal with climate change beyond 2020. At the Durban Summit, it was agreed to continue the second commitment of the Kyoto Protocol, where the developed countries will have to cut down the greenhouse gases. Further, it launched a new platform for future negotiations, to deliver a new and universal legal agreement on the greenhouse gas reduction to come into force by 2015 and beyond 2020.

The conference on climate change was held again in Doha under the UNFCCC in December, 2012. The negotiations in Doha focused on implementing the agreements that were reached during the previous conferences. The outcome of this conference was the "Doha Climate Getaway" package. It included amendments to the Kyoto Protocol for the establishment of its second commitment and agreed to terminate the Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA) and the negotiations under the Bali Action Plan. Although the Doha Round paved a new phase for the negotiations on climate change, developing countries were not satisfied as there was lack of ambition on the part of the Annex-I countries' on mitigation and finance.

The recent climate change summit was held at Warsaw in Poland on November 2013. During this climate change summit, it was agreed by the Parties that reduction of the emissions was in the need of the hour and agreed on creating a new climate change agreement by the year 2015 which would succeed after the end of the Kyoto Protocol. The outcome of this climate summit was the Warsaw Outcomes. The Outcomes included the loss and damage mechanism for the developing countries caused by climate change and also created an initiative known as the REDD+ (Reducing Emissions from Deforestation and Forest Degradation).

Climate change Negotiations

Critics have argued that international negotiations on climate change have become burdensome as there has been an absence to compromise on decision making and long treaties. This is due to a large number of coalitions in the negotiating process. Some of them are focused in specific climate change perspective, while others stand on

shared national conditions or on the principles of common historical link. These different degrees of opinions or coalitions have remained static but over the years it has evolved with new coalitions and old coalitions being disbanded with response to new developments in the climate change negotiations (Giddens 2011: 29).

For example, the feature of "common but differentiated responsibilities" became a prominent as well as a controversial feature of the Kyoto Protocol. Developing countries put the blame on the industrialized countries for the climate change problem and are unwilling to let go of the historical responsibility of the developed states. They demand that the Annex I countries should take the first step in reducing the emission of GHG, while at the same time, respecting the South's right to development. But these Annex I countries are also pushing to include the major developing countries like India and China into reducing their per capita emissions.

Critical theorists like Eckersley state that climate negotiations correspond to three-way struggle between exclusive minilateralism, traditional multilateralism and "affirmative multilateralism" which discriminates in favour of developing countries according to the principles of equity and common but differentiated responsibilities and capabilities. She argues that exclusive minilateralism is elite, unjust, self-serving and likely to thwart the principles of the UNFCCC (Eckersley 2012: 26).

However, negotiating theory gives us two insights on the nature of the parties and the bargaining strategies. The first insight of this theory argues that since developed and developing countries are comparatively defensive and hence the negotiating process yields 'avoidant' or 'symbolic' policies. But if the smaller weaker parties tend to be defensive and stronger, bigger parties are constructive, then 'decision-less decisions' may arise. But, if both the sides are constructive, "collaborative problem-solving" can be possible and this can succeed if the there is a progressive negotiator and the parties can be convinced of the "underlying science and norms of the potential solution (Gupta 2012).

The second insight argues that, using distributive bargaining (or hard) strategies leads to win-lose situations and hence more conflict arises. Integrative (or soft) bargaining strategies may lead to a bigger share and may create win-win situations. Gupta, thus argues that the move from hard to soft bargaining strategies requires constructive negotiations and the developing countries have been at the same time defensive and

offensive as well. So, they should reframe their negotiating strategies so as to show their constructive desire to come up with a solution and also offer "something" to the developed countries in order to convince them that action needs to be taken (Gupta 2012)

Although the developing countries have repeatedly emphasized on the historical responsibility of the developed nations and it is observed that the bulk of the carbon dioxide emissions come from them, however, it is the developing countries that are more vulnerable to the climate change impacts. Further, these countries rely on agriculture, lack infrastructure for adaptation, and geographically located in the vulnerable regions like low lying coastal areas. On the contrary, main emitters of the GHG are less vulnerable, financially strong economies and hence can implement adaptation measures.

Other scholars are of the view that due to the absence of effective North-South relations and inequality, there is no agreement on global climate change negotiations. This 'inequality' which is caused by the overpowering Western views, decreases the countries' ability to ascertain common acceptable 'rules of the game'. Thus, it constrains the developing countries' participation in the international climate change negotiations (Parks and Roberts, 2010). On the other hand, some argue that depending on the vulnerability impact due to the climate change, there could be an ambiguous position towards the climate change negotiations. Since the dimension of the vulnerability impact is different, countries have different stakes on the negotiating table. Countries which are prone to high vulnerability impact should logically be inclined to support limitation on the GHG. Most of the highly vulnerable countries are located in Asia, Sub-Saharan Africa and Latin America (Buys, *et al* 2009).

Definition, Rationale and Scope of the study

Climate is defined as the meteorological condition which includes temperature, wind and precipitation, characterized over a particular area or region. When there is a change in the expected weather, we call it climate change. Climate change occurs in different ways, maybe over a period of time at different geographical

changes..According to the IPCC, the average global temperatures are likely to rise by another 2 to 11.5 degrees F by 2100.

Climate change is a serious problem for everybody and responses to this problem need to have a consensus agreement on international negotiations. Although, both the EU and India are diverse and democratic in nature their perspectives and to tackle the climate change would be slightly different from each other. India stands firmly on the principle of historical responsibility of the developed countries and they have the right to have economic growth. Being part of the BASIC group, India has been able to voice out its concerns on climate change and tackling the problem, even though, it was seen as playing a defensive and reactionary role in the international climate change negotiations. The European Union on the other hand, acts a global actor and leader on climate change negotiations. It has recognized that the developed countries are responsible for most of the GHG emissions and thus, it must take the leading role to ratify the commitments in order to reduce the emissions.

The dissertation will be focused on international negotiations on climate change between India and the European Union. The time period will be limited from UNFCCC's Copenhagen Climate Summit (2009) to the Warsaw Climate Summit (2013). This research will look into the key concepts of climate change negotiations and the approaches of the European Union to climate change and its domestic and international policies related to climate change. Secondly, this research will examine India's approach to climate change in international negotiations and study the evolution of the environmental policies in the country. Also this research paper will study the climate change negotiations that have been mentioned and will look at the responses of the EU and India at these negotiations. Climate change is a complex problem and coming up with an agreement which suits everybody is impossible. Thus, this research paper will study what are problems between India and the EU during the international climate change negotiations.

Deductive method will be employed to examine and analyse the roles of the European Union and India on international climate change negotiations. In order to understand what the areas of convergence and non-convergence are, in the study of climate change negotiations between India and the European Union, a comparative method will be employed. The data collected will be from various sources- books,

journals, official documents, newspapers, websites, etc. Therefore, the sources will be both primary and secondary. Here, the primary sources include the official documents released by the government of India, the European Council, etc. Sources will be obtained from official government websites and international organizations like the United Nations. The secondary sources will include academic journals, books, articles, newspapers and internet sources.

This research proposes to study that the EU and India have different negotiating approaches on the issue of climate change. The research questions raised are what kind of actor is the European Union in the international climate change negotiations, what can be the significance of strategic relationship between the EU and India in the international climate change negotiations, what is the progress of the international climate negotiations since Copenhagen and beyond and why has there not been any positive conclusive result in climate change negotiations and lastly, what can we expect from the future climate change negotiations.

There are five chapters to analyse the research questions that were raised.

Chapter one will be the introduction of the study.

Chapter 2: EU and Climate Change

It will examine the EU's role in the international climate change negotiations from Copenhagen to Warsaw. Also, it will study how the EU uses its position as a global leader in climate change negotiations and negotiate effectively.

Chapter 3: India and Climate Change

Chapter two will discuss India's role in the international climate change negotiations, the evolution of the country's environmental policy and some of its domestic policies and forums related to climate change.

Chapter 4: The EU and India at Climate Change Negotiations: Copenhagen Climate Summit (2009) – Warsaw Climate Summit (2013)

The fourth chapter will analyze the international climate change negotiations from Copenhagen climate summit (2009) to the Warsaw Climate Summit (2013) and also investigate the responses of the EU and India at these summits.

Chapter 5: Conclusion:

This chapter will summarise the findings of the study.

Chapter 2

The European Union and Climate Change

Overview:

The European Union has been a key player in climate change negations for quite some time and has assumed the role of a leader in climate change politics. Although the EU had a slow start on its climate change policies internally, the Maastricht Treaty of 1992,gave the EU "to assert its identity on the international scene". This chapter will explore the evolution of the climate change policies in the EU over a period of time and look into the main climate change policies of EU. This chapter will also examine what kind of an actor is the EU when it comes to climate change negotiations. It will also look at the conceptualization of the EU as an actor in climate change politics.

Evolution of climate change policy in EU

Climate change was seen as a real issue by a number of European leaders, although environment was not mentioned in the original Treaty of Rome. The Single European Act institutionalized the environment as a concern for the community and the Maastricht Treaty took a further step by providing a provision to vote for majority on environment decisions (Parikh, Runnals et al 2010).

EU's climate policy has evolved over two decades slowly and it was the European Parliament that showed initial interest in it. The Directorate – General (DG) Environment department of the European Commission was committed in climate related research way back in the 1970s but since it was politically weak, it did not have the power to initiate EU-level policies with the Member States. It was only in 1988, at Rhodes[1], the European Council was determined to adopt a leading position on environmental policy (Jordan et al 2010:9).

[1]The European Council under the Single Act (1987), stressed on single market, the importance of social dimensions and associated policies and giving fresh impulse to work on environment.

Under the European Council's declaration in Rhodes, it stated that the European Council is making efforts at various levels with a view to respond to the ever-increasing concern to threats to the environment. The European Council also declared that the protection of the environment was of vital importance to the Community and to the rest of the world as well (The European Council 1988). Consequently the EU played a significant role in the 1992 UNFCCC Earth Summit at Rio de Janeiro.

The EU had an idealistic start on environmental policy and had many elements of "sustainable development". So in the 1970s the EU came up with Environmental Action Programme (EAP) which gave the Union to set the framework for its environmental policies. During that period, the EU became party to a number of multilateral agreements on climate change. The 5th EAP in 1993 incorporated climate change as a 'theme'. The 6th EAP (2002-12) also included four priority areas – climate change, nature and diversity, environment and health, natural resources and waste (Damro, Hardie, MacKenzie 2008: 4). The most recent, the 7th EAP identifies three priority areas – protection of nature and strengthening the ecological resilience, boasting low carbon growth and resource-efficient and reducing the threats to human health and well-being. It is guided by a long term vision which states:

> "In 2050, we live well, within the planet's ecological limits. Our prosperity and healthy environment stem from an innovative, circular economy where nothing is wasted and where natural resources are managed sustainably, and biodiversity is protected, valued and restored in ways, that enhance our society's resilience. Our low-carbon growth has long been decoupled from resource use, setting the place for a safe and sustainable global society." (European Commission 7th EAP).

The 1987 Single European Act (SEA) expanded EU's powers in environmental protection. The SEA amended the EEC Treaty by adding *inter alia*, Title VII and article 100A. Under this provision, the Union is empowered to integrate environmental policy in other policies of the Union. Article 100A allows the Council to act by qualified majority and Member States can apply stricter national measures instead of the EEC environmental measures (Zacker 1991:250).

By the 1990s, the Burden Sharing Agreement (BSA) was created, where the emission reduction targets for each Member State was established and the internal market for greenhouse gas emissions was also formed. Under this agreement, the EU-15 has a common agenda to achieve collectively. This agreement sets different emission limits and reduction targets for each of the 15 EU Member states. Each of these targets corresponds to an emission budget (corresponding to a quantity of 'Kyoto units') for the first commitment period of the Kyoto Protocol (2008-2012) (EEA Report 2013)

	Target for 2008-2012 (change from base year)
EU-15	-8%
Austria	-13%
Belgium	-7.5%
Denmark	-21%
Finland	0%
France	0%
Germany	-21%
Greece	+25%
Ireland	+13%
Italy	-6.5%
Luxembourg	-28%
Netherlands	-6%
Portugal	+27%
Spain	+15%
Sweden	+4%
United Kingdom	-12.5%

Figure- 1(Source: European Commission, http://ec.europa.eu/clima/policies/g-gas/kyoto/index_en.htm)

The EU has been optimistic when it comes to reduction of greenhouse gas emissions. In the 1990s, EC predicted new policies which could help in cutting down CO2 by the year 2010, which could be achieved at a cost of 0.2-0.4% of the GDP in 2010. It has followed four major polices to reduce the emission level – carbon/energy tax, polices to encourage demand side management, renewable energy technology and common monitoring mechanism (Ringius 1999; Wettestad 2000; Dahl 2000; Gupta and Ringius 2001).

The Joint Implementation has been a much debated policy in climate change regime. The EU has argued in favor of it but it has limited the use of JI to the developed countries. Before the Kyoto Protocol, the EU had no support for international emissions trading but a provision has been provided in the Kyoto Protocol that will allow emissions trading. With JUSCANZ[2] countries in favour of including the developing countries in JI and supporting the JI, led to the birth of Clean Development Mechanism (CDM) (Gupta and Ringius 2001:288).

The European Security Strategy (2003) sees climate change as a security threat and the 2008 Implementation Report lists climate change as one of the "global challenges and key threats" and described it as a "threat multiplier". This has promoted the idea of linking climate change to security as drastic changes in the climate could adversely affect the EU in terms of "conflicts over resources, economic damage, risk to coastal cities, loss of territory and border disputes and environmentally induced migration" (Zwolski 2012: 72). The ESS Implementation report of 2008 has stated that the EU should pursue climate security agenda in its bilateral and multilateral relations.

European Climate Change Programme

A comprehensive package of policy measures to reduce the GHG emissions was initiated through the European Climate Change Programme (ECCP), where each of the Member States had to come up with its own domestic measures that complimented with the ECCP measures. It was launched in June 2000 and the main

[2]JUSCANZ countries include Japan, the United States, Canada, Australia, New Zealand, Iceland, Israel, Liechtenstein, Norway and Switzerland. The name was adopted from the acronym of its founding member countries.

goal of the ECCP is to "identify and develop all the necessary elements of an EU strategy to implement the Kyoto Protocol" (European Commission, First ECCP 2014).

The first ECCP (2000-04) probed the "extensive range of policy sectors and instruments" which will reduce the GHG emissions to the atmosphere. Under the first ECCP, eleven working groups were established which covered the following areas:

i. Flexible mechanisms: emissions trading
ii. Flexible mechanisms: Joint Implementation and Clean Development Mechanism
iii. Energy Supply
iv. Energy Demand
v. Energy Efficiency in end-use equipment and industrial process
vi. Transport
vii. Industry (sub-groups were established on fluorinated gases, renewable raw materials and voluntary agreements)
viii. Research
ix. Agriculture
x. Sinks in agricultural soils
xi. Forest-related sinks (European Commission, First ECCP 2014).

Each of these working groups identified the options for the reduction of GHG based on cost-effectiveness and other policy areas were also taken into account. The EU's controversial environmental policy the ETS (Emissions Trading System) was the result of this programme.

The second ECCP was launched in October 2005 at an important conference in Brussels whichhas

> "explored further cost-effective options for reducing greenhouse gas emissions in synergy with the EU's Lisbon strategy for increasing economic growth and job creation. New working groups have been established, covering carbon capture and geological storage, carbon dioxide emissions from light-duty vehicles, emissions from aviation, and

adaptation to the effects of climate change" (European Commission, Second ECCP 2014).

