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ULUSLARARASI İLİŞKİLER ANABİLİM DALI

EUROPEAN UNION AS A GLOBAL ENVIRONMENTAL ACTOR IN SEARCH FOR SUSTAINABLE DEVELOPMENT WITH SPECIAL REFERENCE TO GLOBAL CLIMATE CHANGE

YÜKSEK LİSANS TEZİ

IŞIL KUŞİN TARLABAŞI

İstanbul – 2007

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Danışman: Yrd. Doç. Dr. Rana İzci

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ÖZET

Bu tezin amacı Avrupa birliği'nin küresel çevre problemlerinde ne kadar etkin ve aktif bir rol oynayıp oynamadığını ortaya çıkartmaktır. Tez, sürdürülebilir kalkınmayı referans alarak AB'nin ne kadar etkin bir çevre politikası oluşturduğu sorusuna odaklanmaktadır.

Doğal olarak AB kendisini diğer aktörlerden ayıran özelliklere sahiptir. Buna bağlı olarak AB sürdürülebilir çevre korumasında lider bir aktör olma iddiası ve çabasındadır. Bu nedenle tez ayrıca AB'nin liderlik yapan nasıl bir küresel bir aktör olduğunu analiz etmek için ABD ile aralarındaki farlılıkları da ortaya koymayı hedeflemiştir. Bu bağlamda tez sanayileşmiş ülkelerin sürdürülebilir ekonomik güce sahip olmadaki hırslarının, sürdürülebilir bir çevre koruması olmaksızın hiç bir şey ifade etmediği sonucuna ulaşmıştır

ABSTRACT

The aim of this thesis is to explore whether European Union plays an efficient and active role in coping with global environmental problems. In particular it focuses on the question whether EU has established an efficient external environmental policy with reference to sustainable development.

Certainly European Union has some special characteristics which differs it from other actors especially from the USA. Related to its *sui generis* feature it has recently become a leading actor on sustainable environmental protection. So this thesis also presents the differences of the European Union environmental policy from the USA environmental policy to present how European Union became a global leading actor. In that context this thesis concludes that greed of the industrialised countries on having sustainable economic power means nothing without gaining sustainability of environmental protection.

LIST OF ABBREVIATIONS

APPCDC: Asian Pacific Partnership Agreement for clean Development and Climate

BTU: British Thermal Unit

CAN: Climate Action Network

CDM: Clean Development Mechanisms

CFCs: Chlorofluorocarbons

CH_4: Methane

CITES: Convention on International Trade in Endangered Species

COP: Conference of Parties

EC: Economic Community

EU: European Union

EAP: Environment action Programme

ECA: Export credit agency

ECCP: European Climate Change Programme

EEA: European Environment Agency

EEC: European Economic Community

EPA: Environment Protection agency

ETS: Emissions Trading Scheme

EUR: Euro

GEF: Global environment Facility

GHG: Greenhouse Gas

GMO: Genetically Modified Organisms

HFC: Hydrochlorofluorocarbons

IEEP: Institute for European Environmental Policy

IPCC: International Panel on Climate Change

JI: Joint Action

LDCs: Less Developed Countries

LRTAP: Convention on Long Range Transboundary air Pollution

LWCFA: Land and Water Conservation Fund Act

NAPAs: National Adaptation Programmes of Action

NASA: National Aeronautics and Space Administration

NGO: Non-Governmental Organisations

NOAA: National Oceanic Atmospheric administration

N_2O: Nitrous Oxide

OECD: Organisation for Economic Co-operation and Development

PFC: Perfluorocarbons

PPP: Polluter Pays Principle

PAs: Protracted Areas

QMV: Qualified Majority Voting

SBSTA: Subsidiarity Body for Scientific and Technological Advance

SDIA: Sustainable Development and Intergovernmental Affairs

SEA: Single European Act

SF_6: Sulphur hexafluoride

SPS: Sanitary and Phytosanitary

UK: United Kingdom

UN: United Nations

UNCED: United Nations Conference on Environment and Development

UNFCCC: United Nations Framework Convention on Climate Change

UNEP: united Nations Environment Programme

UNIS: United Nations Information Service

US: United States

WCED: World Commission on Environment and Development

WEHAB: Water, Energy, Health, Agriculture, Biologic Variety

WSSD: World Summit on Sustainable Development

WTO: World Trade Organisation

I. INTRODUCTION

Over the last fifty years dramatic and large scale environmental challenges have been indicating the massive increase of human impact on the earth. This impact has unsurprisingly engendered ominous and great scale environmental challenges so far and now pose unprecedented threats both to the natural environment and human settlements all around the world. Although these challenges occur in different ways, results are the same; great human loss as well as immense economic and social damages and ecological stresses in different parts of the world. For instance while flash foods have been causing great economic and human losses in some parts of the world, forest fires have been destroying the lungs of the Earth on the other parts and causing immense social economic and ecological damages. What is more biological diversity which can be, in very basic terms, defined as the essence of life has been decreasing all over the world mainly because of unplanned urbanisation and industrial activities. Simply the balance of the nature has been destroyed by human activities.

Among these environmental challenges global climate change is being recognised as the most frightening one since the complex nature of changing global climate system will further produce unprecedented impacts for the future generations. Extensive scientific observations have already proved that as a result of the enhanced greenhouse effect temperature of the Earth has been increasing at a rate faster than its normal levels. Extreme weather events together with changing precipitation patterns and retreat of glaciers are the most articulated impacts of this change. For last few years the increasing rates of occurrence and severity of hurricanes have been great concern for some countries while others such as low lying countries and small islands have to cope with rising sea levels due to melting of glaciers. According to the present data if the sea levels continue to rise at this rate, most of the seaside countries will also face great disasters in the near future. Besides agricultural activities are also under great threat because of the increasing levels of the drought. Water scarcity and drought were the two important environmental challenges that threatened the life quality even survival of human beings throughout the history. Today

both are still threatening the well-being of the people and paving way for epidemic diseases especially in less developed and in developing countries. In short global climate change has already accelerated the occurrences and effects of these long lasting environmental challenges.

At that point sustainable development takes the centre stage. Emerged as the most comprehensive environmental discourse in the early 1980s, it basically asserts that economic growth and environmental protection can be achieved at the same time. However as current sustainability indicators demonstrate, economic and environmental concerns are not easily incorporated due to narrow and old interpretations of growth and development. While redefinition of development and man-nature relationship constitute the first dimension of sustainable development, international environmental cooperation denotes its second dimension. Since 1970s there have been a growing number of international and regional agreements on the protection of environment. There is also a wide range of actors from states to international organisations even to local environmental associations that can affect and even shape the environmental cooperation. However each actor has its own environmental considerations and potential to lead or affect the international negotiations.

In this international structure the European Union (EU) emerges as one of the most effective environmental actors. Although it was initially established as an economic community, its late comer environmental policy has still been considered as one of its success stories. Particularly since the EU declared its sustainable development strategy in 2001, the external dimension of its environmental policy gained more attention. The EU both in this strategy and its sixth environmental action programme listed the global climate change as one of the biggest challenges that the world faces today. Today efficient use of natural resources, low carbon technologies and enhancing the biological diversity seem as the most important priorities of the EU in coping with the climate change. These concerns also coincide with the sustainable development concerns of the EU in various other policy areas such as energy, urban transportation, and industrial activities. There is indeed a growing worldwide recognition that sustainable development and both mitigation and adaptation policies of climate change are closely linked.

Although global climate change is a global problem which requires international cooperation there are many disparities among the leading developed states themselves as well as between developing and developed states with regard to measures to be taken. All these disparities sometimes cause deadlocks in the negotiations. Nevertheless some actors like the EU show great willpower to move forwards and even lead the negotiations.

Hence this thesis aims to examine whether the EU act as a global leader in global environmental politics with special reference to the link between its sustainable development approach and climate change policy. Thus European Union's influence on international environmental policies pertaining to its sustainable development targets will be analysed.

This thesis therefore consists of three chapters. The first chapter focuses on the question of environmental protection. It introduces sustainable development and other two environmental approaches, namely, limits to growth and ecological modernisation for deeper understanding of the environment and environmental protection. Then historical evolution of sustainable development will be explained. In that context the international conferences and the reports which mark this historical process will be presented. First chapter concludes with the emphasis on the necessity of sustainable development for the continuity of the life on the Earth.

The second chapter involves the legal basis of sustainable development in the European Union. In that context second chapter scrutinizes the Treaty articles and also some other legal documents concerning to sustainable development. Certainly European Union is a very important actor; however it needs some cooperation with other major actors such as United States to achieve its targets and establish and enhance international cooperation. So in that chapter the similarities and the differences of the European Union and the United States on the sustainable environmental protection will also be discussed. The main focus of this search is to answer the questions whether EU has a more comprehensive approach on environment than the US and whether the EU takes more widespread even worldwide environmental precautions whereas the US mostly acts as self-centric actor.

Third chapter of the thesis will focus on the climate change issue as a case study to show the significance of the sustainable development and to examine global actorness of the EU on environmental issues. In that context the European Union's policy regarding to climate change and sustainable development will be discussed in detail. The United Nations Framework Convention on Climate Change (UNFCCC) which is the parent treaty of the Kyoto Protocol can be considered as a basis for the European Union to shape sustainability of its climate change policy. Therefore first a brief evolution of UNFCCC and Kyoto Protocol will be given and then sustainable development concerns both in the UNFCCC and in the Kyoto protocol will be investigated. Mitigation and adaptation strategies in general and of the EU as well as their linkage with sustainable development will be also explained in that chapter. Finally third chapter brings post-Kyoto challenges to light with special reference to the intra-generational and intergenerational justice.

Consequently this thesis argues that sustainability of economic power does not last long without sustainability of environmental protection. It tries to examine the EU efforts for achieving a worldwide sustainable environmental protection. At last but not least it asserts that given the institutional structure of the EU and member state responses to environmental challenges, EU success in the field of environment will be the result of the complex interaction between the EU institutions and member states.

II. ENVIRONMENT AND DEVELOPMENT

The link between environment and development has always brought intricate outcomes for the human civilization. Particularly since the industrial revolution environmental protection has become a 'necessity' but it took a long time for the environment to become an important topic of the international agenda. However it is still a contentious issue in world politics due to transboundary and global nature of many environmental challenges. Therefore our perceptions of the environment and efforts for international cooperation to achieve a worldwide environmental protection are two important and interrelated topics to be analysed.

2.1. Evolution of Environmental Protection

In the last three decades World faced some disasters such as the nuclear accident in Chernobyl (Ukraine) and great environmental challenges such as ozone layer depletion and climate change. With regard to these disasters political elites started to show growing interest to environmental issues. Indeed environment has mainly become a priority issue for the political agenda due to large scale and deadly disasters.

As environmental protection started to gain importance since 1960s three main discourses set the environmental agenda which are namely, limits to growth, sustainable development and ecological modernisation. They have some similarities and differences. Despite their differences even different practises they aim the same thing: to protect the environment.

2.1.1. Limits to Growth

In 1972, the Group of Rome, a group of scientists, educators, economists, humanists, industrialists and national and international civil servants published the report that was named the Limits to Growth (Connelly and Smith, 2003). The report focused on five major interacted trends of global concern which were accelerating industrialisation, rapid population growth, widespread malnutrition, depletion of non renewable resources and a deteriorating environment. According to the report if these global trends continue to rise at that rate it will cause unpredictable results in both population and industrial capacity[1]. Therefore the limits to growth in the world will be reached within the next one hundred years as high population creates greater stress on natural resources. In other words if the five trends reach over the natural growth, the world faces the huge threats since it will go beyond its carrying capacity (Connelly and Smith, 2003).

"The computer generated projections" and models of this report also indicate that global equilibrium which is about the relationship between environment, growth and technology, can be seen as a watershed to get rid of these negative growth trends (Dryzek, 1997: 21). The main concern then is to establish a sustainable ecological and economic stability for the future. Proponents of the limits to growth certainly have tried to establish a new world view through which human survival can be maintained. The concept of carrying capacity therefore constitutes one the basic premises of this world view.

Limits to growth approach certainly introduces the world with many other concepts, policy measures and debates which are still on the international and national environmental agendas as well. However there are many criticisms raised against the Limits to Growth approach. Basically its warning on the resource depletion was found very pessimistic by some scholars. Some authors such as economist Wilfred Beckerman also defined it as "resource-depletion scare stories (Connelly and Smith, 2203:51)."

[1] Further information please see www.clubofrome.org/docs/limits.rtf

Despite all the criticism it has been “a foundation stone of the green political thinking” because of its central theme “that infinite growth in a finite system is impossible (Connelly and Smith, 2203:51).”

2.1.2. Sustainable Development

The year 1972 witnessed not only the heated debates arising from the publication of Limits to Growth Report, but the United Nations Conference on Human Environment which was held in Stockholm and its worldwide reflections. This conference is still significant in numerous ways. First the disagreement between the North and the South appeared clearly at this conference (Connelly and Smith, 2003). The southern countries had opportunity to highlight the links between the prevailing international economic system, environmental degradation and poverty. Especially conflicts about population level appeared definitely. The growing population levels therefore took the centre stage among other concerns. Although Stockholm Conference was the first international conference that warned the members about various unintended and unplanned results of human activities on nature, the shadow of international security concerns, financial crises, economic recession and the pressure of the increasing population on the natural sources continued on environment-development link in the post cold war era. In that perspective United Nations Secretary General wanted to be set a commission to prepare a report about environment and development pressures.

World Commission on Environment and Development (WCED) was therefore established in 1983 (Connelly and Smith, 2003: 237). In order to achieve the goal set by the United Nations Secretary General, President of Norway Gro Harlem Brundtland, who gave its name to the report, was charged. 1987 Brundtland Commission prepared a momentous report which is named: ‘Our Common Future’. It introduced the concept of sustainable development to the world politics. In that report sustainable development was described as

a "development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987: 8)."

Sustainable development approach includes six major principles. These are: integration of environmental protection and economic development, futurity, environmental protection, equity, quality of life and participation (Jacobs, 1999: 26). With regard to sustainable development both economic and environmental protection can be achieved at the same time. In other words the relation between environmental protection and economic development can be translated into positive-sum[2] game from zero-sum[3] game (Hanf and Jansen, 1998). Sustainable development policies therefore require the integration of three areas, which are economic, environmental and social (WCED, 1987). Thus a United Nations document draws attention to the importance of the integration of three pillars and it requires the necessity of "interdependence and mutually reinforcing of three pillars" (UN, 2005: 12). While referring the ecological sustainability it also requires the use of non-renewable resources.

The term sustainability does not only indicate ecological sustainability but also economic and social sustainability. Therefore it is important to underline that there are weak and strong versions of sustainability. In very general terms "Weak version of sustainable development adopts less stringent idea of environmental conservation" whereas "strong version of sustainable development adopts the more stringent idea of environmental limits (Jacobs, 1999:31)." Different explanations of the sustainability therefore reveal the ongoing tension between ecocentric and anthropocentric approaches[4]. Strong version of sustainability also includes the notion of deep ecology which mainly questions the human-nature relationship. Therefore it can be defined as "the pre-eminent radical ecocentric moral theory which has the primary aim of preserving nature from human interference (Carter, 2001: 14)". Ecocentric theory in that sense rejects the anthropocentric belief that

[2]Game theory is "a branch of mathematics that offers a way of formalizing many social and political problems and activities (Scruton, 1996: 211)." In positive-sum games "there is a potential for mutual gain (Scruton, 1996: 211)."

[3] Zero-sum games are "games of conflict: one player's gain is another's loss (Scruton, 1996: 211)."

[4] People should have a strong sensibility in order to protect the natural environment. Therefore environmental protection can be achieved by the human sensibility. However anthropocentric approach regards the environment having only an instrumental value, which also means anthropogenic value, for the protection of environmental values (Connelly and Smith, 2003: 26).

"humans are placed at the centre of the universe, separated from nature" and non-human world has only instrumental value whereas only humans have intrinsic value (Carter, 2001:15)[5].

Nevertheless 1987 Brundtland Report did not only introduce the sustainable development but it also led to the emergence of the ecological modernization approach within the environmental politics.

2.1.3 Ecological Modernization

Joseph Huber and Martin Janicke are considered as the founding fathers of the ecological modernization which briefly "offer the promise of protecting the environment by reforming capitalism (Carter, 2001: 6)." Mainly it is a "systems approach" which focuses on the intricate relationship between production, consumption, pollution and resource depletion (Dryzek, 1997: 144). Ecological modernization therefore does not suggest any radical change at the international system but rather "refers to a restructuring of the capitalist political economy along more environmentally sound lines (Dryzek, 1997: 141)." Then ecological modernization searches for cosmetic solutions according to the deep ecologists.

Roots of both sustainable development and ecological modernisation can be traced back in 1987 Brundtland Report. The Brundtland Report 'Our Common Future' can be seen as the initiator of these two concepts. Certainly they have some similarities and differences. First of all they are both anthropocentric approaches (Langhelle, 2000).