The first concern for the second ECCP was to "facilitate and support the actual implementation of the priorities identified in the first phase".

The second ECCP has several working groups under it:

i. ECCP I review (with 5 sub-groups: transport, energy supply, energy demand, non-CO2 gases, agriculture)
ii. Aviation
iii. CO2 and cars
iv. Carbon storage and capture
v. Adaptation
vi. Reducing greenhouse gas emissions from ships

The aviation working group would focus on the technical side of bring the aircraft emissions under the ETS. The second ECCP also directed in the promotion and analysis of the renewables in heating applications ("RES-H") (European Commission, Second ECCP 2014).

Under the ECCP, the GHG emission level of the EU had fallen. By 2003, it was observed that the combined emissions of the then EU-25 were down to 8% compared to their respective base years (mostly 1990) (European Commission 2006: 7). In 2012, the EU's GHG emissions continued to fall by 1.3%. This was mainly due to EU's reduction in emissions in transport and industrial sector and also promoting renewable sources of energy (EEA 2012). The Eurostat estimated that in 2013, the GHG emissions decreased more as compared to the previous year. It was noted that there was 2.5% decrease in the carbon dioxide emissions from fossil fuels (see Figure 2 in the next page).

CO_2emissions from energy use

<u>Figure 2.</u>

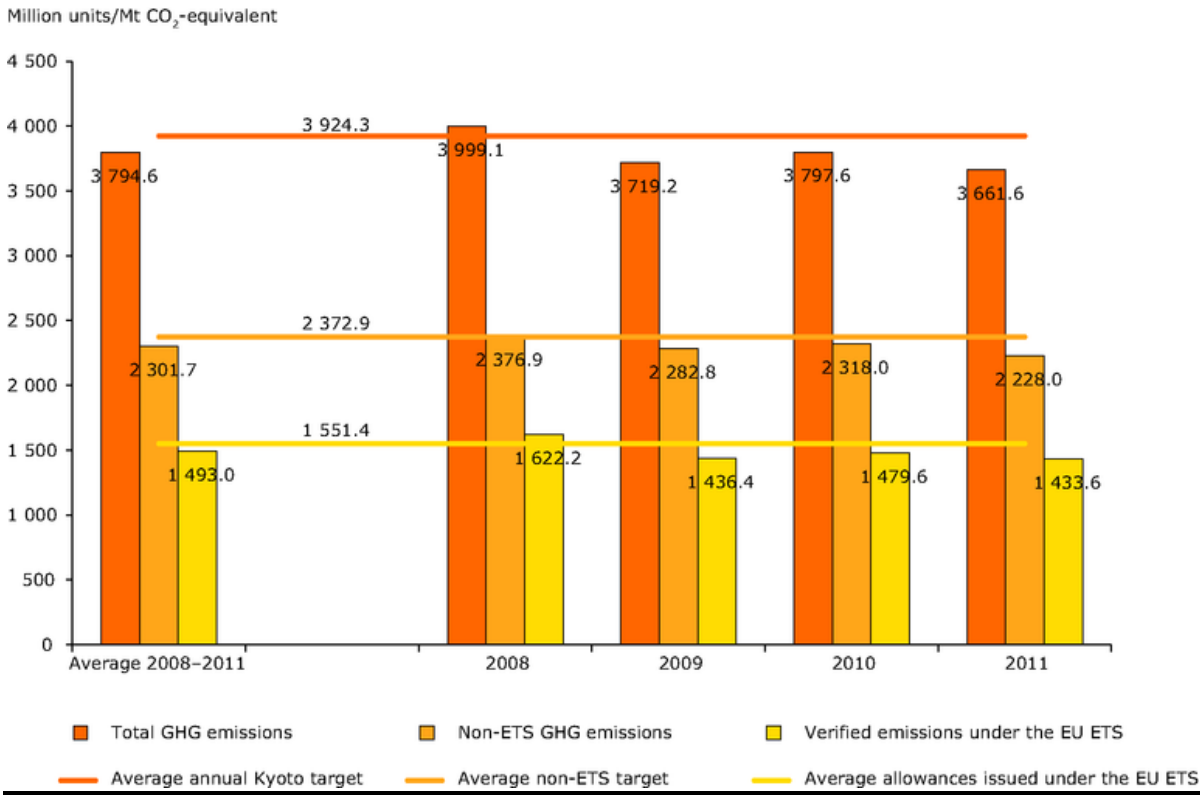
	in1000 tons CO_2		Change 2013/2012	
			inabsoluteterms	
EU28	**3 438 893**	**3 351 849**	**-87 045**	**-2.5%**
Belgium	87 632	87 372	-	-0.3%
Bulgaria	46 272	41 570	-4 702	-10.2%
CzechRepublic	99 380	96 497	-2 883	-2.9%
Denmark	37 653	40 222	2	6.8%
Germany	745 194	759 926	14 731	2.0%
Estonia	17 521	18 291	769	4.4%
Ireland**	35 502	34 160	-1 342	-3.8%
Greece	85 268	76 614	-8 655	-10.2%
Spain	256 452	224 052	-32 400	-12.6%
France	343 544	345 741	2	0.6%
Croatia	16 500	16 226	-	-1.7%
Italy	365 509	341 503	-24 005	-6.6%
Cyprus	6 500	5 547	-	-14.7%
Latvia	6 685	6 404	-	-4.2%
Lithuania	11 480	10 819	-	-5.8%
Luxembourg	10 100	9 723	-	-3.7%
Hungary	42 640	39 717	-2 923	-6.9%
Malta	2 701	2 518	-	-6.8%
Netherlands	162 447	162 039	-	-0.3%
Austria	60 583	59 289	-1 294	-2.1%
Poland	289 288	290 219	931	0.3%
Portugal	45 280	46 919	1	3.6%
Romania	74 292	63 419	-10 873	-14.6%
Slovenia	14 746	12 982	-1 764	-12.0%
Slovakia	27 211	25 518	-1 692	-6.2%
Finland	44 376	43 129	-1 248	-2.8%
Sweden	38 118	36 511	-1 607	-4.2%
UnitedKingdo	466 019	454 924	-11 095	-2.4%

(Source: Eurostat http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/8-07052014-AP/EN/8-07052014-AP-EN.PDF)

European Trading Scheme

Total ETS and non-ETS emission trends in the EU-15 compared to their respective targets (2008-2011):

Figure 3.



(Source: Europen Environment Agency http://www.eea.europa.eu/data-and-maps/figures/total-ets-and-nonets-emission)

Carbon/energy tax has been in EU's agenda and so in 2005, Emissions Trading System (ETS) was launched in 2005 to combat climate change and to reduce industrial GHG emissions cost effectively. It has been a major pillar in EU climate policy and covers 11,000 power stations and operates in 28 EU Member States along with Iceland, Liechtenstein and Norway (European Commission 2014b).

The ETS has been implemented in three phases or 'trading periods'. The first phase was launched from 1st January 2005 to 31st December 2007 and it successfully established carbon pricing for free trade in emission allowances across EU and created necessary infrastructure for monitoring, reporting and verifying(MRV) as

well. The second phase was initiated from 1st January 2008 till 31st December 2012. It also coincided with Kyoto Protocol's first commitment period[3]. With the verified emissions report which was done during the first phase, the Commission was able to cut down on the volume of emission allowances permitted in the second phase to 6.5% below 2005 level[4]. The third phase was started from 1st January 2013 and it will go on till 31st December 2020 and it was given a major reconstruction in 2009.

The ETS also acts as "major driver of investment in clean technologies and low-carbon solutions, particularly in developing countries". It is in the third phase now from 2013 to 2020 and in 2009, a major revision was approved to strengthen the policy. The main changes were:

i. A single, EU-wide cap on emissions applies in place of the previous system of national caps;
ii. Auctioning was now the default method for allocating allowances
iii. Allowances which were still given away for free, harmonized allocation rules applied which were based on ambitious EU-wide benchmarks of emissions performance;
iv. More sectors and gases were included in the system;
v. About 300 million allowances were set aside under the New Entrants Reserve to fund the deployment of innovative renewable energy technologies as well as carbon storage through NER 300 programme.

The ETS works on a 'cap and trade' principle. This 'cap' (or a limit) is set on a total amount of certain GHG that can be emitted by the power plants and industries and the cap is reduced over a period of time so that the emissions fall. Under this cap system, the companies receive or buy allowances and they can also trade with one another as needed. International credits can also be bought from 'emission-saving projects around the world' (European Commission 2014b). Every year the companies must give up 'enough allowances' so as to cover its emissions or else heavy fines are imposed. But if a company is able to reduce its emission levels, it can keep the extra

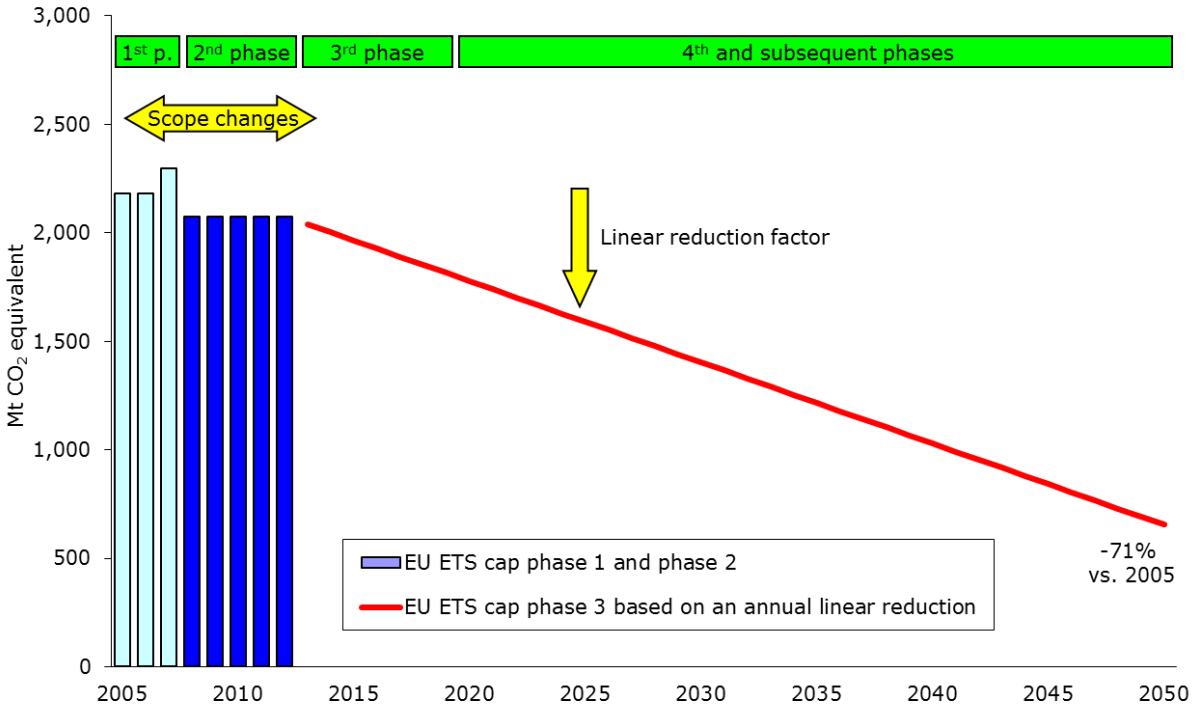
[3]Since the EU is part of the Annexure 1 countries of the Kyoto Protocol, it had made a commitment to reduce the emission of GHG into the atmosphere.

[4]*EuropeanCommissionhttp://www.ab.gov.tr/files/ardb/evt/1_avrupa_birligi/1_6_raporlar/1_3_diger/environment/eu_emmissions_trading_scheme.pdf

allowances to cover its future need or they can sell it to another company that is in need.

Perspective on EU ETS cap until 2050

Figure 4.



(Source: European Environment Agency http://www.eea.europa.eu/data-and-maps/figures/perspective-on-eu-ets-cap)

However, this policy has been the most controversial policy of the EU as most of the developing countries, for an example, China is against it. They are of the view that these taxes will have a negative impact on the competiveness of the industry (Gupta and Ringius 2001:284). The ETS proposes to apply taxes on flights coming from those countries and thus it would increase the price of the commodity imported from them, which would eventually affect the balance of trade (Martin 2012:194).

The ETS suffered a major setback from the beginning. The amount of emissions targeted for each Member State proved to be too high and the financial assistance given to each country did not promote the required investments to reduce the emission level. The ETS did not help in keeping the carbon prices high which was necessary to

obtain the desired outcome (Martin 2012:195). The ETS has been EU's most controversial and ambitious policy. Vogler examines that the stakes for the Member states are much higher as the cost of the ETS auctioning are high especially for the Central and the Eastern European (CEE) countries. These CEE countries mostly rely on coal generated power and have smaller economies as compared to the other bigger Member states (Vogler 2009: 487).

With further enlargements, especially in 2004, where ten CEE countries joined the EU it has affected its environmental foreign policy. The reason is, the CEE countries were required to pass new legislation on environmental laws which had high compliance costs, large investments and changes of institutional structure. Also these CEE countries were small developing countries and newly democratic and was part of former USSR and communist rule. However the CEE countries have a crucial role to play in designing the Union's commitments within the international global climate change regime (Harris 2007:308).

The 2020 Climate and Energy Package

The EU's climate and energy package or the '20 20 by 2020' targets were launched on March 2007 and adopted by the Union on December 2008. It is a binding legislation which targets the EU to meet it three key objectives by 2020. The three main objectives of this policy are:

i. 20% reduction in the GHG emissions from 1990 levels;
ii. Raising the EU's consumption of renewable energy to 20%;
iii. Improving EU's energy efficiency by 20%

Under this, the Union has to reach a binding target of 20% in renewable energy sources in primary energy consumption, the member states have to reach a minimum binding target of 10% in transport energy consumption by 2020 and a commitment to build 12 large-scale power plants using carbon capture and storage technology. This 'package' was meant to address the challenges in the energy policy and also the Union and its member states have examining its domestic and external policies and options so as to move to a more sustainable and secure energy supply in the future (Egenhofer and Alessi 2013: 2). The 'package' also revamped EU's ETS.

The 2020 climate and energy package comprised of four complementary legislations. The first was the revamping of the ETS which already has been mentioned. Second, national targets were set up for non-EU ETS emissions, under the Effort Sharing Decision. These targets would cover from the period 2013 to 2020 and it was differentiated according to the Member States' relative wealth. This would range from a 20% reduction in the emission level (compared to 2005) by the richest Member States to a 20% increase by the least wealthy (but they would still require limiting their GHG emissions). The Member States would have to report on their emissions annually under the EU monitoring system (European Commission 2014).

Third, the Member States were required to take binding national targets so as to raise their share of renewable energy by 2020 under the Renewable Energy Directive. These targets would enable the EU as a whole to reach its targets by 2020 and help to cut down on the GHG emission level and reduce the EU's dependency on imported energy (European Commission 2014).

The fourth aspect of the package was a directive to create a legal framework for the safe use of carbon capture and storage technologies. Carbon capture and storage is capturing the carbon dioxide emitted by the industries and storing it underground for geological formations and where it does not contribute to global warming (European Commission 2014).

Although, the Member States strongly feel that they should be the ones who determine the pace of the internal policies and so climate change should remain as a 'mixed competence'. The Member States have never had a consensus agreement to negotiate on their behalf on international climate change negotiations with the Commission. This increases the EU's risk politically in the international negotiations (Jordan, van Asselt, Berkhout, and Huitema 2012: 53).

The controversial Common Agricultural Policy (CAP) has been affected by climate change. Climate change has intensified natural phenomena such as droughts, plagues and flooding, which has adverse effects on the agrarian sector. This can lead to compromising the availability of food and it is relevant that immediate decisions are needed to protect agriculture. It should be noted that the EU is the largest food importer and the second largest exporter in the world. Some of the cereal and oil crops have become essential raw materials for the production of the bio-fuels and the

Energy and Climate Change Package of the EU has targeted to use bio-fuels for transport by 2020 (Martin 2012:197).

The EU, making a good progress with the 2020 climate and energy package, it has taken one step forward to tackle the challenges of climate change. The European Commission has set up a policy framework for climate change and energy security upto the period of 2030. This policy framework was presented by the EC in January 2014. The main objective of the 2030 framework was to reduce the EU's domestic GHG emissions by 40% below the 1990 levels by 2030 and this will ensure that the EU will cut down on the GHG emissions to 80% by 2025 (European Commission 2014a). The 2030 framework also proposed to increase EU's renewable energy consumption by 27% by 2030 and also talked about to improve the energy efficiency of the EU. The 2030 framework made recommendations for "a new governance framework based on national plans for competitive, secure and sustainable energy" and the plans would be made by the Member States under a common ground so as to ensure coherence at the EU level.

The EU as an Actor in Climate Change negotiations

The European Union is a pioneer in its efforts to mitigate global warming and international climate diplomacy. It has developed its identity as an actor and it exhibits certain "peculiar and chameleon-like traits" in the international environmental diplomacy. Under the Single European Act, the environment was seen as a concern for the Community. However, it was the Maastricht Treaty that went further by providing a majority voting on the environmental decisions. This Treaty gave more powers to the European Parliament on decision making for the entire Community on environmental issues.

The EU as an actor on environmental problems is not recent. It has been actively involved since the 1992 climate change negotiations of the UNFCCC. It has established itself as a protagonist in the climate change negotiations and the Lisbon Treaty of 2007 has promoted the EU as a leader to combat and come up with measures to deal with climate change at an international level (Malla 2011:2). Thus, it

has adopted ambitious commitments under the Kyoto Protocol and is also pushing for a more comprehensive and ambitious legally binding agreement by 2015.

The 1992 UNFCCC Rio Summit came up with a non-binding framework for future international negotiations on climate change. This gave the EU the platform to actively participate in the international climate change negotiations and since then the EU has become the prime defender and promoter of the Kyoto Protocol. The EU's ability to ratify the Kyoto Protocol has shown undoubtedly EU's leadership in climate change negotiations. After the US backed out, under the Bush administration, from the agreement, there was a void in the negotiations but despite all that, the EU single handedly, agreed to the Kyoto Protocol on 25th April, 2002 (Schreurs and Tiberghien 2007:20).

The EU has joined many international agreements since the 1970s and since the 1990s it has assumed the role of an important actor in climate change politics. The Single European Act of 1987 paved the way for EU to become a leader in global environmental politics. With this Act, Community competence was established on issues like air pollution, water and waste disposal (Vogler 2005:236). It has been actively involved since the 1992 climate change negotiations of the UNFCCC. It has established itself as a protagonist in the climate change negotiations and the Lisbon Treaty has promoted the EU as a leader to combat and come up with measures to deal with climate change at an international level (Malla 2011:2).

The EU has been a successful leader in climate change negotiations because it has been a "powerful backer of the precautionary principle" to climate change, heeds to the warnings from the International Panel on Climate Change that emissions of the GHG are leading to global warming and that could lead to serious ecological, health and climate threats. The EU has embraced that the industrialized nations have the responsibility to act, given their historic contributions to emissions of GHG and has defined that actions taken against climate change threat is a "moral and ethical issue that must transcend narrow economic interest" (Schreurs and Tiberghien 2007:24).

Schreurs and Tiberghien explore EU's leadership in climate change and argue that the "open-ended and competitive governance structure of the EU is an issue of shared competence such as global environment has created multiple and mutually reinforcing opportunities for leadership. The environmental policy is where the Commission and

the Member States have joint competence and decisions are taken by majority voting and under these situations, a "positive cycle of competing leadership among different poles can take place" (Schreurs and Tiberghien 2007:24). In the EU's climate change negotiations, many different actors (Member States) have taken the leadership roles. When the Germans and the British had taken leadership roles in climate change negations within the EU and they had taken EU's climate change policy forward.

Gupta and Ringius explore EU's leadership in climate regime in three perspectives – structural leader, directional leader and instrumental leader (Gupta and Ringuis 2001:282).

Elements of Leadership Strategy:

Leadership	Short Term	Medium Term	Long Term
Structural	influence G-7 and G-77 countries in the summit meetings	coordinate strategies in other issue areas and vis-à-vis other international regimes	the EU can promote global transformation and sustainable development through economic and material incentives
Directional	the EU can strengthen the implementation of monitoring mechanism	Improve the credibility; promote	Promote Industrial transformation and sustainable development in the EU.
Instrumental	Build a "55% coalition" able to ratify the Kyoto Protocol	Strengthen relationship with Accession Countries and adopt second commitment period targets.	Build strong coalitions with the developing countries.

The EU has been playing a proactive role in climate change negotiations and despite that, the EU is viewed as somewhat controversial. Observers believe that the EU has

been a ‘hypocrite’ in many occasions. Firstly, it dropped the 15% target in the Kyoto Protocol, second it allowed high emissions for Russia and Ukraine, third, the EU opposed target differentiation for all except for EU countries. The EU has also been accused that it is neither proactively engaging in discussions nor, seeking support from the accession countries, developing countries or JUSCANZ in the pre-Kyoto negotiations. Moreover, the EU fails to have a clear fall-back position, partly because of the complex nature of the EU and thus fails to have a clear mandate in the public (Yamin 2000; Gupta and Ringius 2001:288).

Scholars have argued that the EU could steer the climate regime in a more productive direction. Some have suggested a three way approach, where the EU could ratify the Kyoto Protocol in coalition with Russia, Eastern Europe, CEITs and Japan; strengthen the implementation of the climate policies of the Member states; encouraging the involvement of the development countries by aiding them in adaptation to climate change and engaging in dialogue on fair allocation of emission rights (Ott and Oberthur 1999; Gupta and Ringius 2001:289).

Others are of the view that the EU should ratify and implement the Kyoto Protocol as there are internal technical and political feasibility with the involvement of key developed and developing countries. Also the EU should harness its diplomatic skill to bring major countries like the US on board. Gupta and Ringius (2001) analyze that the EU should develop a short, medium and long-term strategy combining the elements of structural, directional and instrumental leadership. In terms of structural leadership, the EU should influence the G-7 and G-77 countries through summit meeting in the short term; coordinate strategies in other issue areas and other cooperative regimes in the medium term; and use economic and material incentives to promote industrial transformation and sustainable development (Gupta and Ringius 2001).

Martin argues that EU’s role as a leader in climate change regime failed at the Copenhagen Summit in 2009. The Copenhagen Summit was a failure as there was no legally binding agreement, no new targets were established and it had no contribution to create actions on future strategy for actions against climate change. The only progress that was made in the Summit was that its goals targeted the reduction of emissions for countries like USA, Australia and Japan and how the developing

countries such as Brazil, China or India can limit their emissions without compromising their economic growth. It also tried to secure funding for the developing countries for adaptation to climate change (Dell'Amore 2009; Martin 2010:2).

However, this leadership is still doubtful as the European contribution to the GHG emissions, is still enormous and is qualified by the relative growth in emissions of emerging economies like China, India and Brazil. Second, the continuing shifts in the geopolitical landscape questions whether the EU will be able to sustain its leadership in the international climate negotiations. Research scholars have observed that the magnitude of the GHG emissions to the atmosphere translates into power in the arena of international climate diplomacy. The EU and the other developed countries find themselves to "increasing agenda setting and bargaining power of big emerging countries – China, India, Brazil, and South Africa.". Also, the recent enlargements 2004 have also affected the EU's foreign policy on environmental issues. Ten Central and Eastern European countries, which were once a part of the Soviet Union, became a part of the European Union in 2004. They were small, developing and newly democratic countries. They were required to pass new laws on environment and it required high compliance cost, large investments, etc. Scholars thus argue that the accession of the new member states did not influence the European strategy on GHG emissions under the Kyoto protocol and the Burden Sharing Agreement as the new member states were not included in it (Lacasta, Dessai, Kracht, Vincent 2007: 226).

The voting procedures for the Council of Ministers in the EU is time consuming and delayed although it has a supranational regulatory framework for the implementation of policies in the Member states (Johnson and Corcelle 1995; Gupta and Rangius:2001). EU's modest achievements still continue to reflect the differences among the Member States, which could later aggravate. This could prove the EU as an ill-suited leader in climate change. However optimists are of the view that the EU has the potential to facilitate a decision-making process that would commit 15 countries and is still in the learning process and will be able to show a strong directional leadership if it improves its administrative and political machinery and fully implement its policies (Gupta and Ringius 2001:287).

When the Kyoto Protocol was signed initially, there were just 15 EU member states and with the recent enlargements (2004, 2007, 2013 and 2014), the membership has increased to 28 Member States and also most of these accession countries are transition economies. This has created decision making process even more difficult to the already complex problem (Martin 2012:196).

Martin argues that although the EU may be the key player in Kyoto Protocol, it lacks a unified voice when representing EU's interests and its role in climate change regime is purely theoretical. This is due to the fact that many factors and actors have limited EU's capacity (Martin 2012:194). The EU must have a common discourse and present a unified image to the world if it wants to maintain its leadership in climate change regime. The Lisbon Treaty brought a new momentum with regard to climate change as it assigned shared competencies between the EU and it Member States in the areas of energy and environment (Martin 2012:199).

Cooperation is the key which bridges the EU with the developing countries. The EU needs to make it clear to majority of the G-77 countries, that its long term strategies are in the context of sustainable development and the first steps will be taken by the developed countries through ratification and should understand the concerns of the developing world. The EU instead of focusing on targets and differentiation should make an attempt to develop a package approach that makes integrative bargaining possible. This package would include technology transfer, Clean Development Mechanism(CDM), etc. (Gupta and Ringius 2001:292).

Conceptualizing EU's 'actorness' in Climate Change negotiations

Traditional approaches to IR have paid attention to the role of states as actors in "high politics". The state's ability to use force was a characteristic of a great power status and as such, the realists have neglected the civilian EU as a potential actor in its own right. However Vogler and Bretherton examine that the EU itself is an actor as it is forced to act upon and resist the US hegemony (Vogler and Bretherton 2006:3).

In 1992, the Maastricht Treaty took a step further by making environment a clear-cut responsibility of the Community in policy making and giving the Community more powers to represent the EU at the international negotiations on climate change and

environment with the other parties. This Treaty gave the EU "to assert its identity on the international scene" (Treaty of the European Union Article 2).

Vogler and Bretherton view that to be an actor, there involves "more than establishing a degree of autonomy in relation to Member states and formulating a set of common purposes". 'Actorness' is vitally important and dependent on the expectations and constructions of other international actors and this could be seen as a dialectical process which involves three facets and interconnection between them – presence, opportunity and capability (Vogler and Bretherton 2006:5).

> "*Presence* conceptualizes the ability of the EU, by virtue of its existence, to exert influence beyond its borders. It combines understandings about fundamental nature, or the identity of the EU with the (sometime unintended) consequences of the Union's priorities and policies. It provides the link between the internal development of the EU and third-party perceptions and expectations of the EU's role in world politics and demands that it shall act.
>
> *Opportunity* refers to the external environment ideas and events that enable or constrain purposive action. It signifies the structural context of the action.
>
> *Capability* refers to the capacity to formulate and implement external policy, both in developing a proactive policy agenda and in order to respond effectively to external expectations, demands and opportunities".

With the European Parliament declaring that climate change is not only a "grave international problem but an issue which had been acquiring a symbolic profile in the protest movement against the destructive effects of globalization", this has created huge expectations from the EU's presence in the climate change arena. Presence has played a vital role in the construction of 'actorness' and this relationship between presence and 'actorness' can be relatively direct. This means active responses from the third parties which is generated due to the internal polices and this in turn demands action from the EU. For an example, reports have stated that the EU is the second largest emitters of GHG after the US and so the EU will be held responsible along with the US for the Earth's climate. This 'understanding' provided the base for

EU's internal policies on tackling climate change and these internal laws have established the EU's presence and participation in climate change regime (Vogler and Bretherton 2006:6). With the implementation of the ETS, it opened the doors to 'numerous presence effects' that involved participation of applicant countries and neighbours like Norway and worldwide involvement.

With the US out of the picture in the Kyoto Protocol, this has somehow given the EU a unique opportunity to 'capitalize on its economic and environmental presence' and also assume the role of a leader in climate change regime. Although, some have questioned the EU's capability to achieve and sustain this leadership role (Vogler and Bretherton 2006:9).Vogler and Bretherton further examines what kind of capability should an actor have in order to have a fearsome presence and exploit the available resources. They give five prerequisites:

i) Shared commitment to a set of overarching values and principles;
ii) The ability to identify priorities and to formulate coherent and consistent policies;
iii) The ability to negotiate effectively with the third parties and to implement agreements;
iv) Capability in the deployment of diplomatic, economic and other instruments in support of common policies;
v) Public and parliamentary support to legitimize action (Vogler and Bretherton 2006:9-10)

Conclusion

The EU has identified climate change as a threat and preventing a serious danger from climate change is its main concern. It has initiated many climate change policies under its wing, to curb down on the GHG emission level to the atmosphere. These policies are quite ambitious and have succeeded in bringing down the GHG emissions. The EU has also agreed to spend 20% of its budget on climate change policies and actions like adaptation and mitigation. This may seem like the EU is on a smooth path with no obstacles to prevent its climate change policies. But, with the 28 Member States, it is quite a challenging task for the EU to implement these policies domestically.

The EU has become an ‘indispensable actor’ in climate change politics and much is expected out from the EU in the future course of action and it must deliver on its commitments. Although many critics have questioned the EU’s role as an actor in climate politics, it has continued to show its presence and leadership in climate change negotiations. Thus, the key vision of the EU as an actor in international climate change negotiations should aim towards sustainable development and encourage the developed countries to take steps in ratification of the Kyoto Protocol and lead the world for a concrete policy to deal with the threats of climate change in the international climate change negotiations. It must also provide incentives for the developing countries for adaptation to the threats of climate change.

Chapter 3

India and Climate change

Overview:

India's growing economy has given the country's new position in the international political scene. It has emerged as one of the influential players in the international relations. Also with the threats of climate change looming the world today, India is highly vulnerable to it. This chapter focuses on India's climate change policies and its negotiating position in international climate change negotiations. This chapter will also discuss the EU-India strategic partnership and how it affects India and climate change issues.

Liberalization of the Indian economy during the 1990s has brought anremarkable growth to the country. This accelerated growth has brought India into the limelight as one of the fast developing countries in the world after China. But with development also comes its side-effects. India is the fourth largest country in carbon emissions as most of its primary source of energy comes from fossil fuels (about 70.8%)[5]. Although India's carbon emissions maybe lower as compared to China but the threats of climate change are equally dangerous for India. This is a country which is highly vulnerable to climate related events. Climate change can have a wide range of economic impacts. Take for an example, India is a country where agriculture plays a main role in the economy. Almost 58% of the population depends on agriculture for livelihood. Changes in climatic conditions can lead to floods, droughts, increasing frequency and intensity of storms, etc. and this in turn will impact the crop yields, degrade lands and create water shortages. The *Stern Review* has stated that even a small change in the temperature will have adverse effects on the agricultural yield,

[5]CIA The World Factbook, [online: web], Accessed 10th March 2014 URL:https://www.cia.gov/library/publications/the-world-factbook/geos/in.html

which could lower the agricultural yield. The Indian economy is dependent on agriculture and any impact on it will impair India's economy.