Although they both have different ways to deal with environmental problems, they both aim the protection of environmental policy. However it can also be argued that they serve for different problems. For instance while sustainable development focuses on the

[5] "Instrumental value is the value which something has for someone as a means to an end which they desire" whereas "intrinsic value is "the value which something has independently of anyone finding it valuable" (Carter, 2001: 15).

problems arising from economic development or economic growth, ecological modernisation presents a distinctive stance to economic affluence. Moreover ecological modernisation does not seem to be interested very much in the complex relationship between political, economic and social national and international dimensions of environmental protection. Moreover it challenges reconciliation of economic growth and environmental protection n national scale (Connolly and Smith, 2003: 66). Furthermore according to Langhelle although ecological modernisation is necessary but not a sufficient strategy for sustainability. That is why they should not be conflated (Langhelle, 2000).

On the other hand Langhelle argues that the most important difference between the sustainable development and ecological modernisation is about their focal points. Sustainable development is mostly about ethic and social justice. In contrast the focus of ecological modernisation is economic issues and mainly the market failure (Langhelle, 2000). Intergenerational issues are important for sustainable development. On the other hand ecological modernisation does not show such an interest to futurity concerns. It is not interested in social justice or international global problems. It shows interest mostly to regional problems whereas global problems are very important for sustainable development (Langhelle, 2000). As David Pearce argues sustainable development is not a difficult issue but the main problem is how to achieve it (Pearce in Langhelle, 2000: 10). There have been two vital concepts of sustainable development. One is the 'needs' that mean the essential needs of the world's poor. Second one is limitations that were set by the technologies and the social organisations in order to meet present and future needs (Langhelle, 2000: 10).

Furthermore it can be argued that ecological modernisation is for the most part interested in the problems at the national level. On the other hand sustainable development is interested in both national and global institutional level (Langhelle, 2000). To conclude sustainable development and ecological modernisation in essence both aim at protection of environment and argue that economic development is not an obstacle for environmental protection. In short they have certain features in common but they are not and should not be used interchangeably (Langhelle, 2000).

2.2. Historical Perspective of Sustainable Development

In a short period sustainable development became an important part of environmental policies by requiring the integration of environmental policy and economic growth. It's a long process that goes back to 1970s, especially beginning with 1972 Stockholm Conference. International conferences can therefore be seen as the most effective platforms to diffuse sustainable development concerns and internationalise national environmental polices.

2.2.1. The United Nations Conference on the Human Environment

The United Nations Conference on the Human Environment also known as the Stockholm Conference took place in 1972 as the first mega conference on environment. About 1200 delegates from 114 countries participated for the Stockholm Conference. The heads of the governments joined to conference except, Olaf Palme from the host government and Prime Minister Indira Gandhi from India. It was described as a watershed in the development of environmental law, as the beginning of important international cooperation on the environment (Elliot, 1998: 7) The main message of the Conference was 'Only one Earth' and the debate centred around the Club of Rome Report on the Limits to Growth and ecodevelopment[6] which is the precursor of the sustainable development. Participating countries are interested in mostly the problems of the oil pollution, heavy metals, nuclear war and marine mammals, especially whales (Dahl, 2001).

Stockholm conference is very important at least for two reasons for the international environmental politics. The first reason is that Stockholm Conference took a

[6] Ecodevelopment: "ecodevolopment is a strategy that attempts to conserve ecologically valuable areas, especially protected areas (PAs), in a manner that: ensures that the negative infect of such a conservation effort, on people living in and around these PAs, is minimised, empowers the local communities to have an increasing say in the management of the protected area, creates among the local populations a sense of ownership towards the PA; and strengthens PA management capabilities (Singh, 1996: 19).

more holistic approach contrary to the process before Stockholm conference (pre-1972) (Elliot, 1998: 8). The second important reason is the emergence of environmental diplomacy. In other words priorities and essential concerns of different states have apparently started to shape the international negotiations since then. For instance according to communist block countries, environmental degradation was a capitalist problem and they did not attend the conference. Developing countries were also cautious about the conference. According to developing countries northern concerns of pollution and nature conservation would take precedence over poverty and underdevelopment. There have been worries on responsibility of environmental degradation too. All these concerns came together on Founex Report[7] which was prepared by a panel of expert meetings in Founex, Switzerland in 1971. The report stressed the importance of continued development and it also declared that any opposition of developing country would make the slow industrialisation and environmentally motivated restrictions (Elliot, 1998).

Today Non-Governmental Organisations (NGOs) increasingly contribute to the process of making and implementation of international environmental policy. NGO participations became an essential part of environmental negotiations since a great number of NGOs participated to the Stockholm Conference. Moreover parallel to the Stockholm process some NGO meetings such as the Environment Forum, the Peoples Forum, and Dai Dong took place out side of the official process (Elliot, 1998). At these meetings NGOs searched some more alternative solutions to protect the environment[8].

As stated in the Club of Rome report, studies which prepared background of the Stockholm conference focused on the pressure on environment with regard to the growing population and impact of human activity (Elliot, 1998: 10). The conference highlighted the global character of environmental problems (Elliot, 1998: 17). In the conference unsustainable patterns of production and consumption was taken as a cause of the deterioration. Furthermore, it stressed the importance of international cooperation besides

[7] For detailed information please see http://www.iisd.org/rio+5/timeline/sdtimeline.htm

[8]For detailed information please see http://www.ciesin.org/docs/008-570/box9.html

the access of technology and the importance of finding additional financial resources for developing countries (Elliot, 1998) [9].

There were three outcomes of the conference process. First is a declaration second is an action plan and the last one is an organisational framework for addressing environmental concerns within the United Nations system. The secretary-General of the Conference Maurice Strong favoured a declaration which would establish the rights and obligations of the citizens and governments with regard to the preservation and improvement of the human condition (Elliot, 1998: 12).

The Stockholm declaration consists of 26 non-binding principles. The declaration was a kind of compromise. It balanced the shared interests of developed and developing countries (Elliot, 1998: 12). Since it anticipates balancing the importance of a global commitment to protect resources, this declaration seems as an important step against the 'polluter economic development' **(**Elliot, 1998: 12). It also aims to limit the pollution against the economic development **(**Elliot, 1998: 12).

The action plan involved recommendations relating to human settlements, resource management, pollution, development and the social dimensions of the impact of environmental degradation (Elliot,1998: 12).

The United Nations Environment Programme (UNEP) of 1972 was established as the third outcome of the Stockholm Conference to put the results of the conference in practice (Hens and Nath, 2003). Today UNEP has 58 members and its headquarter is in Nairobi. Its operating budget has been small and it has been supplemented by voluntary contributions to an environmental fund (Connelly and Smith, 2003: 232). Developed countries were mostly cautious about any institution which would require substantial funding. Therefore developing countries were reluctant to accept an institution whose decisions might place restrictions on their development (Elliot, 1998: 13). Despite of these cautions, UNEP has been playing a vital role. In international scene its role is generally

[9]She mainly argues that "It represented a formal acknowledgment (by industrialised countries in particular) of the importance of multicultural efforts to deal with transboundary environmental problems (Elliot, 1998: 7)."

explained with the word ‘catalyst’ related to its monitoring and coordinating role in the international area. It plays an active role about offering solutions to environmental problems. For example in the case of ozone depletion it established scientific expertise, technological and environmental effects and economic panels. It has a limited funding and hence limited staffs which negatively affects its freedom of action. Moreover after the Rio Earth Summit and the establishment of some other organisations, its role became ambiguous (Connelly and Smith, 2003: 232).

According to Elliot the Stockholm Conference could not make a real practical commitment to halt and reverse the causes of environmental degradation (Elliot, 1998: 13). So, she argued further that Stockholm Conference could be regarded as a political success. But it could not produce the desired results to halt environmental degradation. As Elliot states:

> The major achievement of the Stockholm Conference was that it brought together governments to debate international environmental issues. And that it provided a basis for the slow development of international environmental law in the years to follow. Its success, then, was primarily political rather than environmental (Elliot, 1998: 3).

Briefly in Stockholm Conference, countries could not make deep commitments to improve the environmental degradation. Although it was the first global conference on the environment as Elliot underlines very clearly it would be taken as a political success rather than environmental success to halt the environmental degradation. However it paved the way for many significant developments in the following years within the UN framework. With regard to 1983 General Assembly resolution United Nations convened the World Commission on Environment and Development (WCED, also known Brundtland Commission) whose work engendered a momentous progress for the environment-development link.

2.2.2. The Report of World Commission on Environment and Development (Brundtland Report)

The World Commission on Environment and Development (WCED), which was chaired by Gro Harlem Brundtland, presented the Brundtland Report in 1987 (Hens and Nath, 2003). The report was also named as 'Our Common Future.' It gained a big importance by introducing the meaning of the term of sustainable development (Connelly and Smith, 2003: 237). Our Common Future placed the environmental issues on the political agenda and it also placed both environment and development issues together Thus it is taken as a turning and vital point for international politics of environment by many analyses.

Sustainable development has many definitions by the experts. Although generally it is explained that sustainable development strategy is a necessity for future progress, a clear understanding the content of such a strategy must remain open for negotiation (Lightfoot and Burchell, 2005). According to Brundtland report "Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987: 43)." There are two key concepts in this definition. First one is the concept of 'needs' which is about the essential needs of the world's poor, to which overriding priority should be given (WCED, 1987: 43). According to report the essential needs of people in developing countries are not being met. And a world in which endemic poverty exists will always face ecological and economic crises (WCED, 1987: 44).[10] The second is the "Idea of limitations" that is imposed by the state of technology and social organisation on the environment's ability to meet present and future needs (WCED, 1987: 43). Sustainable development certainly calls for an economic growth with increasing productive potential and by ensuring equitable opportunities by all (WCED, 1987). However demographic developments have to be in harmony with the changing productive of the ecosystem for the continuity of the sustainable development

[10] "Sustainable development requires meeting the basic needs all and extending to all the opportunity to satisfy their aspirations for a better life (WCED, 1987: 44)."

(WCED, 1987). There have been always some human interventions to natural system, as settled agriculture, the diversion of watercourses, and the extraction of water minerals so far. These interventions were small and their impacts were limited compared to the human interventions especially in the three last decades.

As stated in the report, today's interventions are more threatening to life support systems both locally and globally. Simply growth causes ecological disasters by setting no limits to population and resource use. Therefore sustainable development must not endanger the natural systems so that accumulation of sources and the development of the technology can increase the carrying capacity of the resource base both for current and future generations (WCED, 1987: 45). To hinder these negative effects of economic growth and development sustainability requires that "the world must ensure equitable access to the constrained resource and reorient technological efforts to relieve the pressure (WCED, 1987: 45)."

Regarding to sustainable development the important problem underlined in the report is the consumption of renewable resources such as fish stocks and forests. Besides, about the renewable resources like fossil fuels and minerals the report presents that their use reduces the stock available for future generations. So, this kind of resources should be used prudently (WCED, 1987).

Moreover sustainable development envisages the conservation of plants and animals. To sustain the overall ecosystem integrity the adverse impacts on the quality of air, water and other natural elements have to be minimised.

> In essence sustainable development is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are in harmony and enhance both current and future potential to meet human needs and aspirations (WCED, 1987: 46).

It is clear that the course to achieve the sustainable seems long and is not easy. It also needs a political will as stated in the Brundtland Report:

> Sustainable development is not a fixed state of harmony, but rather a process of change in which the exploitation of resources, the direction

> of investments the orientation of technical development and institutional change are made consistent with future as well as present needs. We do not pretend that the process is easy and straightforward. Painful choices have to be made. Thus in the final analysis, sustainable development must rest on in the political will (WCED, 1987: 8)

Some argued that Brundtland Report was also supported by non-governmental organisations and it launched the concepts of sustainable development and sustainability into the wider public domain as well (Jacobs, 1999: 21). The report confirms this view as the following:

> The report advocated an interpretation of sustainable development that has become a mantra within environmental politics: 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs' (WCED, 1987: 8).

According to Brundtland Report the goals of economic and social development must be defined in terms of sustainability in all countries (WCED, 197: 43). Despite the existence of various interpretations, they must share certain general features and must flow from a consensus on the basic concept of sustainable development and on a broad strategic framework for achieving it. Hence development requires a progressive transformation of economy and society (WCED, 197: 43). Development policies have to pay attention to considerations as changes in access to resources and in the distribution of costs and benefits to achieve a secured physical sustainability (WCED, 197: 43). Physical sustainability entails a concern be extended to equity between generations. It also requires a concern that must logically be extended to equity within each generation (WCED, 197: 43).

2.2.3 The United Nations Conference on Environment and Development (The Earth Summit)

Two decades after Stockholm Conference in 1992 representatives of governments, international organisations and non-governmental organisations convened in Rio de Janeiro, in Brazil, for the United Nations Conference on Environment and Development (UNCED). According to resolution of the UN General Assembly "the conference should

elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of increased national and international efforts to promote sustainable and environmentally sound development in all countries (UN, 1989)." According to Connelly and Smith Brundtland Report raised the profile of the environment and sustainable development in international politics and it triggered the launch of the United Nations Conference on Environment and Development (UNCED) by the UN General Assembly in 1989 (Connelly and Smith, 2003: 238). Hence the conference focused on sustainable development emphasising the Linkage between environment and development (Hens and Nath, 2003).

NGOs participation at the UNCED increased compared to Stockholm Conference.[11] There are some different explanations about the causes of that increased participation. Certainly Environmental NGOs are one of the important sources of information for ordinary citizen. They work on environmental problems not only domestically but also by sharing information across borders. Furthermore they raise public awareness and they can activate the governmental actors to take action on international environmental policy issues (Desombre, 2002).

NGOs which participated to all UNCED sessions generally included academic groups, trade unions, business associations, associations of legislators and local authorities, religious groups, and groups representing women, youth, indigenous peoples and environmental and developmental groups. They worked affectively parallel to the negotiations (Parson, *et al*, 1992). They published daily newsletters at the climate sessions, developed effective networks such as the five regional Climate Action Networks. To illustrate one NGO supported the Association of small island states. In Rio generally the activity of NGOs was divided into two ways. First group was at the official conference and included 1400 delegations. As lobbied delegations they talked to the press, and operated a full-time office with daily press briefings. The other NGO events were held at the separate Global Forum (Parson, *et al*, 1992).

[11] 400 NGOs participated at the Stockholm. This number increased to 7000 at the UNCED (Desombre, 2001).

Five agreements were signed at the Earth Summit; namely, Rio Declaration, Agenda 21, Convention on Combat Desertification, Framework Convention on Climate Change which addresses the global warming and Convention on Biological Diversity which addresses the continuing loss of biodiversity and forests (Hens and Nath, 2003). Mainly Rio Declaration on Environment and Development are set of guiding principles for national and international environmental manner. The Rio Declaration involves 27 principles to guide governments in their pursuit of sustainable development. The stated goal of the declaration is the establishment of a "new and equitable global partnership through the creation of new levels of cooperation among states, key sectors of societies and people (UNCED, 1992)."

It supports the polluter pays principle (PPP) and the precautionary principle (Connelly and Smith, 2003: 239). With principle 7 it also establishes a link between the poverty and environmental degradation and recognises different responsibilities of states[12].

Moreover Connelly and Smith argue that Agenda 21 is arguably the most significant outcome of the Earth Summit. It intended to guide all nations towards sustainable development into the twenty-first century. It consists of 4 sections: Social and economic dimension, Conservation and management of resources for development, strengthening the role of major social groups and means of implementation (Connelly and Smith, 2003: 240). It does not only underline the causes of global unsustainability, but also presents vital ideas about how to put sustainable development in practice (Hens and Nath, 2003).

Elliott argues that the main question about the Rio declaration is whether it really provides a set of principles to shape international action on environment and development, to forge a global partnership and to provide the basis for a global ethic of sustainable

[12]In principle 7 this responsibility stated as "principle 7 states shall cooperate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command (UNCED, 1992)."

development and it is unclear if the declaration elaborates anything new (Elliot, 1998: 22). Elliot also points out the criticisms raised on the basis its effectiveness to deal with global environmental problems (Elliot, 1998: 22). About the Rio Declaration she concludes that:

> First, the declaration and its principles are shaped by and reinforce the imperatives of state sovereignty rather than global stewardship. Second the declaration illuminates the difficulties of reconciling environment and development concerns in the concept of sustainable development, a concept which is nowhere defined in the agreement (Elliot, 1998: 22).

In brief, the UN Conference on Environment and Development is seen by many people as the beginning of a new ecological era (Burchell and Lightfoot, 2004: 168). Moreover, according to Burchell and Lightfoot, the EU was not only granted full participant statues, it also committed to the concept of sustainable development at this summit (Burchell and Lightfoot, 2004: 168). However UNCED is not free from criticisms particularly with regard to its outcomes.

After ten years from Rio in 2002, The World Summit on Sustainable Development (WSSD) was held in Johannesburg. The Johannesburg summit is also the 10th anniversary of the EU's commitment to sustainable development and "it is an important stage for the EU to prove that its commitment to sustainable development represents more than just green rhetoric (Burchell and Lightfoot, 2004: 169)." Before the WSSD states had a preparation process by applying to conferences, meeting, and also introducing declarations. That transition process prepared the ground of WSSD.