India has a crucial stake when combating climate change as it will have an adverse effect. India has a high vulnerability to climate change and it will impact the country's water resources, ecosystem, biodiversity, coastal areas, agricultural productivity, etc. Although the economic development and growth of the country is rising to a new level, it has extensively degraded and damaged the environment (Bidwai 2012: 379). The *Stern Review* has declared that climate change can pose as a serious threat for the developing countries and if it remains unchecked it can hamper poverty alleviation policies of the countries. These developing countries are more prone to the threats of climate change because of "their geographic exposure, low incomes, and greater reliance on climate sensitive sensors such as agriculture." (Stern 2006: 92).

India has implemented or pursued programmes on energy conservation and deployment of renewable energy technologies which can be traced way back to the 1990s. Domestically, India's strategy in tackling climate change can be seen in many of its social and economic development policies, like the National Environment Policy (2006), National Action Plan on Climate Change (NAPCC 2006), 12th Five Year Plan (2007-12), etc. which will further discussed in this chapter.

Evolution of climate change policies in India (From 1947- 2006)

India does not have a concrete climate policy as of now but it has created avenues to tackle climate change on its own. However, it had forest related policies since the colonial era. The British government implemented the Forest Act of 1865. This policy was a draconian law as it allowed the British to expand the empire by claiming over the vast forest areas of the country. Later it was followed by the Indian Forest Act of 1927, where it introduced the procedure to declare an area as reserved forests, protected forests or village forests.

After Independence, India continued to follow the policies made during the British rule. In 1972, a Wildlife Protection Act was enacted. This Act provides for the protection of wildlife – plants, animals, birds. This Act is applicable to the whole country except to the state of Jammu and Kashmir. This law prohibits hunting of the

wild animals unless and until these animals are dangerous to the human life, disabled or diseased beyond recovery with special written permit form the authorized personnel or officer (Ministry of Environment and Forest 1972). This law also prohibits uprooting and picking or plucking up of certain plants and cultivation of specified plants from the forest area. The 1972 Wildlife Act was enacted to control illegal poaching and trade of wildlife and its by-products. This law has been amended from time to time.

In 1974, Water (Prevention and Control of Pollution) Act 1974 was enacted to prevent and control pollution of water and under this law, Central Pollution Control Board was established. This act was later followed by Water (Prevention and Control of Pollution) Cess Act of 1977. The law was aimed at levying and collection of a cess on water, the water which was consumed by the "persons carrying on certain industries and by local authorities, with a view to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution constituted under the Water (prevention and Control of Pollution) Act, 1974".

This was followed by Air (Prevention and Control of Pollution) Act, 1981. The aim of this law was to prevent and control pollution of air. It was amended in 1987. The law took appropriate measure to preserve the quality of air and control air pollution. This law put forward meticulous standards of air pollution with regard to industries and it was backed by severe penalties (Das 2012:22).

The Forest (Conservation) Act of 1980 was aimed at conservation of forests and for "matters connected therewith or ancillary or incidental thereto". It was amended in 1988. The Environment (Protection) Act of 1986 was aimed at providing protection and the improvement of the environment and prevention of hazards to human beings, plants, property and other living organisms. This is the first Indian environmental law that covered the components of environment that included air, water, land, human beings, other living organisms, plants, etc. the purpose of this act was to implement the decisions taken at the UN Conference on the Human Environment of 1972. However, critics are of the view that this law was implemented in the wake of the Bhopal Gas Tragedy of 1984[6] (Das 2012: 23). This law set up a framework for the

[6]The Bhopal gas tragedy was a gas leak accident which occurred in Bhopal, M.P., at a pesticide plant, where thousands of people lost their lives on December 1984.

management of hazardous substances, prior assessment of the environment on the major developmental projects of the country, discharge of the pollutants by the industries into the environment and management of industrial chemical accidents (Das 2012: 23).

Hazardous Waste (Management and Handling) Rules, 1989, aimed at controlling the generation, collection, treatment, import, storage and handling of hazardous wastes. Another similar law which was also passed in the same year, the Manufacture, Storage and Import of Hazardous Chemical Rules set up an Authority to check and inspect those industries handling with hazardous chemicals and the isolated storage facilities.

The Public Liability Insurance Act of 1991 was passed to ensure that the victims of the industrial accidents were provided with relief, while handling with the hazardous substances. The National Environmental Tribunal Act, 1995 was created to provide compensation for the damages caused to the people, property or environment by hazardous chemical substances.

The Ozone Depleting Substances (Regulation and Control) Rules 2000 laid down the regulation for the production and consumption of the ozone depleting substances. The Biological Diversity Act, 2002 was created to conserve the biodiversity of the country, sustainable use of its components, fair and equitable distribution of the natural biological resources.

Other environmental policies that came up were the Factories Act of 1948, which was amended in 1987, the River Boards Act 1956, the Merchant Shipping Act 1970, the Coastal Regulation Zone Notification of 1991 and the Municipal Solid Wastes (Management and Handling) Rules, 2000.

By 2006, the National Environmental Policy was created and this was the first policy of India that acknowledged that climate change was a serious problem. In 2008, a framework to face the challenges of climate change, the National Action Plan on Climate Change (NAPCC) was created. So far, no law or policy has been created specifically to deal with climate change in India.

National Environment Policy

The National Environment Policy, 2006, seeks to conserve and protect the critical ecological systems and resources which are essential for us, to ensure equitable access and efficient use of environment to all the sections of the society, who are most dependent on the environmental resources for their livelihood, to integrate environmental concern in social and development projects of the country, to enhance good environmental governance and resources to conserve the environment (National Environment Policy 2006:8-9).

In terms of climate change, this policy acknowledges the fact that climate change is a global environmental issue and developing countries, particularly India will have adverse effects due to climate change. It also outlines the important feature of India's response to climate change, i.e., the principle of common but differentiated responsibility. It outlines eight points which comprise the important elements of India's response to climate change:

a) Sticking to the principle of common but differentiated responsibilities and respective capabilities of different countries in mitigation of GHG and adaptation measures.
b) To rely on multilateral approaches in facing climate change issues.
c) There should be equal per capita entitlements of global environment resources for all the countries.
d) To identify the key vulnerabilities of India especially water resources, forests, coastal areas, agriculture and health.
e) Over-riding priority of the right to development.
f) To assess and incorporate adaptation measures in incorporating in relevant policies and programmes of the country such as watershed management, coastal zone planning and regulation, agricultural technologies and practices, forest management and health programmes.
g) To encourage the Indian industry to participate in Clean Development Mechanism (CDM) through capacity building.
h) To participate with the developed as well as developing countries to address the challenges of climate change and to attain sustainable development,

consistent with the provisions of the UNFCC, voluntarily. (National Environment Policy 2006).

Prime Minister's Council on Climate Change

This was a committee constituted on June 6th, 2008, under the leadership of Prime Minister Manmohan Singh, which includes Government representatives as well as non-Government members also. This committee will coordinate national action for assessment, adaptation and mitigation of climate change (Government of India 2007). It advised the Government of India to take on proactive measures to deal with the challenge of climate change and facilitate inter-ministerial coordination and guide policy in relevant matters (Government of India 2008). Under this committee, the National action Plan on Climate Change (NAPCC) was released in 2008.

National Action Plan on Climate Change

In the year 2008, India disclosed the country's first National Action Plan on Climate Change (NAPCC). This plan will have an integrated strategy for implementing domestic actions on climate change, outline policies and measures to address mitigation and adaptation (Fujiwara 2010: 9). The approach of the NAPCC is to identify the measures that promote our developmental objective and at the same time yield co-benefits for addressing the climate change effectively (NAPCC 2008:2).

The Prime Minister's Council on Climate Change, on 13th July, 2007, decided that, "A National Document compiling action taken by India for addressing the challenge of Climate Change, and the action it proposes to take" to be prepared (Government of India 2008). The NAPCC identifies the measures that promote objectives that are developmental and at the same time addresses the challenges faced by India due to climate change. The document states that it lists "specific opportunities to simultaneously advance India's development and climate related objectives of both adaptation as well as greenhouse gas (GHG) mitigation" (NAPCC 2008:13). These national missions are all at different stages of implementation and even the state governments are preparing State Action Plans on Climate Change that are aimed at

creating institutions and implementing sectoral activities to address climate change. Twenty one states have prepared the document on State Action Plan on climate change and they are Andaman and Nicobar, Andhra Pradesh, Arunachal Pradesh, Assam, Delhi, Jammu & Kashmir, Kerela, Karnataka, Lakshadweep, Madhya Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Odisha, Punjab, Rajasthan, Sikkim, Tripura, Uttarkhand and West Bengal (Government of India 2013).

The NAPCC comprises of eight missions – National Solar Mission, National Mission for Enhanced Energy Efficiency, National Mission on Sustainable Habitat, National Water Mission, National Mission for Sustaining Himalayan Ecosystem, Green India Mission, National Mission for Sustainable Agriculture, National Mission on Strategic Knowledge for Climate Change.

i. National Solar Mission – Under this mission, the NAPCC aims to develop and promote the use of solar energy in the country. India being a tropical country has a great potential to tap the solar energy. This mission also mentions about the storage of solar power for a sustained long term use.
ii. National Mission for Enhanced Energy Efficiency – This mission creates four initiatives to enhance energy efficiency in the country. The first initiative was to enhance the cost effectiveness of improvements in energy efficiency in large industries through certification of energy savings that can be traded. The second initiative was to shift towards energy efficient appliances in certain sectors through innovative measures which will make the products more affordable. The third step was to create mechanisms that will help in the finance of the demand side management programmes in all the sectors by capturing the future energy savings. Fourth, to develop fiscal instruments so as to promote energy efficiency.
iii. National Mission on Sustainable Habitat – This Mission plans to improve the energy efficiency in buildings, management of solid wastes and promote energy efficiency as core component in urban planning through three initiatives. The Energy Conservation Building Code will address the new and the large buildings to optimize their energy demand. The second initiative was to develop technology to produce power from the waste. Third, to have better urban planning and modal shift to public transport.

iv. National Water Mission – This mission plans to improve the use of water efficiently by 20% through pricing and other measures. It will also improve and optimize the efficiency of the existing irrigation systems of the country.

v. National Mission for Sustaining the Himalayan Ecosystem – The Himalayas is the source of many perennial rivers of India and protecting and conserving the ecosystem of this region is important. Thus this mission seeks to conserve the biodiversity and the ecosystem of the region.

vi. National Mission for a Green India – The plan seeks to increase the forest area by means of afforestation on the degraded forest lands from 23% to 33%.

vii. National Mission for Sustainable Agriculture – Agriculture is important for India's economy and developing new varieties of crops which is resilient to climate change is needed. These new varieties of crops should be able to withstand extreme weather conditions such as droughts, dry spells, flooding, etc.

viii. National Mission on Strategic Knowledge for Climate Change – The mission plans set up and identifies the challenges of climate change through research, for which the Climate Science Research Fund will be created. It also encourages the private sector to develop adaptation and mitigation technologies through venture capital funds.

Other initiatives under the NAPCC include GHG mitigation in power generation, renewable energy technologies programmes, disaster management response to extreme climate events, protection of coastal areas, health sector and creating appropriate capacity at different levels of government.

Critics have criticized that this plan is weak and makes no commitment to cut down the carbon emissions in the country. Also, the plan makes no mention of the inclusion of the poor who are the most vulnerable to climate change (Pandve 2009).

Parliamentary Forum on Global Warming and Climate Change

This Forum was constituted in 2008 and it involves parliamentarians to interact with the specialists working on climate change and global warming. The Members of this forum have participated in various discussions and organized seminars and

presentations relating to subjects on impacts of climate change on agriculture, biodiversity, population, etc. Another function of the Forum is to involve the Members of the Parliament to spread the awareness of global warming and climate change and undertaking other related tasks which deem fit.

Climate Change Action Programme

The Climate Change Action Programme was launched with an objective to build and support the capacity at central and the state level and assess the impact of climate change on vulnerable areas (PTI 2013). As part of the Climate Change Action Programme (CCAP), the Ministry has initiated programmes like National Carbonaceous Aerosols Programme (NACP), Long Term Ecological Observatories (LTEO), and Coordinated Studies on Climate Change for North East Region (CSCCNE). The NAPC is an important initiative launched in 2011 by the Ministry of Environment & Forests in collaboration with Ministry of Earth Sciences, Ministry of Science and Technology and Indian Space Research Organization (ISRO) and other related agencies as well. The aim of this initiative is to enhance the "understanding of the role of black carbon in climatic change through monitoring and assess the impacts of black carbon through various modeling techniques".

Indian Network for Climate Change Assessment (INCCA)

The Ministry for Environment & Forests has set up this network which comprises of 127 research institutions which are working on climate change research and its impacts on various sectors of the economy across the country. The INCCA has aided the Ministry to put up a Green House Gas (GHG) Emissions Inventories (PTI 2013).

Twelfth Five-Year Plan and Climate Change

India's 12th Five-Year Plan (2007-2012) has set ambitious targets for the development of renewable energy and a low carbon mitigation strategy. Under this Plan, the Planning Commission calls for implementing various activities under the eight

missions of the NAPCC (Government of India 2011). The Plan states that in order to effectively address the issue of climate change the strategy should penetrate into all the three levels of planning process. Sustainable development and low carbon growth must be integrated in all the sectors. Secondly, climate change adaptation strategy should be built in areas which are vulnerable to climate change. Lastly, schemes and programmes should be launched to strengthen the scientific assessment, GHG monitoring and protecting the environment through effective adaptation and mitigation measures (government of India 2011).

Other Initiatives

In 2012, India organized the 10th BASIC Ministerial Meeting on Climate Change in New Delhi to promote exchange of ideas and views of the outcomes of the Durban Summit and evolution of common BASIC position on climate change. Representatives of Swaziland, Singapore and Qatar were invited along with the BASIC countries. India has also collaborated with Bhutan, Nepal and Bangladesh to address the adverse effects of climate change through adaptation in four areas – floods, water, energy and biodiversity (Government of India 2013).

Renewable Energy procurement Obligation has been an important force to promote renewable energy sector in India. The Jawaharlal Nehru National Solar Mission has indicated that RPO is the key driver for promoting solar power in India. However, the NAPCC has not made any targets for the RPO (Government of India 2013).

India at International Climate Change Negotiations

India as a developing country has gained prominence in the international arena of climate change negotiations. It has played a key role in the North-South politics of climate negotiations and has been one of the key players in establishing the "common but differentiated responsibility" principle and inserting statements in the negotiating texts that feature to the historic responsibility for the emission of the GHG to developed countries (Joshi 2012: 135).

According to Mohan (2003)[7], he has argued that India has changed from a "porcupine" to a "tiger". When the porcupine has fixed its position it shows its spikes and does not move. This "porcupine" reflects India's traditional nature of being very defensive and distributive strategy. It remains fixed. He further argues that while the tiger is more versatile and moves quickly, it denotes the new dynamics in the 1990s. Thus, as a "tiger" India should be more confident and open to new ideas and proposals rather than staying fixed at one decision. This move would "stand for a shift towards mixed strategies with a considerable value creating an element". But this shift was seen taking place only in the mid-2000s.