2.2.4. The Road to World Summit on Sustainable Development from Rio

Although it took 10 years between Rio to Johannesburg there has been small process taken by the states. For instance nothing was done about Convention on climate change until German invitation to discuss about it in 1995. Then in 1997 84 countries signed Kyoto protocol to reduce greenhouse gas emissions. The protocol was accepted

under the framework of shared but different responsibilities (Hens and Nath, 2003). Until the WSSD, four conferences of parties (COP) were realised to establish an action plan and mechanism to monitor the Kyoto agreements[13].

Contrary to the slow progress in the Convention on Climate Change, states took important steps on Convention on Biological Diversity. Parties convened six times to discuss that issue and they set some measures to achieve the objectives for the conservation of biological diversity, sustainable use of its components and equitable sharing of benefits (Hens and Nath, 2003). However despite all these progresses forests throughout the world have been disappearing at a rate of 14, 6 million hectares annually. So the states were forced to be taken more steps at WSSD to protect the existence of biodiversity (Hens and Nath, 2003).

Millennium Summit of 2000 gathered states once more to take measures to reduce poverty and hunger, to achieve universal primary education, promote gender equality and empower women, reduce child mortality, improve maternal health, combat diseases such as HIV, ensure environmental sustainability, and develop a global partnership for development (Hens and Nath, 2003). These measures were announced in the Millennium Declaration of the United Nations. Following to Millennium Declaration, 2001 Doha Declaration was introduced by the Fourth ministerial Meeting of the World Trade Organisation (WTO).

At that meeting Doha Agenda was established to address the inequality, which occurs between the developed and least developed countries, with a programme of work (Hens and Nath, 2003). Ministers agreed to support protection of environment and sustainable development at the declaration. They also pointed to necessity of completion of negotiations on substantial improvements in market access in agriculture. They also agreed on the reduction of non-agriculture production tariffs. Moreover they declared that on the trade and environment tariff and non tariff barriers to environmental goods and services are to be reduced or eliminated. It was also stated that least developed countries needs a special attention. About Doha Agenda it was hoped that it would create a balance between global

[13] Buenos Aires in 1998, Bonn in 1999, The Hague in 2000 and Marrakech in 2001 (Hens and Nath, 2003:13).

trade and environment to promote both intragenerational and intergenerational equity (Hens and Nath, 2003).

However progresses and agenda settings brought the finance problem to implement Sustainable Development. In March 2002 heads of the state and government convened the International Conference on Financing for Development in Monterrey, Mexico to deal with the problem. They concluded to mobilise the financial resources for development, international trade has to be taken as the engine of development. The members also agreed on to mobilise the international resources, foreign direct investment and private capital flows for development. The need of the greater international financial and technical cooperation was underlined and lastly they stressed the external debt relief (Hens and Nath, 2003).

The US and the EU both promised to give totally 30 billion US dollar to beneficiary countries till 2006. It is clear that before WSSD countries discussed financial problems detailed. So the financial issue did not take place in WSSD once more (Hens and Nath, 2003). From Rio to Johannesburg four preparatory committees took place. PrepCom1 was held at the United Nations headquarters in New York to set WSSD agenda and determining main themes. At the PrepCom2 it was decided that WSSD should be participated by Sub-Saharan Africa and small island states too. In prepCom3 members crated different chapters of plan of implementation of the WSSD. Lastly PrepCom4 has convened in a different place from the others in Bali, Indonesia. There they started to produce a draft plan to realise the Agenda 21. They voted on Agenda 21 and the 75% of the voters were agreed on all paragraphs of it (Hens and Nath, 2003).

All the preparation process for the WSSD creates its background. Hence the UN conferences, 22 reports of the UN Secretary General inadequate attention to WEHAB, coherent policies on finance, trade investment, technology and sustainable development, partnership creation contributed to WSSD (Hens and Nath, 2003).

2.2.5 World Summit on Sustainable Development

The World Summit on Sustainable Development (WSSD) also called The Johannesburg Summit, held in Johannesburg, South Africa. It has taken almost a month from August 26 to September 24. While 9101 delegates from 191 governments, 8227 representatives of major groups taking their places, 4012 media representatives reported on the summit (Hens and Nath, 2003). The representatives joined to the Summit to discuss how to sustainability would be implemented efficiently. The important question of the Summit was therefore why there was so little progress about achieving the Rio goals of sustainable development until now (Hens and Nath, 2003).

Hence WSSD was realised after 10 years from Rio to evaluate the 10 years period. Because of that reason it is also sometimes called Rio+10. Four global and regional meetings (in other words PrepCom) were completed from 2001 to 2002 under the preparation process of the Summit (Mengi and Algan, 2003: 56). Many people from business and NGO's also joined the Earth Summit. At the end of the Summit two important documents were published: Johannesburg Declaration on Sustainable Development and Plan of Application of the WSSD which are also taken as the first kind of outputs of the Summit (Mengi and Algan, 2003).

Johannesburg Declaration is a political declaration which involves 32 principles. It is a vision of sustainable development and it paves the way for new negotiations (Hens and Nath, 2003). In that declaration the worldwide obligation of the sustainable development was repeated. The necessity of an equal and humanist society to realise the sustainable development was stressed in that principle. Furthermore members recalled the responsibilities which are related to three pillars of the sustainable development- economic development, social development and environmental protection (Mengi and Algan, 2003). According to the declaration sustainable development is characterised by multilevel policy action, a long term perspective and broad participation. It involves the threats to sustainable development the main actor and the core issues about water, energy, health, agriculture, biologic variety (WEHAB).

In the Johannesburg Plan of Implementation for Sustainable Development importance of instruments of sustainable development policy, capacity building, technology transfer, training and education, new partnerships, financial means and good governance were also underlined. In this plan reasons behind the poor implementation of sustainable development in certain regions such as Africa, Latin America, Caribbean and small island developing states which suffered from environmental degradation and natural disasters were also stressed. Although it was a crucial declaration for the future of the worldwide sustainable development it was not clear on the possibility of new negotiations. Its impact on sustainability is therefore limited due to that uncertainty (Hens and Nath, 2003).

In Stockholm, countries agreed on the urgent need to respond to the problem of environmental deterioration. At UNCED they agreed that the protection of the environment and social and economic development have been fundamental to sustainable development. With the adaptation of Agenda 21, Rio principles and the global programme UNCED was pointed as a mile stone for sustainable development. At Johannesburg Summit the aim was to reach 'a world that respects and implements the vision of sustainable development.'[14]

The plan of action on sustainable development is the core document of the WSSD. It contains actions and targets to realise the agenda 21 objectives of Rio. So that objectives have to be implemented to realise the UNCED aims. The plan deals with, poverty eradication, changing unsustainable patterns of consumption and production, protecting and managing the natural resource base of economic and social development, sustainable development in globalising world, health and sustainable development, sustainable development of small island developing states, sustainable development for Africa, other

[14]For further information please see International Indian Treaty Council web page: http://www.treatycouncil.org/new_page_524212221.htm

regional initiatives, means of implementation and institutional framework for sustainable development (Hens and Nath, 2003).

Related to plan of action on sustainable development there have been five priorities: water, energy, health, agriculture, biologic variety (WEHAB). The necessity of the financial support for these five manners was also handed at summit. Different sessions were realised to discuss these subjects. Nine fundamental social groups- women, children, youth, indigenous people, local people, NGO, local offices, workers, trade unions, scientists, farmers and also representatives of the governments joined the sessions (Mengi and Algan, 2003). There have been special meetings such as forum of water, Local Administration Session, Meeting of Business World and Circle Table Meeting to activate the sources for WEHAB (Mengi and Algan, 2003).

More than the first kind of outputs, members made a decision on cooperation for sustainable development to make corporation between the private sector and public sector (Mengi and Algan, 2003). Besides, about WEHAB more than 220 corporations have been built by supplying 235 million dollar. During the summit 32 corporations to protect the biological diversity, 17 for the sustainable agriculture and 24 new corporations about water have been proposed to United Nations. Moreover EU declared that they would constitute a corporation which evaluates 700 US dollar about energy (Mengi and Algan, 2003: 69). US also declared that they would be spending 43 million dollar for the energy and 970 dollar for water sources. But all those initiatives could not prevent the criticisms against the Summit. According to Greenpeace the Summit could not produce concrete decisions. Moreover Greenpeace advocated that USA, OPEC countries and Japan hindered the initiative of Brazil on the renewable resources (Mengi and Algan, 2003). All these developments show that actors deal with the environmental problems if the proportion of environmental treat is the same with proportion of their stakes (Mengi and Algan, 2003).

Despite all criticism Johannesburg summit gathered different interest groups and the implementation of the taken decisions became very important. Because it was realised once again that environment was a global issue. So the implementation would not have only national implications but also global ones (Mengi and Algan, 2003).

After the summit UN realised its 11th meeting to implement the decisions of the summit in 2003 UN members also accepted a working programme for the years between 2004 and 2017 (Mengi and Algan, 2003). However WTO Cancun Conference in Mexico ended unsuccessfully since developed countries and developing countries could not agree on the terms of sustainable agriculture. This outcome can be considered as the success of poor countries and the countries against global action. Despite all the conflicting interests UN also has to find new sources to improve and realise the sustainable development politics (Mengi and Algan, 2003: 78).

While EU has been granted to a full participant statue in Rio, it became a really active participant in WSSD (Lightfoot and Burchell, 2004). Therefore initiatives of the EU during and before the WSSD are generally regarded as important determinants of its global environmental actorness.

2.2.6 Internationalisation of Environmental Policy

Current global disasters have certainly forced the countries to set a consciousness about environmental protection. There are however different approaches to protect the environment. For instance according to the one view, 'limits to growth' must be essence of all environmental considerations while another approach asserts that economic growth and environmental protection can be achieved at the same time and they are necessarily not mutually exclusive.

Many countries including EC member states took place in 1972 UN Conference on Human Environment and they warned the world about global environmental degradation and poverty. Environmental challenges especially the dramatic results of environmental degradation have not ended even at the post cold war era and that dragged the states to sign 1987 Brundtland Report which did not only introduce the sustainable development but also established some more principles to be integrated to national policies besides sustainable development. Then a great number of participators got together in Earth

Summit in 1992 (WCED, 1987)[15]. Its goal was to promote sustainable development by establishing new strategies and measures in order to struggle the environmental degradation. It introduced five agreements which are named Rio Declaration, Agenda 21, and Declaration on Forest Principles, and Convention on Climate Change and Convention on Biological Diversity. After ten years from Earth Summit, World Summit on Sustainable Development was held in Johannesburg whose aim was to asses the '10 years period' that followed the Earth Summit. So it was also called Rio+10. In that summit Sustainable Development Political Declaration was adopted. The new declaration introduced 32 principles and an Application Plan. The goal of the summit was not different from the other summits. Their struggle was to create such a world that "respects and implements the vision of sustainable development."[16]

All these conferences clearly indicate that environment has increasingly becoming a hot topic in international relations. Some common problems such as pollution of atmosphere, species loss, nuclear power safety, ocean and sea pollution have been challenging the international agenda. Environmental problems are certainly not limited within the boundaries of individual states (Schreurs and Economy, 1997). A disaster in one state can cause sensitive and responsible consequences in another state of the world. That is why individual states are responsible of transboundary social, health and environmental problems. This situation has forced the states to be gathered to find the ways of struggling environmental problems so far. According to register of the UNEP almost 200 multilateral agreements have been signed since Stockholm conference and then that number increased to 900 at the early 1990s (Schreurs and Economy, 1997). Although in the pre and immediate post World War II periods some national and local matters occurred and bilateral agreements were signed, that local and national preferences were changed after the United Nations Conference on Environment and Development. That conference was

[15] The report requires the principles such as revive growth, change the quality of life, conserve and enhance the resource base, ensure a sustainable level of population, reorient technology and manage risk, Integrate environment and economics in decision making, reform international economic relations and strengthen international cooperation (WCED,1987: 4–5).
[16] International Indian Treat Council webpage http://www.treatycouncil.org/new_page

regarded a turning point of the environmental policy, because environmental problems started to be internationalized from that time (Schreurs and Economy, 1997) [17].

However the outcome of these efforts is not success most of the times. Still environment can be regarded as a policy area with low priority and integration of environmental concerns into other policy areas seems far from reality in most countries. Nevertheless environmental problems force states and other actors to cooperate. Today international organisations, international expert groups- in other words epistemic communities, multilateral cooperation, and other governmental and non-governmental organisations have great influence shaping the environment policy outcomes. Even agenda setting, policy formulation and implementation are becoming increasingly internationalised too (Schreurs and Economy, 1997).

Certainly local activities cause trans-national even global effects. For instance coal-fired plants in Beijing contributed to acid rain in Japan. Furthermore species loss in one region of the world triggers the large scale in biodiversity. Internationalization of economy also has a forcing impact on internationalization of ecological systems (Schreurs and Economy, 1997). Moreover linkages among states and between actors at the domestic and international level have encouraged increasing participation to some degree in international organisations, network creations, multilateral corporation activities, scientific conferences, international political gatherings, and the media and telecommunications so far (Schreurs and Economy, 1997). OECD and World Bank can be taken as examples by gathering state and non-state actors on environmental issues (Schreurs and Economy, 1997). Among all the actors the European Union has showed a great effort to be a dominant actor by linking the domestic and international environmental policy making (Liberatore, 1997). It has not only developed its own environment policy and legislation but also it has been party to many international agreements on environment. It has a leading and bridging role by supporting the sustainability of the internal market and protection on the environment (Liberatore, 1997).

[17] Internationalization of environmental politics can be described as "a response to the emergence of new types of environmental issues (Schreurs and Economy, 1997:5)."

However the EU is not the only actor which tries to influence the international environmental agenda. The US is also a very strong actor in environmental issues. It has a very unique position with regard to international environmental issues. It is a greater polluter; on the other hand it has huge technological, financial and political sources that can be transferred to the efforts to eliminate environmental challenges and to enhance sustainable development all around the world. Therefore it will be helpful to analyse the differences and similarities between environmental policies of the US and the EU to have a better understanding of the internationalisation of the environment.

III. ENVIRONMENTAL POLICIES OF EU AND US AND SUSTAINABLE DEVELOPMENT

The United States (US) and the European Union (EU) are considered as the most influential environmental actors in global environmental politics. They have great economic and political powers and scientific experience to shape the international environmental agenda and negotiations. Although they have a number of similar environmental concerns and interests, their reactions are not the same in each case. In some areas such as in stratospheric ozone issue US becomes a leading actor even pushing the EU to take international action while in some other cases the EU leads the international negotiations. Through time environmental considerations have became a critical factor in their relationship. From time to time they experience a conflict based, even antagonist relationship with regard to some environmental issues as well (Bodansky, 2003).

This antagonist relationship is more evident in genetically modified organisms (GMO) issue and global climate change negotiations. For instance the US has been the most significant and important actor on the climate change issue as being the largest contributor of the greenhouse gas emissions and one of the leaders in technological innovations and scientific research. Therefore US supported initial research which let climate change to be taken as a global issue (Bodansky, 2003). Although the US supported the activities on climate change at very beginning, then changed its attitude. Despite of the all efforts of the EU, the US preferred to stay out of the Kyoto Protocol so far. The US withdrawal from the Kyoto Protocol clearly presented a big disagreement between the two major actors on the climate change issue (Bodansky, 2003). Hence it can be argued that although the US has been and still is the traditional global leader and standard setter in environmental negotiations, the EU has gradually became a policy shaper, and a normative global actor particularly in global climate change issue.

EU has firmly emphasised the sustainable development in different international platforms along with and recently played a significant global role in several multilateral

negotiations such as Montreal Protocol (Bretherton and Vogler, 2006). There are many arguments on its global actorness and leadership on environmental issues. Although due to its *sui generis* characteristic it is not easy to classify its actorness, it is being considered as a normative global power since it has started to shape global environmental regimes and to affect conceptual basis of the key environmental principles and their worldwide implementation for the last decade. Since global climate change is closely linked with unsustainable development patterns, the role of EU in that context is very significant. Moreover the US withdrawal from the Kyoto certainly makes the role of the EU more important in shaping the climate change negotiations. Consequently its significant role in the climate change regime can be considered as the best evidence of its global leadership efforts since 1980s (Bretherton and Vogler, 2006).

3.1 EU as a Global Environmental Actor

The EU plays a significant bridging role between the domestic and international dimensions of the environmental policy. On the one hand it establishes its own environmental policy despite of all the social, economic, political and ecological differences of the Member States; on the other hand it is a party to various international environmental agreements. Unique supranational responsibilities are inherited from the European Community to the European Union which was formed by 1993 Maastricht Treaty -Treaty of European Union (TEU). EC competence with regard to environmental policy is a shared competence which means EU institutions do not act separately from the Member States. It therefore represents a bridging role between its member states and the broader international community (Kramer, 2004).

EU environmental action programmes and legislation certainly influence Member States environmental policies. Member State environmental policies and concerns also affect the EU environmental concerns. It is therefore a two-way process. Regionally the EU aims to improve the Pan-European and Mediterranean environmental protection and

cooperation by using technical, financial and diplomatic resources. That's to say the EU has such a power that it can carry interests of the Member States to a broader region. In the global scale its environmental policy and its position in different environmental regimes affirm its efforts to be an environmental leader. Historically European environmental considerations and policy were shaped by Single European Act underlying the subsidiarity principle. Then 1993 TEU determined to promote sustainable development stressing its importance for both environmental policy and economic development. It also required integration of sustainable development into other community policies too by setting clear objectives.