Domestically, India has three groups which influence the climate change policy. The first one is the 'growth first stonewallers'. They are the traditionalists who believe that climate change is an issue which has been brought up the industrialized countries to curb down India's economic growth. They are of the opinion that climate change should be entirely dealt by the industrialized countries as they are the main emitters of carbon. Secondly, the 'progressive realists' call for more proactive measures at the domestic level but when it comes to linking it to the international level they stand on the same ground with the 'stonewallers'. They oppose any commitment that will constrain country's domestic policies on growth. Lastly, the 'progressive internationalists' who push for more national policies which can be linked with the international commitments on climate change and can be used within the international negotiations to achieve concessions and to move the negotiations to a more successful global mitigation strategy (Michaelowa and Michaelowa 2012: 577).

Over the years the 'progressive internationalists' have strengthened and more vocal, even if they are relatively small in number. This is accounted for four major reasons. Firstly, there has been a general awareness on climate change and its impacts in India and how vulnerable India is to climate change. Second, with India's growing economy, there has been an increase in the energy demands over the past few years and also cater the energy needs of its large population. Thus there has been a strong growth in energy demand and insufficient energy needs of the country. Moreover,

[7]Mohan, Raja (2003), *Crossing the Rubicon: The Shaping of India's Foreign Policy*, New Delhi, Viking. Cited in Katharina and Axel Michaelowa (2011), *India in the International Climate Change Negotiations: From Traditional Nay-sayer to Dynamic Broker*, CIS Working Paper, No. 70.

most of the country's energy resources have been imported especially oil and gas. Energy security concerns have strengthened the case for a strong national climate policy. Thirdly, there are direct benefits in terms of economic and finances to be drawn by India from climate change policy instruments such as Clean Development Mechanism (CDM). Finally, India has a mounting pressure from the international community to take up mitigation commitments. Even the developing countries, like Bangladesh and Maldives have blamed India along with China for creating a deadlock in the 2009 Copenhagen Summit (Michaelowa and Michaelowa 2012: 578).

During the Copenhagen Summit, India with its enhanced image through its membership with the BASIC countries, played a leading role. The BASIC countries played a decisive role in the Copenhagen climate change negotiations and India merged to play a dominant role within the BASIC. The group firmly believes that the UNFCCC and the Kyoto Protocol, both of which have emissions reduction targets for developed countries only, should remain the foundation of the future international climate change negotiations. The group also rejects the enforced limits on its emissions by the international community.

At the Cancun Summit, the Green Climate Fund was set up to assist the developing countries in mitigation and adaptation measures. This Fund will assist the developing countries like India and China to switch to renewable energy sources like the wind and the solar power. (Gray 2010:) India's then environment Minister, Mr. Jairam Ramesh, during the conference stated that India may commit to legally binding cuts in the emissions. He further said that India was working on fulfilling its domestic commitments but it was not yet ready to it in the international agreement.

> "All countries must make binding commitments in appropriate legal form. This does not mean that India is for legally binding commitment at this stage. That's our position. There are changing realities that we have to understand. Increasingly, more and more developing countries are asking questions of India, China and the United States, the three big countries

saying they will not accept the an international legally-binding agreement. I have nuanced our position….Let's keep this discussion going…"[8]

This brought a lot of criticisms by the experts. It shifted India's negotiating position on climate change negotiations and had undone all of its efforts it had worked for in the past.

At the Durban Summit, second commitment to the Kyoto Protocol was agreed and to draw a new legal framework to deal with climate change beyond 2020 was recognized by the governments (UNFCCC 2014). India brought back the issue of equity to the table and the decision on the Long Term Cooperative Action (LCA) "accepts that the issue of sustainable development, as demanded by India, must be debated and reported back to the next COP" (CSE 2014).

The Doha Climate Gateway saw the governments consolidating the gains of the last three years of international climate change negotiations and opened a gateway to necessary greater ambition and action on all levels (UNFCCC 2014b). At the summit, India's demand which has earlier been ignored at Copenhagen and Durban was retrieved. Issues like intellectual property rights in technology transfer and development, equity and unilateral measures. Experts have commented that India's issue that were brought forward were "weak" but Indian negotiators were satisfied as these issues found place in the final outcome of the Doha Climate Gateway package and further stated that they would continue to push these issues in the future negotiations as well (Goswami 2012).

At the Warsaw Summit, which was held recently in 2013, India stood by its CBDR that they agree to the UNFCC Kyoto Protocol but against any legally binding commitment, developing countries should be provided with the flexibility to choose their own actions and rich countries should not see global warming with a business perspective of providing markets to their MNCs.

However scholars like Ranjamani are of the opinion that India's position on international climate negotiations, although legitimate is not sagacious. It is legitimate

[8]Mr Jairam Ramesh's comment on "Cancun Climate Summit: The final day as it happened" (2010), The Guardian, URL:http://www.theguardian.com/environment/blog/2010/dec/10/cancun-climate-change-summit-final

because it firmly stands within the burden-sharing architecture of the UNFCCC and the Kyoto Protocol. It is not sagacious in nature because the drastic changes in the climate will have severe impact on India. There will be an increase in the severity of draughts, land degradation, desertification, and intensity of floods, tropical cyclones, and decrease in the crop yield and food security. The rising sea levels will also displace thousands of people who are living in the coastal areas (Rajamani 2007:4).

Kandilkar and Sagar examine that although the Indian government has given importance to science and technology since Independence, it still lacks the infrastructure necessary for expanding knowledge and maintaining research skills in the country and also lack of financial assistance. They argue that the indigenous technical ability serves as a base to direct India's scientist to work on climate-related research (Kandilkar and Sagar 1999: 121). Joshi also analyses India's capability on the international climate change negotiations and finds a similar observation that India faces quite a number of developmental challenges which are due to lack of access to energy, basic services and the capability to adapt to climate change. This in turn, raises a question on India's role as an emerging global power (Joshi 2013: 142).

Over the years India's strategies on climate change negotiations has seen an important shift from being a "porcupine to a tiger". From a being a defensive, traditional player it has shifted to more of a "deal maker" in the international climate change negotiations. The Prime Minister of India has stated that India's per capita emissions will never exceed the developed countries and thus will not take emissions reduction targets (Ministry of Environment& Forests, 2009:17).

EU-India Strategic Partnership and Climate Change:

India and the EU became "Strategic Partners" in 2004. Under this strategic partnership, a Joint Action Plan (JAP) was signed where both the parties not only looked at economic cooperation but also look at issues on sustainable development and climate change.

> "India and the EU, as the largest democracies in the world, share common values and beliefs that make them natural partners as well as factors of stability in the present world order. We share a common commitment to

> democracy, pluralism, human rights and the rule of the law, to an independent judiciary and media. India and the EU also have much to contribute towards fostering a rule-based international order- be it through the United Nations or through the World Trade Organizations. We hold a common belief in the fundamental importance of multilateralism in accordance with the UN Charter and in the essential role of the UN for maintaining peace and security, promoting the economic and social advancement of all peoples and meeting global threats and challenges." (Joint Action Plan 2007: 1)

The Joint Action Plan (JAP) takes an initiative to establish an EU-India Initiative on Clean Development Mechanism and Climate Change. It is cooperation in the area of clean technology and CDM, adaptation measures on climate change and integration of these adaptation measures into sustainable development strategies (European Union 2012: 15). Under this JAP, the EU-India Joint Working Group on Environment meets regularly to discuss on environmental issues.

Some of the programmes taken under this initiative are:

i. To develop a cluster for clean technologies and carbon capture and storage facilities for the Indian thermal power sector.
ii. Co-fermentation of organic solid waste and septage
iii. To establish photovoltaic plants in India
iv. To provide clean cooking energy and solar lighting to the poor households.
v. To support and assist in the implementation of renewable energy and energy efficiency across India.
vi. To improve the winter livelihood of those people living in the severe cold desert of the Western Indian Himalayas.
vii. To improve emission monitoring status in India.
viii. To support the central and the state governments to integrate adaptation measures on climate change in sectoral policy decisions and rural developmental programmes in order to reduce the risk to the vulnerable sections of the society.

To reduce the vulnerability of the coastal areas through adaptation (European Commission 2012: 15).

Although, the EU-India Joint Action Partnership was developed within the framework of the EU-India strategic Partnership, not much has yielded from this partnership and no substantive results have been produced. Thus it is doubtful that whether the EU will be able to clear strategies towards its bilateral partner, i.e., India (Allen 2012:6).

The 6th EU-India summit in 2009, underlined the importance of early implementation of the JAP, especially in the areas of solar energy, development of clean coal technology and the increase in the energy efficiency. In the 2010 India-EU summit, both the European and the Indian leaders reaffirmed on their cooperation in clean energy development and climate change (European Commission 2012).

While India-EU strategic partnership may signal good prospects, it should be noted that the India-EU strategic partnership will be different from that of the EU and the US. With India, despite the commonalities, the EU needs to nurture greater synergy for it to become a strategic partner. It will require an understanding of each other's roles and visions on global issues like the climate change (EU Observer 2012).

Murrel argues that EU's leadership role can be looked in two ways. First, as an agenda setter. This was clearly seen in the 1990s where the EU had to take up the leadership role, both at the bilateral as well as multilateral level. Khander and Murrel both recognized that it was the EU which made the first step to make proposals and then getting India to agree to them as India rarely made proposals. But at the bilateral level, this has worsened since the start of the EU-India Summit in 2000. However at the multilateral level it shows a different picture. It has encouraged a greater part of India's climate change policy and national strategy documents (Murrel 2012:12). Secondly, the EU as a leader has encouraged Indian negotiators to take responsibility of its emissions and to move towards setting their own targets. Thus the EU's ability to set targets and certain standards has been a success to a certain extent (Murrel 2012:13).

Murrel further argues that the EU supports India's climate policy by aiding India with financial mechanism, through technical assistance and information sharing under the JAP. With India and the EU becoming strategic partners it portrayed both the EU and India as equal partners, bilaterally as well as multilaterally (Murrel 2012:16).

Scholars have observed that compared to the EU, India's attitude towards climate change and environmental issues have been marginal. But the 1984 Bhopal Gas Tragedy was a wakeup call for the country as environmental issues became a political agenda. Although environmental awareness is growing steadily in the domestic debates, economic growth and reduction of poverty have been the major basis of the Indian political agenda (Wagner 2012: 36). With the creation of the National Action Plan on Climate Change (NAPCC), there has been an increasing awareness on climate change on India's domestic priority list. For an example, the country's solar energy mission, which has an ambitious target of installing 'solar-power generation capacity of 20,000 MW by 2022. This will address the country's need for energy security and climate change as well and hence, creating more optimism in the EU-India relations (Murell 2012: 9-11).

However, Wagner analyses that the EU-India relations as strategic partners are quite questionable. The Durban Summit and the Rio+20 Summit witnessed this incompatibility. At the Durban Summit, India had its way in pushing for equity as the centerpiece of the negotiations. The Minister of Environment & Forests, JayantiNataranjan, stressed that the developing countries' economic capabilities, large populations, poverty and low responsibility for the historic emissions must be the base of the international climate change negotiations (The Guardian 2011). The EU favoured market-based solutions and regulatory measure that would be merged with the green economy roadmap and India on the other hand, tried to return to the principle of "common but differentiated responsibilities" (CBDR) and stated that it was non-negotiable at the Rio+20 Summit (Wagner 2012: 39).

Torney also argues that there has been a significant "normative gap" between India and the EU when approaching climate change. India continues to see climate change in a "very North-South terms" resulting in significant resistant from the Indian Government in climate change actions.

> "The emphasis [of the Indian Government policy] is energy access, increasing the amount of energy, increasing the amount of energy efficiency. The main difference we have with the EU is that the primary goal of the EU is to reduce carbon dioxide emission. The tools that the EU uses and the tools for our very separate goals are similar- renewable,

> energy efficiency, etc. But this should not blind us to the fact that the goals are different. We see climate change as a co-benefit. The EU sees enhanced access, etc., as a co-benefit, and that's a very sharp difference in world views"[9]

The India-EU relationship is constantly evolving and it is quite complex when it concerns climate change. India still faces developmental and economic challenges as it is trying to adjust to its new found status as a rising global power and Murrel argues that the EU should try to understand that "climate change is just one of the many priorities for the Indian Government, and that, despite its increasing assertiveness, it still faces many structural and political issues which can delay policy implementation" (Murrel 2012:25).

Conclusion

India is one of the fastest growing economies of the world today, with the highest density of population growth in the world. Recent studies have showed that India will take over China as the country with the largest population by 2030. Along with economic growth, heavy developmental processes are also taking place in the country and this has made India as one of the biggest emitters of the GHG to the atmosphere. However, the per capita emissions are quite low as compared to other countries like the US and China.

India with its large population to take care of, development and economic growth are the main agendas. Further, the costs of setting up adaptation and mitigation measures to deal with climate change are very high. India cannot and does not want to compromise on its development strategies.

However, the threats of climate change for India is high. India is highly vulnerable to the effects of climate change. Yet it has no tangible policy or law to deal with the threats of climate change. India does have environmental policies but these policies deal with forest, wildlife and biodiversity and not specifically with climate change. It is observed that India's environmental policies have evolved slowly from forest based

[9]DiarmuidTorney's interview with a senior Indian Government Official, Delhi, 16th Nov 2010.

policies to prevention and control of air and water pollution and management of hazardous chemical substances. Recent policies have just mentioned the seriousness of climate change. The NAPCC is still a strategy framework to deal with climate change for the country.

The India-EU strategic relations need to be pushed forward. Both the economies should take constructive steps to improve its strategic relations. The EU as a strategic partner should push India to take up mitigation measures and should assist India financially to tackle climate change.

The time has come for India to act. The dangerous effects of climate change will have tremendous effect on the poor and the people living at the coastal cities. What India can do is, come up with a concrete policy which aims at sustainable development and which will not hamper its economic and developmental growth.

Chapter 4

The EU and India at Climate Change Negotiations: Copenhagen Climate Summit (2009) – Warsaw Climate Summit (2013)

Overview

Climate Change is now a recognized threat for mankind in the 21st century. It will not only affect the environment around us but it can also have serious developmental implications for all the sectors of the economy, especially in the energy sector. Climate change is now one of the important agendas in the political community. Many international negotiations and frameworks have been created but so far we are still lacking in a concrete international policy to deal with the challenges of climate change. This is due to the differences among the developed and the developing countries during the international negotiations. This chapter examines international negotiations on climate change from Copenhagen summit (2009) to the Warsaw summit (2013) and also investigates the responses of the EU and India at each of these summits.

The Copenhagen Climate Summit (2009)

The 15th Session of the Conference of Parties (COP)[10] to the United Nations Framework Convention on Climate Change (UNFCCC) and the 5th Session of the meeting of the Parties to the Kyoto Protocol, was held at Copenhagen, Denmark on December 7th-18th, 2009. The opening statement was given by the UNFCCC's

[10]Conference of Parties (COP) is the a body of the UNFCCC, which meets annually and the countries that participate in this meet are known as "Parties to the Convention". It is often referred to as the "supreme body".

Executive Secretary,Yvo de Boer reiterates that, "The clock has ticked down to zero. After two years of negotiations, the time has come to deliver"[11].

He used the analogy of an "ideal Christmas cake" and emphasized that three things should be the outcome of the Copenhagen conference. First, the 'bottom layer' must consist of prompt agreement on implementation or actions on mitigation, adaptation, finance, technology, REDD and capacity building. The 'second layer' will consist of ambitious emission reduction targets and it would also include financial commitments both short and long term finance. The final layer or 'the icing on the cake consists of shared vision on long-term cooperative action on climate change and long term goal'[12].

Mr. de Boer, further stressed that Copenhagen would only be a success 'if it delivers significant and immediate action that begins the day the conference ends'. Thus, the focus should be on creating strong and pragmatic proposals that would enable prompt action on mitigation, adaptation, technology, finance and capacity building[13].