3.1.1. Evolution of EU Environmental Policy

European Integration was originally constructed as an economic integration. Hence during the 1960s EU focused on common external tariffs and common policies such as transport, agriculture and investment which were in close relation with the common market (McCormick, 2001). Therefore it would not be wrong to state that the structure of the EEC was directly and mostly about the implementation of common market. The primary goal of the EU was to remove the barriers to trade before 1972. Even there was neither any reference to environmental issues in writings and speeches of the people such as Jean Monnet, Robert Shuman or Paul Henri Spaak nor in the conclusions of Messina Conference or the Spaak Committee. Hence the founding treaties of the EC - 1957 the Treaties of Rome, 1951 Treaty of Paris – did not involve any article about environmental legislation (McCormick, 2001: 43). When the 1957 EURATOM Treaty was signed it was the first time the basic standards for the protection of the health of workers and the public against the dangers arising from ionising radiation were set (McCormick, 2001). Therefore at the beginning, environmental measures were taken in relation to economic reasons. Even harmonising national environmental laws gained importance regarding that goal (McCormick, 2001). From 1960s to signature of the 1987 Single European Act all

environmental implementations based on only articles 100 and 235 of the Treaty of Rome[18] (Lenschow, 2002: 9). Today still the relationship between economy and environment shapes the EU policies and sustainable development concerns though environmental concerns have gained outmost importance for all policy areas particularly since the mid 1980s (Liberatore, 1997).

Since 1970s EC has started to show growing sensitivity to transboundary global environmental threats and it became party to several International Conventions. Hence the Early 1970s signalled a change of attitude concerning the environment within the EC. Basically trade based implications of environmental policy and the pressure of the European people forced EC to activate about animal welfare, climate change and genetically modified food (Bretherton and Vogler, 2006). For instance EU ratified Long Range Transboundary Air Pollution Convention in 1979 which was about transboundary fluxes of nitrous and sulphuric oxides. Similarly about marine pollution member states of the EC and the third countries came together to regulate wastes. The EC also put emphasis in the negotiations on the sustainability of shared common pool resources (Bretherton and Vogler, 2006).

The EC made its first decisive step towards building its own environmental policy at the Paris Summit in October 1972. It declared that economic growth was not "an end in itself" (Hanf and Jansen, 1998). This led to adaptation of the first Environment Action Programme (EAP) in 1973 (Philip, 1998: 256). In fact during 1970s several environmental

[18]Article 100 of the Treaty of Rome states " Without prejudice to any other procedures provided for in this Treaty, the Council, acting by a qualified majority on a proposal from the Commission, may decide upon the measures appropriate to the economic situation, in particular if severe difficulties arise in the supply of certain products. Where a Member State is in difficulties or is seriously threatened with severe difficulties caused by natural disasters or exceptional occurrences beyond its control, the Council, acting by a qualified majority on a proposal from the Commission, may grant, under certain conditions, Community financial assistance to the Member State concerned. The President of the Council shall inform the European Parliament of the decision taken (Official Journal, C 321E of, 29 December 2006)." Article 235 of the Treaty of Rome states "The Court of Justice shall have jurisdiction in disputes relating to compensation for damage provided for in the second paragraph of Article 288 (Official Journal, C 321E of, 29 December 2006)." Second Paragraph of Article288 states "In the case of non-contractual liability, the Community shall, in accordance with the general principles common to the laws of the Member States, make good any damage caused by its institutions or by its servants in the performance of their duties (Official Journal, C 321E of, 29 December 2006)."

action plans were adopted to resolve this situation (Vogler, 2003). The environmental action plans covered topics such as water quality, marine pollution, waste control, air quality, nuclear radiation, dangerous chemicals, energy conservation, pesticides, noise pollution, genetic modification, forestry and animal welfare[19]. These plans in essence pointed out the impacts of environmental issues within and outside the EC at that time. Vogler underlined the significance of the content of these plans as such "Most of the topics had external ramifications in a World where transboundary and global environmental issues were beginning to acquire a new salience in international politics (Vogler, 2003)."

First Action plan proposed three kinds of actions which were minimising and prevent the pollution, improving the existing European Environment, and pursuing EC policy objectives at other international levels. First Action Plan also established some other environmental principles such as the necessity of preventive action, the responsibility of the polluter for environmental damage and its rectification, the need to action to be taken at most appropriate level (Philip, 1998) [20].

Many national governments began turning their attention to the environment in 1970s as well. Some Member States started to push the EU to set more stringent environmental standards. Structure of the European Commission was changed and then the new commission with a new perspective prepared action programmes on the environment[21]. It also underlined the important principles and the goals of community policy. Indeed environmental law gained importance and some important legislation were passed during those years on the issues such as water and air quality, and waste production (McCormick, 2001). From 1975, the first EC environmental directives dealt with waste

[19] Totally six Environment Action Programme of the European Community have been declared till 2002. 6th one put into practice in 2002 for the years between 2002- 2012.

[20] 1977 Second Action Plan was almost the same with the first one by representing some higher legislation. With regard to legislations of Articles 100 and 235, there has been still a customs union related approach to environment and the unanimity rule in the council. So, it was difficult to get effective measures agreed (Philip, 1998). While third EAP could not change that position, the fourth one presented a more coherent environmental policy. It was adopted shortly after the entry into force of the SEA. It signalled an attention to make environmental policy more coherent and to use article 100a whether possible, to force legislation through and subsequently to enforce implementation (Philip, 1998: 258-260).

[21] New commission was established in 2 July 1970 with the Presidency of Italian statesman Franco Maria Malfatti. Till that time the commission was very reluctant about making new environmental regulations. In 1972 First environmental action programme was prepared by the new commission.

oils, quality of bathing waters and wastes (Kramer, 2004). Besides the adaptation of product-related measures and measures on protection of nature and air quality, public and political concern in Western Europe was increased related to industrial accidents and the problem of dying forests (Kramer, 2004).

Single European Act (SEA) was the turning point for the EU to improve its environmental stance to reach a comprehensive environmental policy for Europe (Kramer, 2004). SEA created four important impacts on environment. First one is the introduction of a new legal title. Hence the commission could start making legislative proposals in areas such as the protection of natural habitats, and freedom of access to environmental information (McCormick, 2001). Before the signature of the SEA environmental legislation was based on unanimity. Secondly the SEA extended qualified majority voting (QMV) in the Council of Ministers. Third, the commission no longer had to be devoted only article 100 and 235 and the DGXI. Finally the need of scientific and technical information was emphasized and SEA triggered the foundation of European Environment Agency in 1990 (McCormick, 2001).

Furthermore member states set some founding principles regarding to SEA: "that prevention, not cure, should be the preferred course of policy; that rectification of problems should occur at source; and that the polluter pays principle should be applied" (Philip, 1998:260). Hence it is not wrong to say SEA is a milestone on the way of the protection of environment in the EU. Then another vital step came into force with the signature of Treaty of European Union (TEU) in other words Maastricht Treaty. With TEU Member States declared their determination to promote economic and social progress for their peoples' future. By this statement the term sustainable development was legally used in the EU at the first time. Concerning the peoples' future Article 130r of the TEU set some important objectives about environment. These objectives are:

- Preserving, protecting and improving the quality of the environment;
- Protecting human health;
- Prudent and rational utilization of natural resources;

> - Promoting measures at international level to deal with regional or worldwide environmental problems (TEU, 1992, 130r)

As stated in the Treaty these objectives were to be realised through certain principles which were precautionary principle, principle of rectify at source and polluter pays principle.

> …Community policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Community. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay… (TEU, 1992, 130r)

Moreover Article 130r of the Treaty of the European Union declared that environmental considerations should be integrated into other community policies[22]. This condition that put forward in the EU Treaty recalled one of the basic requirements of sustainable development once again. Sustainable development must evidently be the integral part of all policy areas. Hence the EU stated in the Article 6 of the Treaty of Amsterdam that promotion of sustainable development must be integrated into the definition and implementation of all EU policies. Thus sustainable development has consequently become a vital component of the Treaties.

> More importantly sustainable development pushed the principle of sustainable development into the heart of the treaties. Sustainable development and environmental protection were added to the recitals for the first time and where Maastricht had maid mention of 'sustainable growth respecting the environment, Article 2 in the Preamble was now written to make one of the community's goals 'a harmonious, balanced and sustainable development of economic activities' emphasis added (McCormick, 2001: 63).

These legal changes were accompanied with some normative changes as well. To illustrate, 'command and control approach' of 1970 and 1980 was replaced with 'market based, flexible and cost effective' solutions. These new approaches signalled a new era in

[22] "…Environmental protection requirements must be integrated into the definition and implementation of other Community policies (TEU, 1992, 130r)." 130s of Maastricht Treaty (1992) also includes some measures as provisioning primarily of a fiscal nature, measures concerning town and country planning, land use with the exception of waste management and measures of general nature and management of water resources and lastly measures significantly affecting a member state's choice between energy resources and the general structure of its energy supply (TEU, 1992, 130s).

EU environmental policy as well. They all point out that there are different needs and conditions of member states and that high level of public participation is essential for the Europe-wide environmental solutions[23].

Under these circumstances the fifth EAP was adopted in 1992. It was approved by a council resolution in 1993. It was adopted only a few months before the Rio Earth Summit and it shares most of strategic objectives and principles with those of Rio. The Fifth EAP was considered as the main European vehicle for the implementation of Agenda 21 and other UNCED Agreements (Connelly and Smith, 2003:280). The second section of the programme was entitled Towards Sustainability and it set objectives, policy implementation programmes for the environment for 1993-2000. The strategy covered five target sectors which are industry, energy, transport, agriculture and tourism. Achievement of sustainable development was therefore linked with the integration of environmental concerns into these five sectors (Connelly and Smith, 2003:208). 5EAP also covered seven priorities including climate change, acidification and air quality, urban environment, coastal zones, waste management, management of water resources, protection of nature and bio-diversity (Connelly and Smith, 2003: 280).

[23] Other normative changes can be summarised as such: The commission placed a new emphasis on bringing together existing activities between 1995 and 1999 instead of launching new initiatives. Regarding to Maastricht Treaty subsidiarity gained legality hence new proposals were established. The second normative change has been come from the commission willingness. The commission needed to establish coordination among the DGs within an interest in environmental issues. Thirdly, the commission has been interested in implementation problem. The commission stressed the cases of non-implementation, non-compliance and incorrect application. So the commission helped creation of EU network not only for the implementation but also enforcement of the EU law in 1992. Fourth, Disparities in environmental quality and in national legislative responses to environmental problems have been emphasized by the expansion of EU membership. There has always been a multispeed approach to environmental protection in the EU. On the one hand some member states have been dependent to regulations and but other hand some others not. The balance became more aggressive in 1995, when the central and eastern European countries, with strong national record in environmental policy, joined into the EU. Finally, during the mid-1990s the commission moved towards a new strategic approach to environmental problems. First step was the establishment of more global solutions for the interrelated problems. For that aim the commission established 1996 directive on integrated pollution prevention and control (96/61) and the 1996 framework directive on air quality (96/62). Then in 1997 the proposal for a framework water directive that was published. The development of the Auto-Oil programme came into force to support the oil and motor industries in reducing vehicle emissions. The work on an acidification strategy started in 1996 and the review of chemicals policy was built in 1998 with regard to discussion papers on strategies for biodiversity, forestry, energy efficiency and eastward expansion of membership. All these initiatives have been investigated EU policy process moving towards an integrated and broad-ranging approach to environmental policy (McCormick, 2001: 65-68).

Hence the 5EAP based on the subsidiarity and shared responsibility principles by recognizing the EU's international obligations. Contribution of public authorities, public and private enterprise and the general public was also considered as a *sine qua non* for the success of 5EAP[24]. Evidently TEU required the EU to support international cooperation. So it was clear that 5th Action Plan supported both national and international cooperation (Connelly and Smith, 2003).

The 5EAP with the aim of creating a more sustainable economy and society underlined "the principles of sustainable development should be incorporated into all other EU policies (Connelly and Smith, 2003:282)." Previous environmental programs were considered as the form of lists of proposed legislation. Therefore the 5EAP has been taken as a great step towards more well-structured EU environmental policy.

In 1996 the European Commission prepared a 'progress report on implementation of 5th action program.' The report indicates that the Commission should disseminate information on legislation and advice on implementation in order to address the lack of knowledge in the Member States. Moreover links between environmental legislation and EU funding need to be strengthened. Member states also should give more attention to publicize the state of the environment or part of it. Public participation, the role of the norms and standards in relations with other instruments are considered (European Commission, 1996). After the 5EAP it was realized that there were some serious problems in the implementation of the environmental policy by the member states (Connelly and Smith, 2003). Under these circumstances the 6EAP was entered into force under the title of Environment 2010: Our Future, Our Choice.

[24]The General Consultative Forum on Environment comprises representatives of trade and industry, trade unions, environment and consumer organisations, local and regional government. Members don't represent their organisations. They speak for themselves. The implementation network is made by National and commission Officials. "The Environmental Review Group comprises senior officials from member states and the commission is designed to facilitate understanding and the Exchange of views on the environmental policy and measures independently of specific proposals and infringement proceedings. (Connelly and Smith, 2003:282)". The EU established three 'Dialog Groups' for the development of policy making and implementation of 5EAP: "The General Consultative Forum on the Environment (renamed the European consultative Forum on the Environment and Sustainable Development in 1997), National and Commission Officials and the Environmental Policy Review Group (Connelly and Smith, 2003).

> The assessment of the 5EAP had shown that there was a deficiency in the implementation of environmental policy by the member states. Thus there is now to be a better emphasis on better implementation of existing environmental laws and policies. The commission has announced that it will bring increased pressure to bear on member states by making implementation failures better known. Another theme running through the Programme is that of production and consumption and, in general, greening the market. One striking feature is that the 6EAP embraces the ideals of ecological modernization (Connelly and Smith, 2003: 284).

The 6EAP runs from 2002 to 2012 and it requires the preparation of seven thematic strategies on air pollution, the marine environment, the sustainable use of resources, waste prevention and recycling, the sustainable use of pesticides, soil protection and the urban environment. The Commission published a midterm report in 2006 on the implementation of 6th Environmental Action Programme (EEA, 2006). There are four priority areas of 6th environmental Action Programme which are climate change, nature and biodiversity, environment and health and finally natural resources.

According to the report there are some deficits in the implementation of the Programme as well. For instance in the climate change issue ratification and entry into force of Kyoto Protocol is a success but, reducing greenhouse gas emissions in the transport sector is not enough. Moreover growth of transport emissions is still continuing. For instance from 1990 to 2004,

> EU-15 greenhouse gas emissions from domestic transport increases by 26 %. Emissions from transport by road increased by 25 % over the same period. For 2010 EU-15 greenhouse gas emissions from domestic transport are projected to increase by 35% from 1990 levels if only existing domestic policies and measures are used (EEA, 2006: 47).

However EU strategy on climate change is not limited with the 6th Environmental Action Plan and goes back to the 1985 (McCormick, 2001). European Climate Change Programme (ECCP) was established in 2000 with the aim of identifying cost effective and environmental effective measures for cutting greenhouse gas emissions in the EU. This first ECCP also aim at helping the EU to meet its target of 8% under the Kyoto Protocol (European Commission, 2006: 5). European Climate Change Programme was also enhanced with the EU Sustainable Development Strategy.

Fifteen members of the European Union accepted 8% reduction target below the 1990 level by 2012 at Kyoto and the EU managed to get agreement for the EU Bubble (Wagner and Michaelowa, 2005: 79). This reallocation within the EU is called "European Bubble" (Wagner and Michaelowa, 2005). Therefore they agreed to have a burden sharing agreement among themselves. With this agreement each of the member states had a national target. Among fifteen member states eight of them (Luxemburg, Austria, Belgium, Netherlands, Denmark, Italy, United Kingdom and Germany) were given reduction targets while five of them (Spain, Greece, Portugal, Ireland and Sweden) were allowed to increase their GHGs and Finland and France (EEA, 2005: 71). The second European Climate Change Programme started in October 2005 with special emphases to EU's Lisbon strategy (European Commission, 2006). When 10 more countries joined the EU they have their own targets under the Protocol except Cyprus and Malta. In order to reach its Kyoto Target EU introduced its emission trading system (ETS) which started in January 2005 (EEA, 2005: 71).

However the aim of reducing GHG emissions in the energy sector also could not be achieved yet. So the report concludes that the implementation process bogged down because "strategies led to protected policy making process with a few immediate outcomes, delaying the formulation of concrete policy proposals (IEEP, 2006: 64)". The report advocates that much time have been lost during the first 6 year of the plan. The implementation process needs new political imputes in all priority areas in order to establish the formulation of concrete policy proposals (IEEP, 2006).

3.1.2. Sustainable Development and EU External Policy

In the EU as soon as Single European Act entered into force, the evolution of environmental policy continued by integrating the environmental requirements into other policy areas such as transport, energy, regional policy, agriculture and industry (Kramer, 2004).

According to 1990 Dublin Declaration of the European Council if the EC used its political, moral and economic authority they would promote sustainable development and solve the global problems. This assumption was tested in United Nations Conference on Environment and Development UNCED (Libaretore, 1997). During the negotiations of UNCED from 1990 to 1992 the EC represented a leading role on the climate change issue at first time. Today it has a forcing power on the Climate Change issue especially on reduction of GHGs. Moreover despite the US opposition the EU has still been playing an active role in the OECD forums to stabilize and reduce the CO_2 emissions.

Related to its complex legal provisions regulating its external responsibilities it does not have an exclusive competence in the environment field so it has serious problems in extending its role beyond the Member States. In fact EU policies and their external dimensions interact with each other. Impact of its policies in the member states, in its neighbourhood and international community are all interrelated (Libaretore, 1997: 207). Despite all the difficulties EU has been playing visible and vital role by influencing environmental outcomes. EU's representative role in international arena increases related to certain interpretations of subsidiarity. On the one hand it seems that EU may not establish a stronger Federal Europe on the other hand it is clear that EU have a great ability to continue its bridging role between the domestic and international environmental policies (Libaretore, 1997).

To illustrate Johannesburg Summit provided the EU with the opportunity to extend its commitment to the principle of sustainable development which differentiates it from other actors, into the WSSD and to the world stage (Lightfoot and Burchell, 2005). In areas such as energy, climate change and biodiversity the EU had difficulties to convince other actors. Despite the US pressure, the EU pushed strongly for a target of halting and reserving the current loss of natural resources and biodiversity by 2015. It was very difficult for the EU to achieve the targets alone. However EU showed some success with Canada, Chine and Russia in Johannesburg (Lightfoot and Burchell, 2005).

EU has therefore become a normative power by promoting concerns for sustainable development at the global level. It followed a concrete progress towards

sustainability related to its leading role. First sustainable development was integrated as a norm in its decision making process. Member states and the EU started to share the competencies in many areas connected to sustainable development (Lightfoot and Burchell, 2004). Second EU has started to give more importance to external dimension of its environmental policy. EU therefore showed great effort in Rio and WSSD to enhance international environmental cooperation. EU also tried to play a mediating role, bridging the gap between the developing countries and US (Lightfoot and Burchell, 2005).

Since the 1992 Earth Summit poverty has been deepening and environmental degradation was getting worse. In light of that manner UN General Assembly stated that the world needed a summit of actions and results rather than a new physical or political debate. What they needed were some realist targets especially to achieve sustainable development. Thus in Johannesburg they established some new targets to "reinvigorate sustainable development activities in the wake of deepening and poverty in environmental degradation (Weiss *et.al*, 2004: 276)." These targets can be listed briefly as: eradicating poverty particularly in developing countries and promoting social and human development, developing national programmes for sustainable development, increasing food availability, improving energy services for sustainable development, decreasing the number of people without access to basic sanitation by 2015 (UN, 2002). Moreover they declared their will to fight against "the worldwide conditions that pose severe threats to the sustainable development" the people (UN, 2002: 3). Chronic hunger, malnutrition, natural disasters are considered within among these threats (UN, 2002: 3). Although Johannesburg was an important Summit in terms of improving sustainable development practises, some criticisms were raised against its structure especially by the environmental NGOs.

As can be seen form the aforementioned considerations, implementation of sustainable development is not an easy task. However political will and international cooperation are the key factors to shape the sustainable development in the world in the years to come.

3.2. The United States: Instability in Environmental Policy and Sustainable Development

Recent events clearly indicate that human health and economic considerations are the most important determinants of the US environmental policy (Harris, 2001). They are not only distinctive considerations to explain the current US position but they were the primary motives in the evolution of its environmental policy. Moreover US in most cases sticks to the wait and see approach; it waits for other countries' reactions to international environmental challenges then supports international negotiations if those reactions do not "limit freedom of action for US business" (Harris, 2001: 18). Briefly US environmental foreign policy always strongly protects the national interests. In other words when the global environmental concerns become part of the US interests the US undertakes the leading role. Otherwise US opposes any international measure especially if the international environmental agreements require transfer of the funds to developing countries (Harris, 2001).

3.2.1. Tendencies in US Environmental Policy

Apparently US environmental policy has not followed a regular pattern but it rather showed changeable trends so far (Vig and Kraft, 2006). According to Kraft and Vig, US even could not achieve a "steady improvement in human relations with the natural environment (Vig and Kraft, 2006:9)". Hence it is better to categorise US environmental policy in two political tendencies depending on the nature of change in American values and the short term political and economic priorities (Vig and Kraft, 2006: 9).

The deep trend with regard to environmental policy dates back to Post World War II era and points out major changes in values. These changes emerge from the shift to post industrial society in US (Vig and Kraft, 2006: 10). Since the quality of life became an

essential feature in the lives of ordinary people environmental considerations gained more importance. Furthermore with the changing understanding of national security, environmental issues were being more and more integrated into decision making structures and also in economic policies. Therefore the implications of US environmental policy became more visible in the international arena parallel to the increasing environmental awareness which was marked by international meetings such as Stockholm Conference (Vig and Kraft, 2006).

Accordingly sustainable development as in the rest of the developed countries started to gain priority for the US as well. Kraft and Vig further argued that integration of environmental issues with major political social and economic considerations became noticeable at the 1992 Earth Summit and so the concern about sustainable development (Vig and Kraft, 2006:10). However the US attitude at the 1992 Earth Summit in Rio clearly showed that it was hard to change traditional, economic social and political values as well as the national security perceptions.

At this point it will be helpful to look at the other tendency in US environmental policy which is called as the shallow political trend by Kraft and Vig (Vig and Kraft, 2006). Short term economic and political priorities and considerations have the potential both to strengthen public opinion on environmental protection and to weaken environmental considerations of the society for a period of time (Vig and Kraft, 2006).

All in all there are certainly many actors that influence and shape US environmental policy and these political tendencies. These are mainly the US constitution, the Congress, party affiliation, the president and executive branch agencies, the courts, public opinion, business interests, NGOs, science and scientists, economics, trade and economists, international organisations and foreign governments and global forces (Harris, 2001).

The stance of United States has a big importance on global environmental sustainability. As the politically and economically strongest state it has a driving force on international environmental protection (Falkner, 2001: 157) For instance US took its place on the Montreal Protocol to protect the ozone layer (Falkner, 2001). Evolution of the ozone

regime widened from local to national and to international level particularly with the leading role of the US. According to Sitaraman different factors such as scientific findings, the active involvement of the atmospheric scientists in ozone politics, efforts of international organizations as UNEP and the leadership role of the United States directed the Montreal process. Montreal protocol which came into force in 1987 built new control measures to regulate the ozone depletion substances. Furthermore regular annual meetings have been held to observe the process. They also adjusted the emission targets and enlarged the list of emission substances owing to regular meetings (Sitaraman, 2001).

3.2.2. US Administration and Environmental Policy

US has a great economic and political power. Therefore without the US support international efforts on environmental problems would be fruitless. However US is also an enormous polluter; on the other hand it has huge technological, financial and politic sources. According to Harris if the US meets the demands of developing countries it would promote ethical goals with regard to environmentally sustainable development (Harris, 2001). US has to realise that global environmental problems such as the climate change and ozone depletion can easily and directly affect the US interests. Furthermore some other local environmental problems such as the acid rain can also affect the US economic, political and security interests. In other words all challenges would threat badly to American people too. It pollutes so much therefore it has to become a part of the seeking of international solution (Harris, 2001).

On the other hand the US sometimes uses its veto power as done in the climate change and biodiversity international agreements. The US manner is generally related to changing ideological orientation at the presidency (Falkner, 2001:158).

For instance during his presidency from 1977 to 1980 President Jim Carter called attention to the to carbon dioxide problem. Ronald Reagan who was the successor of Carter did not appreciate climate change issue. Regarding to heat waves which hit North America in summer of 1988, it was the first time that political agenda inclined global warming. Then NASA scientist James Hanzen criticized the waffling around scientific uncertainty and he stated that "the severe weather was not a chance event (Agrawala and Andresen, 2001)." Following his comment an international conference was realised in Toronto to remind the "historical responsibility of industrialised countries in causing the problem of climate change and called upon them to take the lead by cutting their emissions of carbon dioxide by %20 from 1988 to 2005 (Agrawala and Andresen, 2001)." In the Carter-Reagan Administration environmental policy realised under the framework of Montreal protocol (Falkner, 2001:158). Government regulations were reduced and responsibilities shifted to states and private sector. Budget cuts were realised. The most significant developments of his presidency were strengthening of the Resource Conservation and Recovery Act (1984), enactment of the Superfund Amendments and Reauthorization Act (1986), the Safe drinking Water Act (1986) and the Clean Water Act (1987) (Vig and Kraft, 2006) .

When George H. W. Bush became the president he was more desirous than Regan to adopt a more positive environmental policy into the 1990s. Regarding to his desire he called for Clean Air Act Amendment of 1990 (Vig and Kraft, 2006). On the other hand during the Bush administration actions on environmental issues were taken because of both ideological and economic reasons (Vig and Kraft, 2006). When Bush became the president of the US from 1989 to 1992, he was reflected as a very environmentalist president. In fact US position on climate change issue was sceptical. Even the US was the lasted to sign some agreements and to take some measures which have been already taken by the other states. On the other hand the EU has been setting targets and timetables for the developing countries. Even US with Japan and Soviet Union opposed EU leadership. US encouraged national strategies rather than binding commitments. Some formal regulations and Plans on Protection of Wetlands and Arctic Wildlife Refuge were passed in the second half of the Bush Administration. Another refused issue was the financial aid to developing countries. US was not willingness on that issue too (Agrawala and Andresen, 2001).

Two presidential terms are significant for the climate change issue. One is Clinton Gore Administration which encouraged the Kyoto Protocol. Second one is the Bush Administration which dragged the US withdrawal of Kyoto Protocol.

3.2.2.1. Clinton-Gore Administration and the Kyoto Protocol

Clinton-Gore administration took over after Bush administration between 1993 and 2000. At the beginning they established a British Thermal Unit (BTU) Plan which based on the heat content of fuel. Then Clinton Gore Climate Change Action Plan (CCAP) entered into force in 1993 (Agrawala and Andresen, 2001). In that plan their way to reduce the greenhouse gas emissions was more 'carrot than stick'. Hence the climate change issues became a political issue. On the other hand in 1996 climate change was not a political issue related to 1992 presidential elections, heat waves and the Earth summit. In 1997 at the second term of the Clinton – Gore administration international negotiations were heading towards an agreement and "climate change regime approached the negotiation of a binding protocol (Agrawala and Andresen, 2001)."

However US opposed to short term binding emission reductions till 2010. US also wanted flexibility about reduction of emissions. About the Kyoto Protocol Clinton agreed to achieve 1990 levels of green gas emissions by 2008-2012. This was assumed as a more modest manner contemporary to CCAP. But still US was not willing about short term targets and indeed EU became a leading actor in the climate talks. US continued to refuse EU targets about cutting emissions by 15 % of 90 levels. In the end Gore visited to Kyoto in 1997 and they had a consensus agreement on Kyoto Protocol. According to that agreement, US did not only accepted to cut its greenhouse emissions by 7% from 1990 levels by 2008-2012 but also amalgamation of 6 greenhouse gases instead of three.

Clinton Administration also built a pro-environmental policy programme. Clinton Administration also had progress at international level areas such as the climate change and biodiversity (Falkner, 2001:158). Different from Reagan he reinvented government to

make it more efficient. Clinton was praised by several environmental groups, on the other hand he was criticised because of reversing Reagan Administration (Vig and Kraft, 2006). After the Kyoto negotiations, US played a more market based role again (Agrawala and Andresen, 2001).

> The US market based approach, meanwhile, scored a partial victory with the protocol allowing for emissions trading within the group of industrialised countries that agreed to binding targets (Agrawala and Andresen, 2001).

It seems that under the Clinton-Gore administration environmental policy gained more importance whereas with Bush Administration strategic economic interests especially considerations on fossil fuels and security interests dominated both its domestic and international agenda and environmental concerns were overlooked.

3.2.2.2. Bush Administration and Withdrawal of US from Kyoto Protocol

The stance of Bush Administration was significantly different from the Clinton Administration. As a Republican President he wanted to present party's core constituencies and also industrial corporations. Moreover he wanted to present the interests of the timber, mining, agriculture and oil sectors (Vig and Kraft, 2006). Bush administration was also against to some international and domestic environmental policies. The most significant example of that manner is the US withdrawal from Kyoto Protocol (Vig and Kraft, 2006). Even, despite the signature of Climate administration in 1998, Bush administration declined it as a 'dead' protocol (Schreus, 2004: 208). Furthermore during his presidency minimising environmental concerns and some decisions on clean air rules, water quality standards, mining regulation, and protection of national forests and parks were considered as negative developments by the environmentalist. Lastly after the terrorist attacks to Twin Towers of September 11 Bush administration changed its direction sharply away from the environmental politics. Hence primaries of the US changed deeply such as invasion to Iraq in 2003 (Vig and Kraft, 2006). Besides the changing ideologies, interest groups also have

an important influence on American manner. Business plays a central huge role in the shaping of US foreign environmental policy.

> Giving their willingness to cooperate with the administration in creating an international ozone regime, the CFC producers could muster the support of state actors in their attempt to shape the emerging ozone regime to their own commercial benefit. In climate change politics, the fossil fuel industry has been able to create a powerful business front against strong U.S. commitments to reduce green gas emissions, based on its key role in energy protection and industrial manufacturing (Falkner, 2001: 173).

As Falkner explains above US sensibility about environment is restricted by American stakes. US environmental policy related to bargain between the state and the corporate interests in the pursuit of both environmental sustainability, and corporate interests and competitiveness. So the decisions for technical change and global sustainable development seem insignificant factors on US environmental policy. However corporations are not only actors that affect the environmental policy. Environmental and consumer groups also have influence on environmental policy. Regarding to fragmentation and the divergent of corporate sector some industries would have a productive manner on that kind of policy; on the other hand some of them oppose it. So conflict between business groups and political alliances between state actors and corporate interests play an important role on shaping the US environmental foreign policy.

According to Falkner pro-environmental actors gain limited autonomy from business conflict. That autonomy is also supply a power for them to support the international environmental standards. Therefore convergence of environmental concerns creates conditions for the US to become a leader in international environmental politics (Falkner, 2001: 174). Falkner also explains that if the business group gains a power on shaping the international environmental policy the state autonomy becomes limited (Falkner, 2001: 174).

As mentioned before there are some important actors that shapes the U.S. foreign environmental policy. NGOs in that context have big influence on US environmental policy. They never have a direct only effect on the policy. But they have a great influence on it. This influence may appear local to the international or the national to the international or the national to the local rather than bottom up or top down. They generally

have a noteworthy voluble economic power and they can easily direct the policies. They can stand against to state policies, and they can also coordinate bargaining through the establishment of networks (Boas, 2001: 183).

Relating to their financial sources and knowledge NGOs have an ability to affect the decision makers. For Boas NGOs have two level bargaining processes (Boas, 2001). One is their bargaining leverage must be used to gain access to the decision making process. And the other one is US can become an important world policy player relating to NGOs effect on the decision making mechanisms. (Boas, 2001) He further argues "It is easy for the NGO community to become blinded by the light of the power, and when it happens, they can propel an important player, in the case the US, into the less constructive role of the veto/blocking state (Boas, 2001: 192)." To achieve its goals on foreign environmental policy US has to be in an equitable manner against to developing countries (Boas, 2001). There are also other actors which shape US sustainable development concerns such as National Oceanic& Atmospheric Administration (NOAA) which was the first federal agency in the United States Government to establish an office dedicated to Sustainable Development[25].

3.3 Environmental Policies of US and EU: Conflict or Cooperation on Sustainable Development

U.S. and the EU are two major actors that affect the environmental development all over the World. With regard to some environmental issues cases EU assumes a leadership role whereas in other cases US pretends to be the leading actor. As studies clearly show there are two periods –the 1960s-mid 1980s and mid 1980 aftermath which

[25] The president council on sustainable development within NOAA was established by president Clinton in 1993 with the aim of advising him on sustainable development and developing new perspectives integrate economic and environmental and equity issues .Please see noaa webpage htpp://www.susdev.noaa.gov/pcsd.html)

well define the similarities and differences between two actors and also the trans-Atlantic environment relations.

For instance from 1960s to 1980s active environmental protection began in both the United States and Europe in the 1960s. However the period of this adaptation have different features such as structural differences in two actors during 1960s (Kramer, 2004). While the US possessed all the constitutional, institutional, economic and political requirements to conceive and implement a coherent and consistent environmental policy at home and abroad, EU was in a quite different position. The EU with reference to its supranational power could only act where the European Community Treaty exactly provided. Another great difference was about their structures because, EU is not a nation state like US; on the other hand different from the US it has a supranational feature. Furthermore the member states' different perceptions and objectives for the European integration influenced the Community decisions too (Kramer, 2004).