The striking feature of this climate conference was the adoption of the Copenhagen Accord. This was a major breakthrough in international climate change negotiations. The US and all the major developing economies like India and China came together and committed themselves to reduce greenhouse gas emissions and signed a joint climate agreement, for the first time (FCRN 2010). These countries also made 'unconditional national pledges' to cut down on the emissions and was able to make an agreement on limiting the average global temperature increase to 2 degree Celsius or less (FCRN 2010). Developed countries also made commitments on providing finance (long-term and short-term) to tackle climate change.

[11]Opening Statement given by Yvo de BoerURL: http://unfccc.int/files/meetings/cop_15/statements/application/pdf/speech_cop_15_opening_7.12.09_-_cad.pdf

[12]Ibid.

[13]Ibid.

The Copenhagen Accord

The Accord highlighted that climate change was one of the greatest threats of our time and strong political will was in need of the hour to combat this major threat in accordance with the principle of CBDR.

The Copenhagen Accord states that,

> "To achieve the ultimate objective of the Convention to stabilize the greenhouse gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climatic system, we shall, recognize the scientific view that the increase in global temperature should be below 2 degree Celsius, on the basis of equity and in the context of sustainable development, enhance our long-term cooperative action to combat climate change. We recognize the critical impacts of climate change and the potential impacts of response measures on countries particularly vulnerable to its adverse effects and stress the need to establish a comprehensive adaptation programme including international support".

Second, there was an agreement on deep cuts in global emissions in accordance with the IPCC Fourth Assessment Report. Cooperation was the key in achieving deep cuts in global and national emissions and longer time period for 'peaking' would be given to the developing countries, bearing in mind that socio-economic development and poverty eradication are the priorities of these countries and 'a low-emission development strategy is indispensable to sustainable development' (Copenhagen Accord 2009).

Adaptation is a major challenge faced by every country in the world. The international community must cooperate to ensure enhanced action and implementations of the Convention, which are aimed at reducing the vulnerability and resilience building in the developing countries. These actions are urgent especially for the vulnerable developing and small countries in Asia and Africa and the island counties (Copenhagen Accord 2009). The Accord mentions that the developed countries will provide adequate financial resources for capacity building, technology for adaptation and mitigation measures in the developing world. Since these developed countries are

the parties to Annex 1, they would continue the reduction in emissions and strengthen in accordance to the Kyoto Protocol. The Annex 1 parties were committed to quantified economy-wide emission cuts individually or jointly by 2020, which were to be monitored, reported and verified with the 'existing and any further guidelines adopted' by the COP so as to ensure that these 'targets and finance is rigorous, robust and transparent'. The Non-Annex 1 parties (least developed countries and the small developing island states) on the other hand, 'may take actions voluntarily and on the basis of support'. The mitigation actions adopted by these countries will be 'subject to their domestic measurement, reporting and verification' and those developing countries that are receiving international support for their actions would be subjected to international monitoring, reporting and verification (MRV) under the guidelines adopted by the COP (Copenhagen Accord 2009).

The Accord mentions of pursuing various ways, which includes 'opportunities, to use markets to enhance the cost-effectiveness and to promote mitigation actions' and the developing counties that have low emissions, must be provided with incentives, so that they may continue 'to develop on a low-emission pathway'. The Accord recognizes the 'immediate establishment of a mechanism' so as to mobilize financial resources from the developed countries, in efforts to reduce the 'emissions from deforestation and forest degradation'.

> "Scaled up, new and additional, predictable and adequate funding as well as improved access shall be provided to developing countries, in accordance with the relevant provisions of the Convention, to enable and support enhanced action on mitigation, including substantial finance to reduce emissions from deforestation and forest degradation (REDD-plus), adaptation, technology development and transfer and capacity-building, for enhanced implementation of the Convention" (Copenhagen Accord 2009).

The Accord calls for 'collective commitment' by the developed countries to provide 'new and additional resources' (this includes forestry as well) through investments by the international institutions amounting to USD 30 million for the period 2010-2012 (Copenhagen Accord 2009). Developed countries are called to commit a goal of jointly mobilizing USD 10 million by 2020 to address the needs of the developing

countries to tackle climate change (Copenhagen Accord 2009). This fund would come from various sources such as the public and the private both, bilateral and multilateral. This led to the establishment of the 'Copenhagen Green Climate Fund' and the 'High Level Panel' was also established to study the contribution of the potential revenue sources.

The Copenhagen Green Climate Fund was also to function as the 'operating entity of the financial mechanism of the Convention to support project, programme, policies and other activities in the developing countries related to mitigation including REDD-plus, adaptation, capacity building, technology development and transfer' (Copenhagen Accord 2009). A Technology Mechanism was also established to 'accelerate technology development and transfer', which would be led by the country-driven approach, for both adaptation and mitigation.

Last, but not the least, the Accord called for assessment of the Copenhagen Accord by 2015, keeping in mind, the temperature target of 1.5 degree Celsius. The Copenhagen Accord was received with mixed feelings. It was neither perfect nor it was the 'ultimate' climate deal. Many had high expectations from this climate summit but it fell short of ambitious and legally binding commitments.

However, the Accord was not without a merit. First, it had brought the US and major developing countries like India and China to sign a joint climate agreement for the first time. Second, all these countries made 'unconditional national pledges' to cut down on the emission level and hence, it was able to limit the Earth's average global temperature to 2 degree Celsius. Fourth, the Convention was able to resolve the issue of monitoring, reporting and verification (MRV) of the developing countries which was a deadlock earlier. Fifth, the commitment made by the developed countries to provide long and short term finances for adaptation and mitigation actions to face the challenges of climate change.

Although the Copenhagen Climate Summit was a crucial political step, it was heavily criticized. The Accord had no long term goal and it lacked in targets for reducing the emissions to 50% (i.e. reduce the global emissions to 50% by 2050) for the developed and developing countries. According to the critics, there was no 'reference to global emissions peaking date, or even a developed countries peaking date' or 'no clear

pathway for emissions has been agreed'(FCRN 2010). Also there was little or no reference to the future of the CDM and other carbon market-based instruments.

Although the Accord mentions about the financial resources for adaptation and mitigation measures for the developing countries, the critics have stated that these maybe just 'promises only' as the Accord is rather ambiguous on whether these finances are to be added to the existing commitments and 'the sources of funds can include private and investment monies which are likely to come by way of loans rather than foreign aid governments are somewhat let off the hook. Only a few governments plus the European Union were prepared to make specific dollar at Copenhagen' (Elliot 2010).

There were high expectations from the Copenhagen climate summit to create a new legally binding agreement but it turned out to be a huge disappointment as none of the participating countries were willing to compromise on their economic and developmental growth, especially countries like India and China. This proved to be a recipe for a huge failure at the Copenhagen summit. Inspite of all this, the Copenhagen Accord managed to set the limit for the increase in the global average temperature, the developing countries took steps for mitigation measures and the developed countries made commitments to set up funds to assist the developing countries in their mitigation and adaptation measures against climate change (Rastogi 2011: 132).

The Response of the EU at the Copenhagen Climate Summit

The European Commission's President Jose Manuel Barroso, expressed his disappointment as the Accord 'fell short' of EU's expectations by saying,

> "I will not hide my disappointment. The level of ambition is honestly not what we were hoping for".
>
> "This was the first experiment in working together, there are important points that have been agreed- after all it was an agreement. But the level of agreement is honestly not what we had been hoping for" (FCRN 2010).

He further added that the Accord lacked collective targets for reducing the emissions. It had failed to set a deadline for the treaty and made no mention of legally binding the agreement. The Swedish EU Presidency called the agreement "a disaster" while the German Chancellor, Angela Merkel, expressed the summit as a "step, albeit a small one towards a global climate change architecture" (FCRN 2010).

The Swedish Environment Minister, Andreas Carlgren, stated that the climate summit at Copenhagen was a "great failure" partly because 'the others' had rejected the targets and the time-table to sign for a legally binding reduction of the emissions of the GHG (Kanter 2009).

The EU was heavily criticized by the industrialists and the environmentalists. It initially went to the Conference with a strategy of leading an example of reducing the emissions but it was not able to push the other nations to follow it up and it ended up sidelining their plan later at the summit (Kanter 2009). "The EU had virtually no presence in Copenhagen; it was little more than a bystander: all ghost, no Hamlet!" (Lehmann 2010).

Scholars have pointed out that the reason why the EU became a mere spectator at the Copenhagen summit was probably because, the rising multilateralism between the BASIC countries was getting stronger and the transatlantic alliance between the US and the EU was dying (Lehmann 2010). The absence of the EU during the negotiations between the US and the BASIC countries was a total diplomatic failure.

This brings us to question the EU's role as an effective actor in climate change negotiations. The reason why the EU failed to meet its expectations was probably it was too ambitious with its goals as compared to the US and the BASIC countries, which had a more reserved negotiating strategy. The EU had in mind to come up with an ambitious treaty to succeed the Kyoto Protocol which was ending in 2013. However, it was unable to convince the parties to agree with its ambitious accord (Groen and Niemann 2012:14). The US and the BASIC countries had more modest goals as compared to the EU. The US wanted to cut down on the GHG emissions to 17% by 2020 from 2005 levels as compared to the EU, who wanted to cut down on the emissions to 29% by 2020 by 1990 levels (Groen and Neimann 2012:14).

The BASIC countries had also cornered on the EU. Their joint actions against the developed countries had an immense impact on the outcome of the summit. During the closed meeting these countries drafted the accord which later became the basis of the final Copenhagen Accord. Also they decided to have a walkout if the developed countries would make them compromise against their developmental strategies (Groen and Neimann 2012:15).

The negotiating strategy of the EU was not effective enough. It lacked cohesion and unanimity. There were disagreements among the Member States in terms of national interest hence, they were unable to tactfully negotiate with the US and the BASIC countries. Also, the EU had no backup plan or Plan B to their negotiating strategy (Groen and Neimann 2012:18).

What the EU now needs to do is find ways to regain its role as an effective player in climate politics. Some have suggested a combination of 'carrot and stick' policies in this regard. For an example, the use of border tax adjustments (i.e. carbon tariffs), is one possible 'stick' that was previously suggested, although this has been a controversial measure and other Member States have opposed it strongly (FCRN 2010).

The Response of India at the Copenhagen Climate Summit

India at the 15th COP of the UNFCCC at Copenhagen, Denmark was represented by the Prime Minister, Mr. Manmohan Singh and Minister of Environment and Forests, Mr. Jairam Ramesh. Just a week ahead of the Copenhagen Summit, India had made a very clear statement that there would be no compromise of the carbon emission cuts and would preserve its economic growth at any cost (The Indian Express 2009). Shyam Saran, the Special Envoy to the Prime Minister on Climate Change stated,

> "At present what we are really negotiating is not how to deal with the climate change, but how we preserve our economic positions and how do we cap trade and promote some of our economic interest".

India is a member of the BASIC countries (Brazil, South Africa, India and China), which had a key role in the final outcome of the Copenhagen Accord and the Summit,

and also establishing itself as a major player in global politics. Mr Jairam Ramesh commented,

> "I believe the BASIC group has emerged as a powerful group in the climate change negotiations. Their unity was instrumental in ensuring that the Accord was finalized in accordance with the Bali Action Plan and the Kyoto Protocol".

He further added that the closed door meeting with the US President, Barack Obama and the other BASIC Heads of the Government, helped to clinch the Accord, which satisfied all.

> "At the summit, our national interest has been not only protected but enhanced. Copenhagen is not a destination but the beginning of a long process".

Mr Ramesh called for a "detailed road map for a low-carbon growth strategy in the 12th Five Year Plan" to act against the threat of climate change (Government of India 2010).

Surprisingly, the Prime Minister of India, Mr. Manmohan Singh, made a promise of bringing down its emissions to 20% by 2020 at 2005 levels, voluntarily.

India is however satisfied with the Copenhagen Accord as it does not bargain with its negotiating strategy, i.e., India's resistance to the binding emission reduction for the developing countries and its firm support for the continuation of the Kyoto Protocol. The inclusion of the REDD plus, financial support, CDMs in the Accord are some of the good outcomes for India (FCRN 2010). To this, Mr. Jairam Ramesh commented,

> "This is a very, very important achievement. There is no mention whatsoever of a new legally binding instrument because this was clearly the intention of many European countries".

The Accord safeguarded the rights of the developing countries and India's voluntary commitment to cut down the emissions will not be subjected to international verification. Mr Ramesh confidently stated that not only would India meet its pledge to reduce the emission of the GHG to 20% by 2020 at 2005 levels, it could also

improve upon it and the country will adopt a constructive approach to face the challenges of climate change (VOA 2009).

During the summit India played the unique role of a facilitator between the US and China, apart from being an active member of the BASIC. The US and the other developed countries wanted to ensure that the mitigation measures taken up by the developing countries were transparent. But China and India as well, on the other hand, expressed their concern as they saw it as an encroachment to their national sovereignty. This created a tension between these two counties. India, however, helped to find a compromise between the US and China by introducing the concept of 'international consultations and analysis'. This concept allowed "creative latitude in its interpretation" of the process for transparency and it removed references to 'verification' which both India and China found intrusive (Rastogi 2011: 133).

The Cancun Climate Summit (2010)

The 16th UNFCC or the COP16 was held at Cancun, Mexico from 29th November-10th December 2010. It was the 6th session of the Conference of the Parties serving as the meeting of the Parties (CMP) to the Kyoto Protocol. The Cancun Climate Summit drew about 12,000 participants, which included 5400 representatives from the UN bodies and other intergovernmental and non-governmental organizations. Also, 5200 Government officials of different countries participated in this climate summit.

The main focus of the Cancun climate summit was to "enhance the long-term cooperation under the Convention of the Protocol" through a two-track negotiating process. Initially, it was planned to complete these negotiations during the UNFCCC's Copenhagen Summit in 2009 but unfortunately, many challenges were faced and further extended to the Cancun climate summit.

Mexico's President, Felipe Calderon remarked that the Cancun Summit had allowed the leaders to "glimpse new horizons" and where the countries had the "shared task to keep the planet healthy and keep it safe from humans" (Richard 2010). Hence, the COP16 at Cancun, the international community's response to climate change by far has been the most comprehensive in terms of reducing the emissions of GHG and to "build a system which made all countries accountable to each other for those

reductions". The Cancun Agreements formed the pedestal of the "largest collective effort" of the world to reduce the emission levels and it included "the most comprehensive package" to help the developing countries to face the challenges of climate change in the long-term run. The Cancun Agreements are as follows: (UNFCCC 2010)

In terms of mitigation, the Agreement states,

1. Establishment of clear goals and "timely schedule for reducing human-generated" GHG, so as to keep the average global temperature below 2 degrees Celsius;
2. To encourage the participation of all the countries to reduce the emission levels in accordance with their respective responsibilities and capabilities;
3. To review the progress made by the countries towards the goal of 2 degrees Celsius and to review it again by 2015 and check if it needs to be strengthened in the future with the best available scientific process.

Transparency Actions

1. To ensure that there is international transparency of the actions taken by the countries and the global community's objective towards the '2 degrees Celsius' should be reviewed in a timely manner.

Technology

1. The Agreement mentions of mobilizing the development and transfer of CDMs to address climate change in terms of adaptation and mitigation.

Finance

1. Mobilization of short and long term funds for the developing countries to tackle the challenges of climate change;
2. To set up the Green Climate Fund, to provide funds for the developing countries in assisting them in their adaptation and mitigation measures.

Adaptation

1. To take a coordinated approach in adaptation, so as to assist the vulnerable sections of the society, who will face the inevitable impacts of climate change.