Kramer explains the period from the mid 1980s with regard to the active attitude of the EU and the US environment contrary to 1970s. Up to the mid-1980s European Union and the United States enacted their own environmental legislation and both became active in international environmental negotiation (Kramer, 2004)

At the beginning of the 1970s it is generally argued that there is a strong degree of centralization in the adaptation of federal legislation, concerning air and water pollution, industrial permitting, nature protection and soil cleanup policies in the U.S. During the 1970s, the Environment Protection Agency (EPA) and other federal agencies pursued a strong policy of standard setting and enforcement of environmental standards (Kramer, 2004). During the 80s, at the Reagan administration deregulation was started. The regulatory responsibilities of the EPA were limited and measures were taken to give the states greater for regulating the environment (Kramer, 2004). EPA and other federal agencies were started to be conducted by the cost- benefit analyses related to Reagan's Executive Order 12291. So that economic impact assessment requirements and other economic barriers were established to environmental regulations. That is why

environmental concerns remained secondary to trade and economic considerations in US external policy especially in the early 1980s (Kramer, 2004).

On the other hand Kramer points to improvements of the EU. Parallel to worldwide developments of the 1970s, improvements continued in the European Community. From 1975, the first EC environmental directives dealt with waste oils, quality of bathing waters and wastes (Kramer, 2004). Besides the adaptation of product-related provisions and provisions on protection of nature and air quality, Public and political concern in Western Europe was increased related to industrial accidents and the problem of dying forests. When the EC Treaty was amended in the mid-1980s a consensus on a comprehensive European Environmental Policy was occurred. With the Single European Act of the 1987, objectives and principles of environmental policy were laid down (Kramer, 2004). During the 1980s while the US was building economic barriers to environmental policy EC environmental policy was accepted as being independent of commercial and foreign policy. According to Kramer it is an important difference between two actors (Kramer, 2004).

Most of the times EC member states in the name of national sovereignty preferred to be represented by separately on the international scene rather than as a part of the EC (Kramer, 2004). The European Community had responsibilities for commercial matters; on the other hand this competence was disputed by the sovereign member states. EC was represented separately in the international scene. At the international meetings, EC was represented by the environmental directorate General of the European Commission and by environmental departments of the EC members (Kramer, 2004). Therefore speaking with one voice was the problem of the EU (Kramer, 2004). Until 1987 the EC did not have the chance to take part as "a single autonomous body in international environmental negotiations (Kramer, 2004:58)." Until 1985 even all documents on Global environmental conventions could only be signed by states not by regional bodies such as the EC (Kramer, 2004). However with the Convention on Long-range Transboundary Air Pollution (LRATP) this situation was changed for the European Community (Kramer, 2004). Regional Economic Integration Organizations (REIO) were allowed to accede the

multilateral conventions by the European Community initiative. Therefore EC became a party to this Convention (Vogler, 2003:69).

It is clear that after 1981, the US changed its policy and opposed European Community accession to global environmental conventions. Until that time U.S. allowed accession to convention only if two conditions were fulfilled. The first condition was about community competence: The US required that European Community should make "a precise statement on the Community's competence in the subject matter dealt with by the convention in question (Kramer, 2004:59)." However such a precise statement is not always possible for the EC since it does not have a constitution but a founding treaty. Therefore through out time EC competences have evolved and the allocation of competences between the EC and member states is still a dynamic process not a already set condition (Kramer, 2004:59). The second condition of the US was to be fulfilled if the majority of EC member states "had individually ratified the convention in question (Kramer, 2004:59)." Despite the EU position with regard to its competence in international agreements or conventions such as Long Range Transboundary Air Pollution Convention, the US opposition, however, increased after 1981 (Kramer,2004).

When in 2001 US decided to withdraw from the Kyoto protocol, EU found an opportunity to realise the ambition of being a leader (Bang, 2005) The EU became a more influential actor on the climate change policy and as a frontrunner actor it reduced the emissions. EU Member States faced the difficulties and barriers to achieve the targets that were required also legally binding from the Kyoto Protocol. Because of that reason, they needed to have a more co-ordinated climate policy (Bang, 2005). Under those circumstances governments displayed a supportive behaviour for the climate change policy. Moreover they handed an early action consensus by the help of the business and the environmentalist NGOs (Bang, 2005). Emissions also accompanied by moderate population growth and substantial growth in economic output The green NGOs played an important role to confront the EU the challenge of global warming especially at the half of

the 1980s (Bang, 2005). They used their limited sources and they co-ordinated their positions through the Climate Action Network (CAN)[26].

Repudiation of the US from the Kyoto showed that its economic interests did not mach with those environmental concerns of the Kyoto Protocol. Hence logical flexible implementation worked to achieve the protocol. Until the Kyoto the flexible implementation mechanisms were territorial and little explored by the EU (Bang, 2005). The role of the EU institutions was important to inform the countries about the Kyoto mechanisms. For instance EU Commission played a vital role to trigger the social interaction. The knowledge of the member states differed about the Kyoto Protocol. Under the roof of the European Parliament countries increased their information about the mechanisms. For example at the beginning Northern-European counties were doubtful towards marked based instruments and liberal norms (Bang, 2005).

To realise the Kyoto mechanisms, protecting the national economies is very important for the EU. However EU faces some difficulties as slow economic growth, industrial difficulties and the globalizing economy (Bang, 2005). So to realise the target becomes more difficult for the EU. To cope with these difficulties, EU therefore uses 'multi-stage' approach (Bang, 2005).

Clinton administration supported to Kyoto protocol to achieve an agreement on some disputed problems such as full emissions trading, joint implementation and participation by the developing countries. On the other hand it refused the EU on very important issues particularly in developing country commitments and set-country emission targets (Bang, 2005). Contrary to the EU, US was in favour of flexible targets and argued that developing countries should take binding obligations (Bang, 2005).

During the 1990s the US firms were on favour of mitigation of GHGs in the atmosphere. They held campaigns to influence the public opinion. The Global Climate

[26] CAN is a global network and almost 300 NGOs works together to reduce the GHG emissions to ecologically sustainable levels. For further information please see CAN webpage http://www.climatenetwork.org/

Coalition and the Exxon were the supporters of the strategy (Bang, 2005). This moderate construction continued till Bush Presidency. European NGOs tried to have influence both international and domestic climate policy where as US based NGOs turned their faces only international talks, business and consumers as a reaction to their home government (Bang, 2005).

Related to growing population and high rates of economic growth emissions have been increasing during the past couple of decades in the US. However the US should reduce the emissions in a short term as a Kyoto requirement. Rather than reducing the emissions 7% from 1990s, it increased the proportion %18 (Bang, 2005). Therefore in the US the stakeholder groups opposed the Kyoto targets and the time tables (Bang, 2005). Mainly the US industry lobbies were affected by the mitigating policies. Some of them such as oil companies have different strategies to improve the climate change policy although some companies experienced to reduce the emissions. So, they showed that green gas emissions would be reduced without negative economic consequences (Bang, 2005). It is clear the political force is very important to activate the Kyoto mechanisms but Kyoto Protocol was perceived as a burdensome solution by the Bush administration. Therefore it can be argued that US opposition to Kyoto in essence drives from its economic stakes which advocate different bilateral and multilateral cooperation for the climate change negotiations other than the Kyoto Protocol requires (Bang, 2005).

The EU and the US did not only display different positions about the Kyoto mechanisms and future of global climate change but also they showed different attitudes on some other environmental concerns which have important repercussions on investment and trade as in the case of setting Environmental Standards for Export Credit Agencies and Genetically Modified Organisms. Export credit agencies basically deal with sustainable investments. However GMOs are also in a close relationship with sustainable development, since they refer to health of the future generations. Hence it can be argued that different priorities of US and the EU make difficult to realise the worldwide sustainable development.

3.3.1. Environmental Standards for Export Credit Agencies[27]

Export Credit Agencies (ECA) support exports into high-risk markets. They also enable the financing of high-risk transaction and they are very vital "for infrastructural projects with potential environmental impact (Ochs and Schaper, 2005:6)." In the 1990s competitive disadvantage occurred therefore the US tried to internationalise the domestic US regulations by using export credits against its European counterparts (Ochs and Schaper, 2005). Due to US initiative OECD's Export Credit Group was asked to finalize the negotiations on "environmental standards and producers for export Credit agencies with the aim of reaching an agreement (Ochs and Schaper, 2005:7)". As a result in 2001 a draft recommendation on common approaches on environment and officially supported export credits was established (Ochs and Schaper, 2005). This recommendation however created a big dispute. Except Turkey and the US all members of the credit group supported this recommendation. Because according to US, this recommendation disappointed some US goals for binding standards and transparency. Therefore revision of this agreement provided opportunity for the US to emphases its goals (Ochs and Schaper, 2005:7). Since European states were not of the same opinion about the revisions. US benefited from this disagreement of the European states and it pulled individual states to its side (Ochs and Schaper, 2005). Actually negotiations based on two points; one is 'minimum standards for project evolution' and the other is 'transparency of the evolution process prior to coverage decisions (Ochs and Schaper, 2005).' Construction of the standards requires binding implementations for environmental projects. With regard to transparency different states had different implementations so it was argued that such kind of transparency was impassable because of concerns of commercial confidentiality (Ochs and Schaper, 2005:7).

[27] By acting as a public bank some of the ECAs offer better period than the private financers. Some others act as insurers by observing some of the risk. ECAs operate under a public mandate (Ochs and Schaper, 2005).

NGOs were on the stage both internationally and domestically by hoping the ECAs stop the destructive environmental projects and they were active especially on ECAs grew out of the World Bank reform campaign (Ochs and Schaper, 2005). Especially Germany opposed to transparency rules and environmental standards. On the other hand France and the United Kingdom (UK) took their place on the US side (Ochs and Schaper, 2005:8). States which opposed the US proposals demanded flexibility in the provisions. However Because of the lack of unity among European states, United States initiative was accepted (Ochs and Schaper, 2005).

3.3.2 Regulations of Genetically Modified Organisms

EU and the US had different regulations concerning the Genetically Modified Organisms (GMOs). EU had a leading role in developing rules for the GMOs. However the US produces the majority of the GM crops with 66 per cent of the global average (Ochs and Schaper, 2005:9). While Canada, Argentina and Chine are following US with high averages whereas the EU with the rest of the world produces only 1 percent of the global average (Ochs and Schaper, 2005:9).

EU took an important step to internationalise the precautionary principle in the Cartegena Protocol of 1999 on Biodiversity with regard to GMOs. The Cartegena Protocol caused a transboundary movement in living modified organisms (Ochs and Schaper, 2005). On the one hand it requires preservation of the natural biodiversity on the other hand it does not regulate GMOs in food products (Ochs and Schaper, 2005). Although US does not support the Protocol, it considers the precautionary principle.

The European regulatory process on the GMOs caused a transatlantic conflict. The main reason of this tension derives form different perceptions of the GMOs. While the US sees them harmful, most countries think that they may carry a risk (Ochs and Schaper,

2005). Therefore they including the EU ask for mandatory labelling of such foods. However the US is against such a mandatory labelling and sees it as a trade barrier. Voluntary labelling is the way that the US prefers with regard to GMOs.

Concerning the GMOs, European Union was successful in internationalization of its regulations on GMOs contrary to the Export Credit Agencies case. Precautionary principle in the Cartegana Protocol was evolved in line with the EU standards rather than US risk assessments (Ochs and Schaper, 2005:11). On the other hand The US influence on the regulations of the EU was very limited (Ochs and Schaper, 2005).

3.4. Conflicting views on Global environment and Sustainable Development

Among all the transatlantic environmental differences, the greatest disagreement between US and the EU emerged due to issue of climate change (Ochs and Schaper, 2005). From time to time they both worked for the recovering of climate change problem. At the beginning U.S. was considered as a potential leader to reduce the greenhouse gas emissions. But it did not come true. The US defiantly opposed to timetables for emissions and the specific targets. US also opposed to a global climate change fund and the technology transfer from rich countries to poor (Ochs and Schaper, 2005). The EU emphasised the importance of the political will and the urgency to the contrary the US demands. Moreover US also refused the flexible reduction targets while the EU demanding binding ones such as the Kyoto protocol requires (Ochs and Schaper, 2005). According to US, EU effort to reduce the emissions was not more than rhetoric. Even the international commitments are assumed as targets to be achieved by the EU. The US also criticised heavily the reports of and role of IPCCC as the main scientific actor whereas the IPCC findings were considered as the basis for political action by the EU (Ochs and Schaper, 2005: 13). Once again their differences on the precautionary principle played an important role creating a transatlantic disagreement on environment.

For the US, EU insistence on binding targets would make the Kyoto Protocol so costly that US could not achieve without imposing expensive domestic environmental standards. Moreover via such policies the EU would impose the US to adopt its environmental policies (Bodansky, 2003; Ochs and Schaper, 2005). Despite the US opposition, the EU managed to dominate the negotiations and in the end the Kyoto Protocol had binding emissions targets and IPCC continued to be "the primary scientific authority (Ochs and Schaper, 2005: 14)". There are three interlinked consequences of the European leadership for the climate change policy (Ochs and Schaper, 2005). First despite the US opposition EU built some binding targets for the industrialized countries. This position caused an important authority for the EU over the climate change policies. Second result is the EU became a unifying actor for the climate change policy because of the US rejection of the Kyoto Protocol. Last result is that EU gained a great success by convincing the Russia and some other countries to ratify the Kyoto Protocol (Ochs and Schaper, 2005).

Divergence between US and the EU was apparent only in the governmental level but also in the public opinion. For instance from European perspective precautionary principle is more important for European people, because, they prefer taking action when the scientific evident is uncertain. Europeans are more obedient on governments' intervention, so they accept the environmental regulation easier than American people. According to public opinion polls and individual attitudes it seems that Europeans feel more responsibility for future generations than Americans feel. Therefore environment is not only an economic issue; it is also a moral standpoint for them. Europeans also seem more sensitive about developing countries. However this might be related with their colonial past and would be considered an apologetic attitude (Bodansky, 2003). However such perceptions can also considered as stereotypes. For instance some other surveys demonstrate that Americans also show consideration for environmental protection at least as much as Europeans do (Bodansky, 2003: 64).

Another difference also derives from the ways they respond to the climate change. In the climate change negotiations regarding to Clinton administration technology would solve the problem; on the other hand EU advocated that technologic development was not enough to struggle with climate change, so people had to change their life styles too.

> The US argued that if emissions can be reduced more cheaply in India or China than in the US, then the US should be able to buy emission reductions from abroad rather than making the reductions at home. In contrast Europeans tended to see the emissions trading debate as, in part, a moral issue arguing that people in rich industrialised countries need to change their way of life, rather than being permitted to buy their way out (Bodansky, 2003: 64).

Surprisingly despite Europeans' more environmentalist stances, in some issues US seems more precautionary such as food safety controls, smoking, highway safety, child product safety (Bodansky, 2003). Another historic difference is that while EU have been used to multilateral relations, the US have been take more bilateral decisions, such as US withdrawal from the Kyoto Protocol with regard to Bush Administration. Despite its general bilateral tendency it some times involved some multilateral agreements about production of biotechnology and ozone layer. In fact that shows us political preferences make great differences on US policy (Bodansky, 2003).

In Bush Administration environmental policy never gained a big importance on US policy agenda. Economic and energy stakes of the US have always set the priories in its political agenda. Simply in contrast to the EU, environmental issues so far could not become so powerful to challenge the supremacy of its economic interests (Bodansky, 2003).

1992 Earth Summit is the first time that EU and US sat around the same table to struggle climate change. But 15 member states of the EU supported the Kyoto Protocol and the Framework Convention on Climate Change; the U.S. opposed the Protocol. UNCED underlined the need of the action on environmental threats and on the worldwide implementation of sustainable development. So the political negotiations started with the UNCED (Lankowski, 2004). As stated above for the European Union precautionary principle has very much influenced its environmental policy. In contrast US have been on the side of the market based mechanisms for pollution control and cost-benefit analyses. During 1980s US efforts to struggle the ozone depletion turned US into the leader country on that issue. On the other hand it lost that position during Kyoto negotiations. With especially its withdrawal of the Kyoto, EU became the leader of the limate change issue (Lankowski, 2004). Moreover European industries also did not refuse the reduction of the

emissions as Americans have always done. While Europeans coming together to set an environmental agenda, Americans set individual agenda (Lankowski, 2004). European environmental agenda certainly depends on some guiding documents such as Single European Act, Treaty on European Union and Amsterdam Treaty. These legal documents encompass precautionary principle and sustainable development. On the other hand in US "there is not any development plan or general vision assigning a specific role to environmental desiderata (Lankowski, 2004: 337)."

Particularly after 9/11 terrorist attacks to Twin Towers and Pentagon US directed to its focus on c security issues. This however provided a great opportunity for the EU to assume a global leadership on environmental issues as well as more responsibilities to enhance international environmental cooperation (Bodansky, 2003).