Forests

1. To protect the world's forest, which is the major repository of carbon.

Capacity Building

1. The Agreement talks about building of the global capacity to meet the challenges, especially in the developing countries and ensuring that effective institutions and systems are implemented successfully.

"Implementing the Cancun agreements means that the Governments will want to turn their decisions into actions that brings real benefits for people on the ground as soon as possible" (UNFCCC 2010).

With the failure of the Copenhagen Summit a year earlier, not much was expected out from the Cancun summit. Very few anticipated a legally binding outcome from this summit. Nevertheless, issues about mitigation, adaptation, technology, finance, forest cover and capacity building were talked about and were mentioned in the Cancun Agreement.

However, the critics have called the outcome of the summit as a "modest deal wrangled out by the 200 countries, meeting at the Mexican resort". Although the Agreement reinforces the promises made by the rich and the developing countries to support the poor and the vulnerable countries against climate change financially, it does not make any mention of how the funds would be raised for the much talked about Green Climate Fund. Also, deeper emission cuts and mechanisms for the negotiation of deeper emission cuts were ignored. The decision for a new global climate agreement after Kyoto Protocol was also absent.

Brown states that the Cancun Agreements were a failure as it failed to meet the ethical three criteria post-Kyoto regime. He suggests that any climate change agreements after Kyoto Protocol must have these three ethical criteria – (i) it must have a sufficient GHG reductions, so that the international community are on the pathway to prevent the dangerous effects of the GHG concentration in the atmosphere. (ii) Climate change negotiations must begin to base the differences among the national allocations on the basis of equity and justice. (iii) there must be assurances from those

who are responsible for climate change to help in the adaptation and mitigation measure of the countries that are highly vulnerable to the effects of climate change, financially (Brown 2011:24).

The Cancun Agreements failed to meet the first criteria as it did not correct the inadequate voluntary emissions of the GHG made at the Copenhagen summit. Secondly, the Cancun Agreements allowed each of the nations to identify their emissions reductions based on their voluntary national considerations without any regard to equity. Hence it was a failure. Third, the Cancun Agreements created adaptation measures to help the Least Developed Countries (LDCs) against the challenges of climate change but it failed to mention the source of funding for these measures. Thus, the Cancun Agreements were unable to satisfy the ethical criteria post-Kyoto regime (Brown 2012: 28-29).

The Response of the EU at Cancun Climate Summit

"In Cancun the European Union will be pressing for an agreement on a balanced set of decisions which would pave way for reaching a legally binding global framework as soon as possible and also lead to immediate climate action on the ground. The EU, the world's largest leading aid donor, will give a full and transparent report in Cancun on its delivery of 'fast start' funding to support developing countries" (European Commission 2010a).

The EU at the Cancun summit continued with its objective to have an ambitious and comprehensive legally binding global agreement which would engage all the countries to tackle climate change and it should be built in accordance with the Kyoto Protocol and the Copenhagen Accord. The European Commissioner for Climate Action, Connie Hedegaard stated that the EU was ready to take an ambitious global agreement but the other important major economies of the world were not ready to do so. She further on stated that it was crucial to come out with an outcome at the end of the Cancun summit or the UN would lose its credibility in the process of negotiating a climate change agreement.

At the end of the Summit, the Cancun Agreements were born and the EU welcomed the positive outcome. It was "balanced and substantive package of decisions" as the EU had hoped for. Connie Hedegaard stated,

"The EU came to Cancun, to get a substantial package of action oriented decisions and to keep the international climate change negotiations on track. We have helped to deliver the successful outcome the world expected and needed. But the two weeks in Cancun have shown again how slow and difficult the process is. Everyone needs to be aware that we will have a long and challenging journey ahead of us to reach the goal of a legally binding global climate framework" (European Commission 2010).

Flemish Minister for Environment, Nature and Culture, Joke Schauvliege, at Cancun: "The EU has worked tirelessly to be a bridge-builder in Cancun while also advancing its positions. The EU has reported transparently on progress it has made in mobilizing the 7.2 billion euros of fast-start funding it has pledged over 2010-2012 and we will continue to do so on annual basis…"(European Commission 2010).

However, the EU at Cancun climate summit adopted a more pragmatic approach. It aimed at a balanced outcome with two negotiating tracks, i.e. the Long-Term Cooperative Action, under the Convention track and the Kyoto Track, involving all the parties. The EU advocated for a set of concrete decisions on various institutional issues and also showed its willingness to "consider a second commitment period under the Kyoto Protocol" (Groen, Niemann and Oberthur 2012: 182-183).

Since the Cancun climate summit was less publicised and politicised as compared to the Copenhagen climate summit, it was able to achieve its goals during the summit. Scholars have analysed that in a highly politicised situation, interest groups with different views must have pushed the EU's negotiating stance in different directions during the Copenhagen climate summit. Whereas, during the Cancun climate summit this did not happen. Infact, with the failure at Copenhagen, not much was expected from the Cancun summit. Hence, the EU was able to operate in a more pragmatic approach towards its goals (Groen, Niemann and Oberthur 2012: 185)

The Response of the India at Cancun Climate Summit

Previously at the Copenhagen Summit, India along with the other BASIC countries had played an important role in negotiating the Copenhagen Accord and it also should be noted that it had made the promise of voluntarily cutting down on its emissions at Copenhagen. So, India's the Minister of Environment and Forest, Mr. Jairam Ramesh, at Cancun:

"All countries must make binding commitment in appropriate legal form. This does not mean that India is for legally binding commitment at this stage. That's our position. There are changing realities that we have to understand. Increasingly, more and more developing countries are asking questions of India, China and the United States, the three big countries saying they will not accept an international legally-binding agreement. I haven't nuanced our position..Let's keep this discussion going, let's understand the sentiments of the rest of the world, and let's not be painted as the bad guy" (The Guardian 2010).

These tentative comments made by the Minister showed that even though India made the promise of voluntary cuts the previous year, it could still mean that emission would still be rising in a fast growing economy like India (The Guardian 2010).

India at the Cancun however made some remarkable step as a dealmaker and being part of the BASIC group, it was able to make significant contributions to the Cancun Agreements (Pande 2011:1). It made sure that its domestic actions would be echoed globally and during the summit it also offered to help the Small Island Developing States.

(SIDS) with capacity building and with its adaptation measures to tackle climate change (Pande 2011:2). Last but not the least, it called the developed countries to help the least developed countries to assist them in facing the challenges of climate change through fast-start funding.

However, there is still room for criticism. Critics have stated that India 'blinked' at Cancun. It let the US off the hook and slide off the Kyoto Protocol, which could have serious impacts on countries like India and China. India's concern on Intellectual Property Control on technology was "thrown out of the window and its demand banning trade sanctions against developing countries were diluted substantially".

Durban Climate Summit (2011)

The 17th Conference of Parties (COP17) to the UNFCCC was held in Durban, South Africa between 28th November- 11th December, 2011. It was the seventh session of the CMP7 to the Kyoto Protocol.

At the Durban summit, the UN Secretary-General, Ban Ki-moon, remarked in his speech,

"In 2007, you showed leadership and came away with the Bali Roadmap. In 2009, people said Copenhagen was a failure. Yet it was not. There were significant commitments for mitigation, adaptation and technology transfer. Last year, in Cancun, you firmed up and built on these foundations. We saw international commitment to deep cuts in global greenhouse gas emissions that will hold the increase in global average temperature below 2 degree Celsius from industrial times. You have shown multilateralism can deliver. Here in Durban, we must keep the momentum" (UNFCCC 2011).

He also mentioned in his speech that he expected four outcomes from this climate summit at Durban. First, the implementation of the Cancun Agreements; second, "tangible process on short and long-term financing" and the implementation of the Green Climate Fund. Third, to consider the second commitment period of the Kyoto Protocol and lastly, to take "concrete steps towards a more robust climate regime".

At the end of the two-week summit, the parties realized that a new, fresh legal agreement on climate change was needed beyond 2020. Hence the Durban Platform for Enhanced Action was born. The main objectives were:

The continuation of the second commitment period of the Kyoto Protocol;

To launch a new legal agreement to deal with climate change by 2015 for the period beyond 2020.

A decision was made to conclude the "existing broad-based stream of negotiations" by 2012.

To conduct a fresh global review of the emerging scene on climate change, with the best available science and data and to ensure that there was collective action to stop the global average temperature from rising beyond the agreed limit (UNFCCC 2011).

People welcomed the outcome of the Durban summit. The developed countries agreed to cut down on their emission levels by 2020 and the new pact would have a legal status to it. The developing countries were also benefitted from this summit. They would be able to access to the financial resources to cope with the ill-effects of climate change from the rich countries.

Chris Huhne, UK's Climate Change Secretary, called the deal as a "significant step forward" in reaching a global climate deal and sent a strong message to the industrialists to move towards low-carbon emission economy (Vidal and Harvey 2011). "Countries have agreed a deal in Durban to push for a new climate treaty salvaging the latest round of United Nations climate talks from the brink of collapse" (Vidal and Harvey 2011). But the environmentalist have said that there was absence of ambitious negotiations to bring down the level of GHG emissions so as to limit the global average temperature to no more than 2 degrees Celsius and to avoid "dangerous climate change".

The Response of the EU at Durban Climate Summit

The EU accepted the outcome of the Durban summit as a "historic breakthrough in the fight against climate change". Connie Hedegaard, European Commissioner for Climate Action, said,

"EU's strategy worked. When parties after Cancun said that Durban could only implement decisions taken in Copenhagen and Cancun, the EU wanted more ambition. And got more. We would not take a new Kyoto period unless we got in return a roadmap for the future where all the countries must commit. Where the Kyoto divides the world into two categories, we will now get a system that reflects the reality of today's mutually interdependent world. And as we are interdependent, what we promise to do must have the same legal weight. With the agreement on a roadmap towards a new legal framework by 2015 that will involve all countries in combating

climate change, the EU has achieved, its key goal for the Durban climate conference" (EEA 2011).

The EU was an active and forceful player during the Durban summit. It stuck to its goal of supporting the Kyoto Protocol, even when the developed countries broke their promises or commitments to ratify the Kyoto Protocol. This role played by the EU at Durban was in a way that showed the aspirations of the Treaty of Lisbon- an outward-looking Europe that can shape the rules of an open interdependent world (Mabey 2012).

The success of the EU at the COP17, Durban, was based on strong fundamentals of policy building and being able to deliver its commitments on climate finance for the developing countries and also to implement the 20:20:20 climate energy package. This role played by the EU during the summit has revived its somewhat dying leadership in climate change negotiations. It made alliances with various countries from Asia, Africa, Latin America and Small Island States, forming the "green group" of countries and worked together to create an ambitious deal at the Summit.

The EU's leadership role in climate change negotiations was revived at the Durban Summit. It shifted its role from directional, ideational leadership to a more realistic and structural leadership, which was based on the Union's normative aims. The EU reduced its objectives, reconciled its relations with the BASIC countries and became a mediator between the major emitters of the GHG (Backstrand and Elgstrom 2013: 1380-1381). It was examined by Backstrand and Elgstrom that EU's role as a 'leadiator' worked against the changing geopolitical situation of climate change negotiations, where the BASIC nations rose to power (Backstrand and Elgstrom 2013: 1381). Thus, the Durban Platform was in compatible with the EU's aspirations and also it became aware of the changing geopolitical scenario in the international climate change negotiations by "aligning itself with the long-term US demand to require mitigation action from major emitters in the developed world" (Backstrand and Elgstrom 2013: 1383).

The Response of the India at Durban Climate Summit

India during the Durban Climate summit had gone with three objectives in mind. The first one was to continue the Kyoto Protocol for a second commitment period, the second was its interests on intellectual property rights, equity and unilateral trade measures, which had been ignored in the previous summits, to be integrated in the climate deal. Third, was to safeguard the notion of CBDR and 'differentiate' between the developing and developed countries (Sengupta 2012).

However, India found itself "outwitted and cornered" during the negotiations. The only success it was able to achieve was the continuation of the Kyoto Protocol for a second commitment period. It failed to gain "substantive recognition for the issues of intellectual property rights and unilateral trade measures". India's failure obtain its goals during the summit is a failure of its negotiating strategy and raises alarming questions about Indian diplomacy. Moreover, the EU along with the support of its alliances from Small Island states and the Least developed countries, was able to pressurize the BASIC countries (which also included India) to take up legally binding commitments in the coming future. But, European Commissioner for Climate Action, Connie Hedegaard, said that India's position was "unreasonably inflexible". Ms JayantiNatranjan, India's Minister for Environment and Forest, replied back, "India is asking for space for basic development for its people and poverty eradication. Is this an unreasonable demand?" she further said that she could not "sign away the rights of 1.2 billion people" by agreeing to such deals as it could limit their economic and developmental growth (Sharma 2011).

What India failed to do at the COP17 was its poor communication skills as it was unable to highlight India's vulnerable position to climate change and its 'quite low' emissions levels, which are comparatively, lower than China's. The lack of active negotiating strategy by India resulted in poor outcome and defeat at the Durban summit.

The Hindu rightly quoted India's negotiating strategy at Durban as, "You know your negotiating strategy is in trouble when countries ranging as far as Norway in the developed world to partners like South Africa and neighbours like Bangladesh start quoting Gandhi and Nehru back at you".

Doha Climate Summit (2012)

The 18th session of the Conference of Parties (COP) to the UNFCCC and the 8th session of CMP to the Kyoto Protocol took place between 26th November– 8th December, 2012 at Doha, Qatar. This was the first time the UN held its climate change negotiations in the Middle East. The Doha summit focused to ensuring that the previous agreements were implemented and it was successful in the amendment of the Kyoto Protocol for a second commitment period from 2013-2020. However, the reduction of the emissions was not as ambitious as it should have been. The Doha summit ended with major three key decisions which were clubbed as the "Doha Climate Gateway".

The Doha Climate Gateway talked about three important things:

1. The first major decision taken was the continuation of the Kyoto Protocol till 2020, signed by Norway, EU, Switzerland, Australia, Monaco and Liechtenstein.
2. To develop and design a new protocol under the Durban Platform for Enhanced Action.
3. To conclude or terminate the Bali Action Plan.

The Doha climate conference also addressed the international mechanism on loss and damage associated with climate change. This was a key concern for the developing countries, especially for the vulnerable developing countries to climate change.

Yet, the Doha Climate Gateway missed few issues. The first one was finance. Yes, the developed, rich countries did promise to fund $100 billion for mitigation and adaptation measures from 2020 but only few countries like the EU and the UK have stepped in. Second, the major emitters of the GHG like the US, Japan, Australia, Canada and Russia are still out of the Kyoto Protocol. There were also attempts to include agriculture in the climate deal but it was unsuccessful. There was no decision taken on the MRV (monitoring, reporting and verification) of the emission reduction from REDD+.

The most important out come from the Doha climate summit was the 'formal adoption' of the second commitment period of the Kyoto Protocol, but only few countries like the EU, Australia, etc were part of the second commitment period. The

major developed countries like Russia, Japan and New Zealand did not participate in the second commitment period of the Kyoto Protocol (Khor 2013:18).

The Response of the EU at Doha Climate Summit

European Commissioner for Climate Action, Connie Hedegaard said, "In Doha, we have crossed the bridge from the old climate regime to the new system. We are now on our way to the 2015 global deal. It was not an easy and comfortable ride. It was not a very fast ride either. But we have managed to cross the bridge. Very intense negotiations lie ahead of us. What we now need is more ambition and more speed" (European Commission 2012).

The EU welcomed the outcome of the Doha climate conference. It wanted to make a transition from the old climate regime, where the developed countries had legal obligations to the reduction of the GHG emissions, to a new system where both the developed and the developing countries will have legal obligations to the reduction of the emissions (Hedegaard 2012). With the new climate agreement on the way by 2015, the EU along with the vulnerable developing countries was able to insert this point into the Doha Climate Gateway, under the initiative of the Durban Platform for Enhanced Action.

Further, the EU stepped up its role as leader in climate change negotiations. During the Doha summit, it showed that it was on the track to provide 7.2 billion euros as a part of the fast start finance. It had earlier pledged to fund the developing countries in facing the challenges of climate change through fast start finance for the period of 2010-2012 and also assured that it would continue that year as well. Other developed countries also followed its steps and pledged to finance the developing countries for the year 2013 and some till 2015.

With the continuation of the Kyoto Protocol for the second commitment period, the EU has "taken on emission reduction commitment in line with its domestic target of cutting emissions by 20% of 1990 levels by 2020" and if the conditions are right, it has 'left the door open' to increasing the reduction level to 30% also. With the insistence of the EU, the key measures to reduce emissions, so as to hold the global warming below 2 degrees Celsius, were also identifies.

The Response of India at Doha Climate Summit

During the Doha climate conference, India again brought back the issues of Intellectual Property Rights, equity and unilateral trade measures. During the negotiating rounds, India also ensured that, agriculture was excluded from the mitigation programme that was proposed at the global level (Ministry of Environment and Forest 2012).

The reassertion of the principle of equity and CBDR, which had remained silent since Copenhagen, was revived. "The Conference has explicitly recognized the action of the parties will be based on equity and CBDR including the need for equitable access to sustainable development" Ministry of Environment and Forest 2012).

The Kyoto Protocol being continued for the second commitment period, India was however left disappointed. The reason was the low level of emission even in the second commitment period. India had called for a much higher ambition "consistent with what is required by science". Developing countries like India are of the view that the rich countries of the world were trying to "lead the world towards a regime where targets will be shared by the poorer countries" (The Hindu 2012). India has consistently argued that its carbon emissions are much lower as compared to the biggest emitters of the world and a country with the second largest population in the world, it has to meet it social and developmental constraints. Hence it has the right to develop now.

The chief negotiator for India at the Doha climate summit, MeeraMehrishi said, "India is a large country with a very small carbon footprint. Our per capita emission is only 1.7 tonnes per annum. And, with our current growth rate, our per capita emission is not likely to exceed 3.7 tonnes, even in 2030". She further added, "As a developing country, India faces many challenges. We have huge social and developmental constraints and have to address large unmet energy needs of our vast population. Yet, we are conscious of our global responsibilities. Even as we work towards meaningful and enhanced actions at the global level, we have already started taking action under our National Action Plan on Climate Change" (The Hindu 2012).

Warsaw Climate Summit (2013)

The 19th Session of the COP to the UNFCCC and the 9th session of Meeting of the Parties (CMP) to the Kyoto Protocol was held in Warsaw, Poland from November 11th- 23rd, 2013. Environmentalists had criticized heavily for choosing Poland as the host country for the conference as the country lacked in its commitment to reduce the fossil fuels[14].

The President of COP19, Marcin Korolec, said "Warsaw has set a pathway for governments to work on a draft text a new universal climate agreement so it appears on the table at the next UN Climate change conference in Peru. This is an essential step to reach a final agreement in Paris in 2015" (COP19/CMP9 2013).

During the Warsaw Conference, the countries were able to agree on a time plan to reduce their GHG emissions under the new global climate agreement which would be adopted in 2015. The Parties also agreed to set up a mechanism for loss and damage caused by climate change in the vulnerable countries (European Commission 2013a).

The conference concluded with the Warsaw Outcomes which had several key points and they are:

There was a universal agreement to have a new global climate agreement by 2015 which would come into force by 2020. It was also decided that all the countries would begin start preparing for the new deal domestically well before December 2015 or by the first quarter of 2015. Also the developed countries were asked to support the developing countries in their domestic process.

The Parties agreed to "strengthen measures to close the 'ambition gap'". The ambition gap was the gap between what has been pledged to date and what is required to limit the world's average temperature below 2 degrees Celsius before the new climate deal came into effect.

The Warsaw International Mechanism for Loss and Damage was established. This will address the losses and damaged caused by the ill-effects of climate change in the developing countries, especially the countries which are more vulnerable to the impacts of climate change.

[14]More than 80% of Poland's energy comes from coal and is one of the largest emitters of carbon in Europe.

It was observed that 20% of the emission of GHG to the atmosphere was due to deforestation and thus, one way of reducing the emission was to prevent deforestation and degradation of forest. For this purpose a new initiative was announced, known as REDD+ (Reducing Emission from Deforestation and forest Degradation).

48 of the world's poorest countries finalized a comprehensive plan to deal with the impacts of climate change and the developed countries stepped up to pledge their support for the Adaptation Plan.

The Climate Technology Centre and Network (CTCN) was completed and said that it was ready to respond to the requests of the developing countries on the assistance of technology transfer.

The Response of the EU at the Warsaw Climate Summit

The EU responded with a warm welcome to the final outcome of the Warsaw Climate Conference and said that it was a "step forward in the international fight against climate change". Connie Hedegaard said,

"The Warsaw climate conference showed how challenging the way to an ambitious result in Paris will be. But the last hours also showed that we are capable of moving forward. The EU wanted the stepwise approach that is now agreed as the way forward: all countries must contribute to the future reduction efforts, and already now all countries must go home and do their homework in order to table their contributions well in advance of the Paris Conference, and by the first quarter of 2015 by those ready to do so. For sure there will be faster and less bumpy ways to Paris but now journey has started. We must make it there" (European Commission 2013b).

The EU also announced during the Warsaw summit that 20% of it budget would be directed towards tackling the threats of climate change. The said budget would be used domestically and directed towards helping the developing countries to adapt to climate change. Connie Hedegaard said that if the world was going to tackle the threats of climate change successfully, it had to change "the whole economic paradigm" which would include how we construct our budgets (Yeo 2013).

However, the EU's insistence to put up a timeline on reducing the global emissions was vehemently attacked by the developing countries. The EU expressed its frustration at these 'group of developing countries' and called them as blocking the process of cutting down the GHG emissions (Harvey 2013). The EU along with the US also wanted to ensure that the rapidly growing economies would take responsibilities of their emissions, which they did not under the Kyoto Protocol, during the summit (Harvey 2013).

The Response of India at Warsaw Climate Summit

At the Warsaw Summit, India along with the other developing countries stuck to the "historical responsibility" of the rich countries as the major cause of climate change. India expressed its dismay at the rich developed countries for back-tracking on their commitments and treating the ill-effects of climate change "with a business perspective of providing markets to domestic companies"(Mohan 2013).

Critics have slammed India and China for thwarting the efforts made during the negotiations by the US and the EU to control GHG emissions. It showed be noted that India and China have one of the major emitters of GHG and even the other developing countries of Latin America and the Small Island States have been concerned with the amount of GHG China and India emits to the atmosphere (Upton 2013).

However all was not lost for India. With the announcement of REDD+ during the summit, India was ready to tap the benefit from it. India has already drafted a policy to make India a REDD+ ready country. The objective of this draft policy is to develop forest areas, safeguard the rights and the interest of the local communities and to strengthen cooperation, coordination among sectors and stakeholders having direct and indirect impact on land use and forestry. Another important objective to be noted is to develop appropriate mechanism to channelize REDD+ funding and transferring the financial benefits to the communities in a fair and transparent manner. The policy also underlines the importance of afforestation and it is observed that forest cover neutralizes 11% of the country's GHG emissions.

Conclusion

India and the EU are one of the important players in the international climate change negotiations. The EU was a disappointing player during the climate change summit held at Copenhagen as it failed to bring the developing countries to reduce their emission but as the research proceeded, it was found that EU revived its leadership at the international climate change negotiations by having more realistic and pragmatic strategies at the later summits by signing up for the second commitment period of the Kyoto Protocol and also making commitments to financially aid the small island states and the developing countries.

India on the other hand, stuck to the principle of CBDR throughout the international climate change negotiations as it felt that it had the right to develop and the per capita emissions of India were quite low as compared to the developed countries. The other demands such as the Intellectual Property Control and for a higher emission cuts for the developed countries were ignored at the international negotiating table. This left India highly disappointed. With India refusing to cut down on its emissions of the GHG, it has been condemned by the international community to obstruct the international climate change negotiations.

Chapter 5

Conclusion

Climate change is the most dangerous environmental threat today. As the global temperatures keep increasing due to heavy industrialisation, the wide-ranging effects of climate change also increases. These drastic and dangerous effects of climate change will impact most of the low lying areas, especially the island countries and the developing countries. Scientific research has shown that these developing countries are highly vulnerable to the threats of climate change.

The second chapter has examined that the EU is an 'indispensable actor' in the climate change international negotiations. It has undertaken ambitious steps or policies to tackle the challenges of climate change. The climate change policies of the EU have evolved slowly over the last two decades. As examined in the chapter, it is found that climate change policies of the EU are very ambitious and this has given the EU the role of a leader in the international climate change negotiations. These policies have been quite successful in bringing down the emission level of the GHG of the EU and have also reserved a certain amount of its total budget to spend on climate change policies like adaptation and mitigation measures.

However, further analysis has shown that there is an internal disagreement between the EU and its Member States on these policies. This is due to the fact that the EU with its further expansion of the CEE countries has led to this disagreement. The CEE countries were once a part of the former USSR and these countries are small and developing which rely mostly on coal generated power. Also the adaptation and mitigation measures require big investments which these countries are unable to provide as these countries are small economies as well.

But this has not stopped the EU to take the role of a leader in the international climate change negotiations. It has taken pioneering steps to tackle the challenges of climate change domestically and also at the international level as well. The EU is one of the few economies that have ratified the Kyoto Protocol and it seeks to come up with a more comprehensive legally binding agreement by 2015. The further analysis of the chapter has also revealed that the EU does acknowledge the fact that the industrialised nations have the responsibility to act, given their historic contributions to the emission

of the GHG to the atmosphere. The chapter also studied the 'actorness' of the EU in the international climate change negotiations. The presence of the EU in the international negotiations has given the EU the role of an actor and lot is expected from the EU.

The world has high expectations from the EU and it is expected to act on its commitments on its claims to reduce GHG emissions. Criticisms about the EU's role as a leader and an actor on climate change have come up but it has continued to show its presence in the international negotiations. The EU as an actor should aim its policies towards sustainable development and push the other developed countries as well as the developing countries to come up with a comprehensive legally binding agreement as soon as possible to save our planet.

Chapter three examined India and climate change. India is one of the emerging economies of the world today and this developmental growth has made India as the fourth largest emitters of the GHG emissions into the atmosphere. India is highly vulnerable to the effects of climate change. The stakes are high for a country like India. The chapter analysed the evolution of the environmental policy of India as well. The major finding from this chapter is that, India continues to follow the policies made during the British rule even after its Independence making few amendments here and there. In the later years, India did initiate policies related to air and water pollution, waste management, management of hazardous chemical substances and forest. Although, the environmental policy of the country like the National Environment Policy seeks to preserve the ecological system and the resources that are essential for the country, yet it does not address the core issue of climate change and how to face the challenges and the impacts of climate change in the country. But it mentions and acknowledges that climate change is a serious issue. The recent plan disclosed by India on climate change, i.e., the National Action Plan on Climate Change is a strategy framework which will address the actions for adaptation and mitigation of the country. However, this is just an integrated strategy framework. It is still not yet a policy and it has been criticised as a weak framework and makes no commitments on carbon emissions of the country. Thus, India still does not have any concrete climate change policy.

Yet, India has managed to play an important role in the international climate change negotiations. It has firmly stood on the principle of "common but differentiated responsibilities" (CBDR), which puts the developed countries historically responsible for the increase in the Earth's temperature and the emission of the GHG. During the climate change negotiations, India being a member of the BASIC countries, has stood by its CBDR and that the developing countries have the right to develop and should have some flexibility in the international climate change agreements. In fact, India along with China and other emerging economies are pushing the developed countries to take full responsibility of their historic emissions and ratify the Kyoto Protocol.

Further analysis of the chapter shows that India's stance on climate change negotiations maybe legal but not wise as India is highly vulnerable to the impacts of climate change. India is country, whose economy, is highly dependent on agriculture and the changes in the climate will have severe impacts on the crop yields. Moreover the vulnerable sections of the society will be the worst affected by climate change.

The chapter also examined the EU-India Strategic partnership on climate change. It is seen that India and the EU share common ground on democracy, human rights, pluralism, etc. Both of the partners have also identified that climate change is a serious problem and have taken initiatives such as the Joint Action Plan in which both India and the EU will cooperate on CDMs and climate change. India, in order to face the challenges of climate change, needs infrastructure which it still lacks. Thus the strategic partnership with the EU can create avenues for cooperation with India on climate change issues. But, at the international level, the EU-India strategic partnership seems questionable as India still continues to look at "North-South" terms. It needs to be pushed forward and create more areas of cooperation.

Chapter four analysed the UNFCCC international negotiations on climate change from Copenhagen to the Warsaw summit and the responses of the EU and India. The Copenhagen climate summit was a highly publicised international negotiation on climate change and a lot was expected out of this summit. But it failed to live up to the expectations of the people. The role of the EU as a leader in climate change became questionable. Critics called the EU as a 'mere spectator' as it was unable to push the developing countries to reduce on their emission of the GHG level and the unity among the Member States of the EU lacked. Also, during this summit, the rise

of the BASIC countries was seen. With India as member of the BASIC countries, it played a decisive role. For India, the Copenhagen summit was a success of its negotiating strategy as it did not compromise with its resistance to the binding emissions of the developing countries. There was clearly a clash of opinions between India and EU during the summit.

At the Cancun summit, however, the international negotiations managed to come up with a Green Climate Fund to help the developing countries face tackle the challenges of climate change. But it made no mention of how these funds would be raised. The negotiating strategy held at Cancun, the EU was more realistic and pragmatic as compared to the summit held at Copenhagen. India, on the other hand, stepped up as a dealmaker during the summit and surprisingly offered to assist the Small Island Developing States (SIDS) with their adaptation and capacity building measures. India was left disappointed with the ignorance of its Intellectual Property Control which was part of its negotiating strategy.

The EU during the Durban climate summit played the role of a leader in the climate change negotiations and stuck to their goals and revived their leadership role in the international climate change negotiations which they had lost during the Copenhagen climate summit. Even at the Doha climate summit, the EU took a step further and signed the second commitment period of the Kyoto protocol along with few developed countries – Norway, Australia, Switzerland and Liechtenstein. The EU continued to portray its leadership qualities at the Warsaw climate summit as well. It made announcements to commit 20% of its total budget to address the issues of climate change domestically and also to assist the developing countries in tackling climate change.

However, for India, it was a failure of their negotiating strategy as India could not manage to achieve any of its goals except for the second commitment period of the Kyoto Protocol in Durban and Doha as well. As India continued to stick to the principle of CBDR, it was heavily criticised for trying to thwart the climate change negotiations during the Warsaw climate change.

Thus, India and the EU have different approaches in their negotiating strategies in the international climate change negotiations as there is a gap in the developmental growth between India and the EU. India cannot compromise on its energy needs to

support its vast population as a major chunk of the total budget will be needed to channelize for adaptation and mitigation actions which India cannot afford.

Although, both the EU and India have identified and acknowledged that climate change is a major threat. While, India still holds that developed countries are responsible for the climate change due to "historical responsibilities" and it has the right to develop to support its ever increasing population. The EU on the other hand, one of the most developed economies of the world, has been playing a key role in climate change negotiations and also trying to push the other economies to combat climate change by reducing their emissions.

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