IV. EU AND GLOBAL CLIMATE CHANGE: LEADERSHIP IN SUSTAINABLE DEVELOPMENT

The principal basis for the EU to combat climate change as a global actor, since the Protocol forces the states to reduce the greenhouse gas emissions is certainly the Kyoto Protocol. Under the changing conditions sustainable development, mitigation of climate change and adaptation strategies are global issues that EU deals with a great importance as a global environmental actor. Moreover post Kyoto process presents a vital importance for the sustainability concerns of climate change negotiations. Besides under the framework of post Kyoto negotiations the issues of intergenerational and intragenerational justice gain primacy and force the EU to focus more on its external environmental policy.

4.1. Global Climate Change Regime and the Role of the EU

Climate change is a global problem therefore it requires global action. According to Article 1 of the United Nations Framework Convention on Climate Change (UNFCCC) climate change is closely related with the human activity (UNFCCC, 1992: 3).

The only negotiations which require concrete and binding actions on climate change especially for the industrialised polluters came into force with the Kyoto Protocol. The Kyoto Protocol mainly presents several binding measures for the participant countries to act globally. Its first period begins in 2008 and it ends in 2012. Different from Kyoto Protocol there are also several activities among countries such as the Asian and Pacific Partnership Agreement for Clean Development and Climate (APPCDC) and, the action programme for climate protection which was agreed at the G8 Summit in Gleneagles (EurActive, 2007). They all aim to facilitate global action to cope with the global climate change. However among them only the Kyoto Protocol presents a broader framework for worldwide solutions.

The role of the EU in the Kyoto Protocol shows its "self-representation as a norm entrepreneur" especially with regard to Russian ratification (Scheipers and Sicurelli, 2007:447). In brief "global warming policy also provides evidence that the EU is shaping its identity in opposition to the US (Scheipers and Sicurelli, 2007:447)." Hence regarding to global climate change issue EU builds its identity with reference to multilateralism, a commitment towards international law and the instruments to achieve its goals (Scheipers and Sicurelli, 2007:447). Moreover regarding to global climate change problem 'differentiated binding' targets are significant with the sustainable development in the EU whereas US has been keen on only economic and voluntary stakes. EU also represents itself as the "promoter of universal values on a global scale. (Scheipers and Sicurelli, 2007:451)" According to EU, US mostly interests in 'state sovereignty' and 'domestic economic and security' issues (Scheipers and Sicurelli, 2007:451).

4.1.1 Relationship between Sustainable Development and Climate Change

Recent studies show that human activities such as burning fossil fuels (i.e., due to transportation and energy production) contribute to the climate change to a great extent (EEA, 2004). Particularly after the industrial revolution, the level of greenhouse gas concentrations has been increased by %34 (EEA, 2004:6). The rise of global temperature reached approximately to 0.7 C over the past 100 years. 1998 was considered as the warmest year all over the world.

The level of increase in Europe since 1900s (0.95 C) point out that rise of temperature in Europe is more than the global level (EEA, 2004:6). Because of the global warming glaciers in the European Alps lost approximately one third of their area from 1850 to 1980. (EEA, 2004:4). The sea levels around Europe have been increased in the past century although the rise of the sea levels has been declined by between o.8 mm/year and 3.0 mm/year in the past century (EEA, 2004:7). Moreover due to the climate change populations of plant species in both northern and the southern Europe have been stressed.

Annual river discharge also has changed over the past few decades across Europe. Thus climate change is also a huge threat to human health, environment and several sectors of society in Europe (EEA, 2004:79).

Several new policies on climate change, energy security and sustainable development have triggered the reduction of GHGs in different sectors and in different countries. However International Panel on climate Change (IPCC) Fourth Assessment Report of 2007 states that current climate change mitigation polices and sustainable development related policies such as transportation and agriculture are not enough to prevent the high growth of GHGs in the atmosphere (IPCC, 2007).

In recent years it has been realised that climate change policy is in close relation with some other policies too such as biodiversity, human health, water, stratospheric ozone depletion. Attributable to this growing awareness the urgent need for reviewing the policies such as deforestation and use of environmental taxes are ever increasing. Subsequently all these developments put the search for "sustainability" and "sustainable development" under the limelight once again. In that context UNFCCC calls for the world wide sustainability in its Article 2.

> .....stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to economic development to proceed in a sustainable manner (UNFCCC, 1992: 4).

Many developing and industrialized countries ratified the UNFCCC by accepting climate change as a huge threat. After the UNFCCC the Kyoto Protocol was opened for signature in 1997 with the aim of reducing the greenhouse gas emissions %5 for all countries between the years 2008-2012. In order to achieve that aim renewable energy and energy efficiency should be substantially improved. Technological developments, market penetration strategies and provision of price incentives have to be accomplished by a transfer of capital and technology to developing countries. In that "transformation of global energy systems" plays an important role providing "access to sustainable energy for people in developing countries, which is a UN millennium development goal (EEA, 2004:16)."

EU and national policy targets have been set for future substantial reductions of greenhouse gas emissions and for a tolerable to reach such targets, further strategies and policies are needed to achieve more sustainable development in relevant sectors of society.

UNFCCC called all participants for the reduction of the greenhouse gases by and set the milestones of the Kyoto Protocol. Article 3 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change aiming to reduce 5% of the emissions compared to 90 levels between 2008 and 2012 gives great responsibility to all industrialised countries, especially to the EU members (UN 1998:3).

In brief the EU and the other Kyoto Participants deal with not only Kyoto Process but also Post Kyoto era for the sustainability of environmental protection. Hence for the Post Kyoto process mitigation of the climate change and adaptation strategies gain importance increasing more and more. While participants of the Protocol are working to reduce the emissions, 'justice' related issue and getting under the limelight. At this point there are two types of justice on the international agenda, intergenerational and intragenerational. Intragenerational justice refers to equity among different sectors while intergenerational justice refers to equity between generations

It is clear that all Kyoto and post Kyoto processes aim to achieve sustainability of environmental protection by combating climate change. UNFCCC which is the first step of the Kyoto Protocol recognises that all countries especially developing ones need to account the possibilities for achieving greater energy efficiency and control greenhouse gas emissions in order to achieve sustainable social and economic development (UNFCCC, 1992:3). Despite the different explanations of the sustainability, in general it "refers to the viability of socially shaped relationships between society and nature over long periods of time (Becker *et.al*., 1999:4)." Therefore environmental sustainability is about the social issues such as social justice, gender equality and political participation (Becker *et.al.*, 1999). Sustainability certainly requires social development by referring the changing needs of the future generations. In that sense according to sustainability natural environment is as important as market economy (Becker *et.al*., 1999). Thus environmental sustainability is about all interrelated relationship between economic, social and political issues. Therefore

"sustainability implies that economic processes are subordinated to social and ecological constrains (Becker *et.al*., 1999:5)." In that context "intragenerational social justice, equity in gender relations and democratic participation in decision making processes" gain importance for the "distribution of natural resources and services (Becker *et.al*., 1999:5)." However international cooperation is required to provide the overall sustainability throughout the world. Epistemic communities therefore play an important role in establishing and enhancing the international environmental cooperation. In the case of climate change, the reports of the Intergovernmental Panel on Climate Change (IPCC) have important implications on raising the worldwide consciousness and on inter (national) policies and negotiations.

4.1.2. International Efforts to Combat Global Climate Change

Intergovernmental Panel on Climate Change (IPCC) was established by World Meteorological Organization (WMO) and United Nations Environment Programme (UNEP) in 1988 involving all WMO and UNEP members. Its main aim is to present risks of human included climate change concerning with scientific and technical basis. Furthermore IPCC evaluates its potential impacts and options for adaptation and mitigation rather than monitoring or carrying out climate related data or parameters. IPCC have been published four reports which points the impotency of scientific uncertainty in climate change.

First assessment report in general supported the studies of UNFCCC. Second assessment report is concerned to be provided the necessity of an urgent action at global, national and regional levels to reduce the greenhouse gas emissions. Then third assessment report was prepared about "the scientific, technical, environmental, economic and social aspects of the mitigation of climate change (IPCC, 2004:8)" Results of the fourth assessment were announced in 2007. Finally fourth assessment report of the IPCC emphasises "a comprehensive treatment of water, sustainable development, technology and

the integration of mitigation and adaptation (IPCC, 2004:1).” Depending on the scientific findings a framework convention was prepared and opened for signature in 1992 Rio Summit (The Earth Summit). Therefore 1992 United Nations Framework Convention on Climate (UNFCC) is considered as the first step towards the stabilization of atmospheric concentrations of GHGs. Then with the 1997 Kyoto Protocol it was agreed on the reduction of the greenhouse gas emissions.

4.1.2.1 United Nations Framework Conference on Climate Change (UNFCCC) and Sustainable Development

During the 1980s scientific communities underlined that the greenhouse gas emissions engendered global warming by threatening the human health and environment. With regard to scientific studies policy makers established Intergovernmental Panel on Climate Change (IPCC). The panel realised in 1988 by the only participation of UNEP and World Meteorological Organisation (WMO) members. It was the first time that the risk of climate change reported. Then in 1992 the representatives from all over the world convened in Rio Summit and agreed on the establishment of a Framework Convention on Climate Change. Therefore in 1992 UNFCCC was opened for signature to reduce the greenhouse gas emissions and to deal with the temperature increases all over the world. Two years after in 1994 it was ratified by 189 states then it entered into force on 21 March 1994[28]. In Article 2 the objective of the Convention states that “to achieve stabilization of greenhouse gas concentrations in the atmosphere at a low enough level to prevent dangerous anthropogenic interference with the climate system (UNFCCC, 1992:4).”

Under the Convention governments have a chance to share their information about greenhouse gases and their best practises on the issue. Moreover they share national

[28] There have been 190 member states and 6 observer states UNFCCC members. For further information please see UNFCCC page: www.unffcc.org

strategies and provision of financial and technologic support to developing countries. Governments also cooperate in preparing for adaptation to the impacts of climate change (EEA, 2004).

UNFCCC underlines the fact that warming of the Earth's surface is closely related with human activities which have been substantially increasing the greenhouse gas emissions since the industrial revolution. In order to achieve sustainable protection of the global climate for present and future generations, states need to establish effective environmental cooperation. The Convention therefore states that the widest cooperation is necessary to stabilize the GHGs emissions (UNFCCC, 1992). Hence it calls all countries to be gathered under the same umbrella to realise shared but differentiated responsibilities.

To achieve the objectives of the Convention states agreed on several principles such as protecting the climate system for the benefit of present and future generations in addition to their common but differentiated responsibilities, and precautionary principles which should be taken to mitigate the negative effects of the climate change (UNFCCC, 1992:4). However among all the most important principle is about the necessity of promoting sustainable development. In the Convention it was stated in Article 3 that "policies and measures to protect the climate system against human-induced change should be appropriate for the specific conditions of each Party and should be integrated with national development programmes, taking into account that economic development is essential for adapting measures to address climate change (UNFCCC, 1992: 4)." States also committed to promote sustainable management to protect the reservoir[29] of GHGs which was not controlled by Montreal Protocol.

In Article 4 of the UNFCCC, parties require to take actions related to funding, insurance and the transfer of technology to specific groups of countries which are most vulnerable to climate change as

> the small islands, countries with low-laying coastal areas, countries with arid and semi-arid areas liable to forest decay, countries with areas prone to natural disasters, countries with areas liable to drought and desertification,

[29] In article 1 of the UNFCCC the word 'reservoir' is defined as "a component or components of the climate system where a greenhouse gas or precursor of greenhouse gas is stored. (UNFCCC,1992: 4)"

> Countries with areas high urban atmospheric pollution, countries with areas with fragile ecosystems; including mountainous eco systems, countries whose economies are highly dependant on income generated from the production processing and export and/or on consumption of fossil fuels and associated energy-intensive products, and landlocked and transit countries (UNFCCC, 1992: 8-9).

Conference of the Parties is the main body of UNFCCC. It is a decision making authority of UNFCCC and observe the implementation of the Convention. It is also responsible for leading international negotiations under the UNFCCC and meets once a year unless there is special request by the UNFCCC secretariat.

In order to make all these arrangements and to facilitate the coordination, a secretariat was established under the UNFCCC. Furthermore a subsidiary body for scientific and technological advice (SBSTA) was also established at the first COP in 1995 to present accurate scientific data and information as well as technical advice to the parties and to its other subsidiary bodies (UNFCCC, 1992:13).

After the UNFCCC, Kyoto Protocol entered in to force in 2005 to cut the greenhouse gas emissions. It is clear that UNFCCC prepared the countries to make action climate change. Therefore by signature of the Kyoto Protocol most of the industrialised countries accepted to take concrete steps through climate change. So they decided to cut the emissions 5% compared the 1990 levels.

4.1.2.2. Kyoto Protocol to the United Nations Framework Convention on Climate Change

Kyoto protocol to the United Nations Convention on Climate Change was adopted at the COP 3 in Kyoto, Japan. All developed countries that were party to the Protocol agreed on the binding emission targets; reduction of their emissions of carbon dioxide and other gases which are CH_4, N_2O, HFC, PFC and SF_6. Under the protocol the countries separated two categories. First category refers to developed countries under the name of

Annex 1[30]. According to Article 3 of the Protocol these countries are obliged to reduce their greenhouse gas emissions by about 5% compared 1990 levels between 2008 and 2012 (UN, 1998).

The second category refers to developing countries by calling Non-Annex 1 countries. Annex 1 countries accepted GHG emission reduction and obligations. They also must submit annual greenhouse gas inventory. On the other hand Non Annex 1 counties do not have any obligation to reduce the GHG emissions. Despite that manner Article 11 of the Protocol underlines that they have to participate in the clean development mechanisms (UN, 1998).

Kyoto Protocol opened for signature in 1997 and it entered into force in 2005. The EU by its fifteen members ratified the paper work at the United Nations in 2002 and became party to the Protocol. Being a party to the Kyoto Protocol means an emission reduction target of 8% from its 1990 emission levels for the EU[31].

According to Article 2 of the Kyoto Protocol in order to promote sustainable development Annex 1 countries have to take some responsibilities such as "enhancement of energy efficiency in relevant sectors of the national economy, protection and enhancement of sinks and reservoirs of greenhouse gases not controlled by Montreal Protocol, promotion of sustainable forest management and international environmental agreements; promotion of sustainable forms of agriculture in the light of the climate change considerations, promotion of new and renewable energy (United Nations, 1998:2)."

Kyoto Protocol also requires that the Annex 1 countries have to reduce the emissions 5.2% from their levels of 1990 between the years 2008-2012 as the first step. The protocol did not involve any obligations for the developing countries. That's one of the

[30] Annex1 countries are Germany, USA, EU, Australia, Austria, Belgium, Belarus, Bulgarian, Czechoslovakia, Denmark, Estonia, Finland, France, England and North Ireland, Holland, Ireland, Spain, Sweden, Switzerland, Italy, Iceland, Japan, Latvia, Lithuania, Luxemburg, Canada, Hungary, Norway, Poland, Portugal, Romaine, Russia, Turkey, Ukraine, New Zelland and Greece (Kyoto Protocol,1998). Non-Annex countries are Germany, USA, EU, Australia, Austria, Belgium, Denmark, Finland, France, Holland, England and North Ireland, Ireland, Spain, Sweden, Switzerland, Italy, Iceland, Japan, Luxemburg, Canada, Norway, Portugal, Turkey, New Zealand and Greece (UN, 1998).

[31] UNFCCC homepage http://unfccc.int/kyoto_protocol/items/2830.php

most important reasons why the Bush administration did not ratify the protocol. However US rejection also created an obstacle for the Kyoto Protocol related to protocol's request of "ratification by a number of states which together account for at least 55% of the 1990 GHG emissions" to enter into force (Perlot, 2005: 1). Under this situation after US withdrawal Russian ratification became necessary to achieve 55% proportion (Perlot, 2005:1). All these developments caused a great time lag for implementation of the emission targets and mechanisms that were brought under the Kyoto Protocol to mitigate the global climate change.

Kyoto Protocol refers to three kinds of mechanisms which are named joint implementation (JI), clean development mechanism (CDM) and international emissions trading. According to joint implementation mechanism developed countries work together in cooperation to reduce the GHG emissions. Regarding to CDM a developed country can achieve its target but at the same time the project activities must be hosted by a developing country whereas international emissions trading provide a kind of carbon market. In other words;

> International emissions trading allows countries that have achieved emissions reductions over and above those required by their Kyoto targets to sell the excess to countries that find it more difficult or expensive to meet their commitments (EEA, 2006: 30).

EU-15 plus The Czech Republic, Estonia, Slovakia and Slovenia took some recommendation about their intended process to Kyoto Mechanisms from European Commission.

During the assessment of first national allocation plans which cover the years between 2005-2007 EC stated advancement of financial and institutional preparations for the use of Kyoto mechanisms. According to EC assessments only some EU members could use the mechanisms. While within the EU15 only United Kingdom and Germany decided to achieve Kyoto targets without using Kyoto mechanisms, Greece and Sweden did not taken any legal decision about intending to Kyoto Mechanisms.

The first allocation plans of eight countries -Austria, Belgium, Denmark, Italy, Ireland, Luxemburg, Spain and the Netherlands- proved how the mechanisms of Kyoto

protocol contribute the closure of the gap between GHG projections and 2010 targets. The JI and CDM activities differ among the countries. For instance Austria, Belgium, Denmark, Finland, Germany, Ireland, Italy, the Netherlands, Sweden and Spain allocated resources for the use of Kyoto Mechanisms. Austria, Italy, the Netherlands and the Spain are the largest contributors by allocating EUR 288 million, EUR 1320 million, EUR 600 million and EUR 250 million for the five year period. Hence the total budget which was allocated by ten member states arrived to approximately EUR 2830 million (EEA, 2006). Two European Environment Agency (EEA) countries Norway and Switzerland applied flexible mechanism. Norway promised to acquire around 50 million tonnes of CO_2 equivalents in total for the first commitment period under the Kyoto Protocol (EEA, 2006).[32]

4.2. Strategies to Combat Global Climate Change and Its Effects

There have been two main strategies to combat the climate change in the international era: one is mitigation ant the other is adaptation. Although they differ in their short term targets and their scales (local, regional, global...) they are not mutually exclusive policies on the contrary they complement each other. Furthermore both strategies in essence highlight the inescapable impact of unsustainable consumption and production patterns and offer sustainable life style changes.

4.2.1. Mitigation

According to the Article 1 of the Convention adverse effects of climate change means "change in the physical environment or biota resulting from climate change which have significant deleterious effects on composition, resilience or productivity of natural and managed ecosystems or on the operation of a socio-economic systems or human health and

[32]"Up to a total of 8 MT CO_2 equivalents will be bought by Switzerland for the first commitment through this mechanism (EEA, 2006:31)."

welfare (UNFCCC, 1992: 3).” Thus climate change has a capability to influence to the socio economic systems and human health. So mitigation of the climate change is important for both natural and managed ecosystems.

Given the results of the last scientific findings, mitigation of climate change was seriously discussed in the fourth assessment report of International Panel on Climate change in 2007 as in the previous three reports. In that report mitigation is explained in two potentials: Market potential and economic potential.

> Market potential is the mitigation potential based on costs and private discount rates, which might be accepted to occur under forecast market conditions, including policies and measures currently in place, nothing that barriers limit actual update. Economic potential is the mitigation potential which takes into account social costs and benefits and social discount rates assuming that market efficiency is improved by policies, and measures, and barriers are removed (IPCC, 2007: 7-8).

There have been two kinds of approaches to assess the economic potential of the mitigation, namely, top-down and bottom-up studies (IPCC, 2007). Thus they both create different solutions in the mitigation studies.

> In top-down studies the behaviours of the economy, the energy system, and their constituent sectors are analyzed using aggregate data. In bottom-up studies, specific actions and technologies are modelled at the level of the energy-using, GHG-emitting equipment, such as power-generating stations or vehicle engines, and policy outcomes are added up to find overall results. The top-down approach leads easily to a consideration of the effects of mitigation on different broad sectors of the economy (not just the energy and capital goods sectors), so that the literature on these effects tends to be dominated by this approach (IPCC, 2001:591).

Changes in life styles can contribute the mitigation of GHGs. For instance education and training programmes, usage of mew technologies, urban planning, staff training in industry with documentation of existing practises all can support the mitigation strategies (IPCC, 2007). There have been some kinds of multiple mitigation options in the transport sector, which are faced many barriers such as consumer preferences and lack of policy frameworks (IPCC, 2007).

UNFCCC also calls the parties to take precautionary principles to prevent the causes of climate change and to mitigate its adverse effects. According to UNFCCC all countries have to formulate and implement and also publish national and regional programmes to mitigate the climate change. Besides mitigation Convention also states that all parties have to establish some projects and measures to adapt to climate change. In that context it points developed countries to assist the developing countries in meeting costs of adaptation to the adverse effects. Adaptation of climate change consequences is also an objective of the Convention (UNFCCC, 1992).

According to the Convention the developed countries adapt national policies which are supported by regional economic integration organisations and also they have to take measures on the mitigation of climate change. For that aim first they have to limit the anthropogenic emissions of greenhouse gases (UNFCCC, 1992: 6).

4.2.2. Adaptation

Despite the reduction of the emissions the climate will continue to change over the coming centuries. Anthropogenic damages on the environment have been resulting climate change for years. These damages have been destroying human health, environment and the society. Despite the all struggles it is clear that their negative impacts will go on years and years. Because of that reason humanity has to prepare and adapt itself to consequences of the climate change. That is why adaptation is very important for the survival of the humanity.

Under these circumstances in order to prevent the environment, society and the economies from the damages that climate chance causes, sustainable development and new adaptation strategies have to be come into force. The participation of the parties to the adaptation process has a vital importance. EEA represents five main reasons about the importance and emergency of the adaptation strategies (EEA, 2004: 79). First one is that the anticipatory and precautionary adaptation is more effective than the last minute

emergency adaptation. Second one is about the unexpected consequences of climate change. Despite the all predictions, some unexpected problems can happen. Related to unexpected and extreme climatic events there is a risky of under-adaptation. Third reason is that the immediate benefits could be gained regarding to better adaptation. Fourthly policies and practises which result ineffective adaptation has to be removed to gain the immediate benefits. Moreover some decisions that reduce the efficiency of the adaptation should be prevented. While climate change threatening the human health, environment, society and economises, it would bring some opportunities too. These opportunities would be realised by the appropriate adaptation strategies (EEA, 2004: 79).

Despite the frequent usage, there isn't any definition of adaptation in UNFCCC. On the other hand it often refers to adaptation. For instance Article 4 of the Convention calls the parties to be in cooperation for adaptation of the impacts of climate change (UNFCCC, 1992: 5). Article 3 of the Convention points the necessity of adaptation with policies, measures to minimize the causes of climate change and mitigate its adverse effects (UNFCCC, 1992: 4). After the Buenos Aires COP 4 recognised some information gaps, and at the COP 5 adopted a work programme "to identify the adverse effect of climate change, the impacts of the implementation of response measures under the convention, the specific needs and concerns of developing country parties and actions related to funding, insurance, and technology transfer to meet these needs (Mace, 2006: 58)." In 2001 Marrakech COP 7 meeting, several decisions on adaptation have been taken under four sections. First one was about the adverse effects of climate change which would be supported by the GEF and other sources. It is also to be supported by a new Adaptation fund under the Kyoto Protocol. Moreover it provided insurance related actions to be discussed at COP8 (Mace, 2006). Second section was related with the implementation of Article 4.9. It involved a work programme for less developed countries (LDCs). Furthermore it creates a mechanism for identifying urgent and immediate needs of the LDCs such as strengthening the national climate secretariats, training of LDC negotiators in negotiating skills and language and preparation, development and implementation of National Adaptation Programs of Action (NAPAs). Third section was about impact of the implementation of response measures and the last one was on further multilateral work related to Articles 4.8 and 4.9 (Mace, 2006). Buenos Aires Decision of the COP 10 meeting

marks a turning point on adaptation. Buenos Aires adaptation Programme of work on adaptation and response measures has been came into force under the four sections as done in Marrakech too. Different from the Marrakech fourth section involves the SBSTA Program of work on impacts, vulnerability and adaptation to climate change (Mace, 2006). Under the framework of fourth section, parties were required to developed five year work programs. However despite the enthusiastic atmosphere in the meetings, concrete action was restricted because of several reasons. For instance developing counties pointed scientific uncertainties in order not to take actions. Furthermore differences in institutional capacity, bargaining power and negotiation skills within the Group 77 and China also emerged (Mace, 2006).

In June 2007 European commission published a green paper about "adapting to climate change in Europe and options for EU action." According to that green paper "Europe must take adapting measures to lessen impacts of current and future warming (EU, 2007)." The green paper states that the deep cuts in GHG emissions are necessary but also taking action for the adaptation of people to the climate change is required to reduce damages from impacts of climate change (European Commission 2007a). According to green paper adaptation means "taking action to cope with changing climatic conditions, for example by using scarce water resources more efficiently or ensuring the frail and elderly are properly cared for during heat waves (EU, 2007)." It also "aims to stimulate a broad public debate on adaptation in Europe, starting with a major stakeholder conference hosted by the Commission on 3 July in Brussels (EU, 2007)." Furthermore the Green Paper establishes four priority actions. These are:

* Early action to develop adaptation strategies in areas where current knowledge is sufficient;

* Integrating global adaptation needs into the EU's external relations and building a new alliance with partners around the world,

* Filling knowledge gaps on adaptation through EU-level research and exchange of information,

* Setting up a European advisory group on adaptation to climate change to analyse coordinated strategies and actions (EU, 2007).

In August 2007, 900 delegates from parties, representatives from intergovernmental organisations, NGOs and members of the press joined "Vienna Climate Change Talks 2007." Necessity of global response and equal importance to adaptation and mitigation have been emphasised by the participants in Austria. Parties also examined the ways for financial support of the adaptation. Thus they discussed the establishment of climate-friendly and climate-proof investments. Furthermore they concluded that Kyoto Protocol's Clean Development Mechanism could trigger industrialised countries to invest in sustainable development projects. During the climate change talks representatives also officially recognised the IPCC indicators to achieve the very low levels of GHGs till mid century of the 2000 to facilitate the worldwide effective adaptation (UNIS, 2007).

4.3. International Talks for Post-Kyoto Era

Kyoto targets have to be achieved in 2012. At that point states need to focus on post Kyoto actions and plans because global warming concerning with climate change is a dynamic process. Therefore negotiations in Montreal and Nairobi mainly refer to the considerations and possible strategies for the Post-Kyoto process.

4.3.1. COP 11/MOP 1 in Montreal

In 2005 COP 11/MOP1 was gathered in Montreal, Canada. This meeting was a landmark in international climate change talks since first session of the governing body of the Kyoto Protocol (MOP) also took place in Montreal by almost 10000 participants from all over the World. Therefore COP 11/MOP 1 in Montreal provided a momentous platform for the participants to discuss the future of the international negotiations on climate change.

Benito Müller described the conference "into two substantive 'tracks': one concerning emissions mitigation, and the other focusing on the other issues primarily adaptation to climate change impacts (Müller, 2006: 1)." Mitigation track involved three 'i's with regard to Canadian environment Minister Stephen Dion. They were called as implementation, improvement and imagination. Implementation referred that Kyoto Protocol targets had to be legally binding. So its adaptation as an amendment was decided at COP/MOP3 in 2007 (Müller, 2006: 2). Improvements required the establishment of clean development mechanisms to make the Kyoto Protocol more operational. Lastly imagination referred to post-Kyoto process "to initiate formal negotiations on industrialised country targets for a period after 2012 (Müller, 2006: 2)."

Second track of Montreal adaptation concerned with how to reduce the adverse effects of climate change through adaptation which is mostly about imagination. Especially adaptation financing was about imagination. Hence Five-year Work Programme on Adaptation was the major outcome of the Montreal. Müller stated that "most important negotiations on adaptation were financial matters, namely the role of the Global Environment Facility (GEF) as an operating entity of the financial mechanism of the United Nations Framework convention on Climate Change, on the one hand, and operation of the Adaptation Fund on the other (Müller, 2006:3)." GEF domestically aimed "to evaluate the impacts of climate change on coastal zones and water resources in different regions of the country, agricultural protection, precipitation patterns, energy system and infrastructure and social-economic sector (GEF, 2003)." In globally it entails "to contribute to the development of country policies that will be part of global efforts to mitigate climate change (GEF, 2003)."

The Dion Dialog which required a future action under the UNFCCC highlighted "long term cooperative action in a number of areas, including sustainable advancement of development goals, action on adaptation and realising the potential of technology and of market based opportunities (Müller, 2006:26)."

4.3.2. COP12/MOP2 Nairobi

Following the Montreal Negotiations, 2006 United Nations Ministerial Conference was held in Nairobi, Kenya. Approximately 5900 parties came together to discuss adaptation and development issues and the ways of mitigation on climate change consequences. In Nairobi parties gathered in two different meetings: "the 12th Conference of the 189 Parties to the UN Framework Convention on Climate Change (UNFCCC), and the 2nd Meeting of the 166 Parties to the Convention's Kyoto Protocol (EU, 2006)." For the adaptation of the developing countries several decisions were taken in Nairobi. Discussions on clean technology implementations for Sub-Africa and other poor regions and future global actions on climate change and the plans for the post Kyoto process - after 2012- were the main issues of the meeting.

4.3.3. Post-Kyoto Era

In the post Kyoto era the necessity of the establishment of a consensus between EU, US, China, Russia, India, Japan and Canada on the climate change issue turns into a urgent priority. At the Kyoto and post Kyoto process EU represented a leading role. On the other hand US withdrawal from the protocol damaged the balance of power within the system and postponed the entry into force of the Kyoto Protocol. This delay then put the ecological efficiency of the Protocol into question. In order to prevent the similar obstacles, negotiations for the post Kyoto era are very crucial.

According to analysis although these countries can establish a new regime, the EU's absolute leading position should be more on the reduction of the GHG emissions. For instance coal is the most polluting energy recourse. In that context the clean coal technology gains great importance. If the large consumer countries such as US, China and India continue using coal sources, coal should be decarbonised. Pollution of mega cities is another problem of especially in China and India. Limitation of the GHGs is not enough for these countries. They also have to be assisted to prevent the urban pollution. They also

have to be assisted less energy and carbon intensive development paths. Another issue is about nuclear energy. Countries have to be in cooperation on nuclear energy developments. Promotion of renewable energy sources also should be supported. Japan and EU can work in cooperation to decrease the oil dependency of other countries (Perlot, 2005).

As a response to European Council's demand, European Commission represented costs and benefits of post Kyoto actions taking into account both economic and environmental consequences in 2005(European Commission, 2005).

4.3.3.1. Intragenerational Justice

Intragenerational Justice encompasses various forms of justice such as social justice, ecological justice, ecological justice and gender justice within the same generation. It should be worth remembering that intragenerational justice can be achieved "within the same time (YOIS and AEGEE, 2003:5)".

Market based valuations and environmental valuation mechanisms are all interrelated especially on the income distribution of individuals. Poor people do not have much choice in a market which asses them in monetary units. "The social acceptability of these valuations depends on the social acceptability of the existent distribution (Padilla, 2002:73)." If a high proportion of society in not living in a quality life, it is wrong to talk about development. Furthermore social justice is very important for the compatibility with a sustainable system. All over the world poverty is one of the most important reasons of unsustainability especially in undeveloped regions. On the other hand rich countries gained prosperity by applying unsustainable ways. Then they caused global disasters such as climate change. Hence rich countries are historically responsible of the ecological disasters which drag humanity under a great risk. Today the studies of sustainable development deal with the solutions of the environmental problems (Padilla, 2002:73).

Several commitments of UNFCCC require participation and public awareness in different sectors. In Article 5 it is stated that parties have to be in cooperation on sectors such as energy, transport, industry, agriculture, forestry and waste management while combating climate change (UNFCCC, 1992:5).

4.3.3.2. Intergenerational Justice

Intergenerational justice "is the justice between two different generations (YOIS and AEGEE, 2003:5)." Intergenerational justice has two dimensions. One is environmental dimension and the second dimension is financial intergenerational justice within the debts (YOIS and AEGEE, 2003). Conversations about intergenerational equity do not only include transition economics, social economy and government budget-making, it is also explored in environmental concerns including sustainable development, global warming and climate change. Intergenerational problems arise related to present actions on economy and ecological capacity. Decisions and actions of present generations impact survival of future generations. Future generations do not have any change to make an agreement with present generations, because they are not living at present. Even they are not represented present. The main question is "who gives present generations the right to impose strong ecological damages on future generations (Padilla, 2002: 72)?"

Traditionally the Earth and its resources belong to present individuals. Hence Present generation has the power about using those resources. At that point the solution is not possible, because it requires an agreement between future generations and present generation. Under these circumstances the only way is the efficient usage of resources. Furthermore the economic efficiency should be realised to increase the life standards of present and future individuals (Padilla, 2002).

While the fossil fuel based industrialization of rich states is continuing destroying to ozone in the atmosphere and the contribution to the global warming will be great increased in all over the world. Moreover as Shue states "if development means

industrialization based on fossil fuel, there is no much thing as sustainable development (Shue, 1995:461)."

Present and future generations are often underlined in the Convention. For instance first principle of the Convention calls the parties to protect the climate system for present and future generations on the basis of equity (UNFCCC, 1992:4). Even UNFCCC "determined to protect the climate system for present and future generations (UNFCCC, 1992: 3)."

In brief sustainability is composed of both intragenerational justice and intergenerational justice indicating three dimensions of sustainability that are ecological, economic and social (YOIS and AEGEE, 2003:6).

4.4. European Union: A Global Leader in the Climate Change Issue

According to Intergovernmental panel of 2007 report the world has been surviving in an accelerating warming. The report states that since pre-industrial era world warmed by an average of 0, 76° C. Furthermore if it continues with that speed the temperature will be able to increase approximately 4° C (European Commission, 2007b). The European Union has been leading a war against to global warming for almost a decade. As the first step EU established Kyoto targets. In other words, at the post Kyoto era, EU points the necessity of a comprehensive agreement to continue combating climate change. To discuss that necessity heads of the governments came together in March 2007 by underlying the leading role of the EU in the combating climate change. They adopted EU Action Plan on Energy to achieve a competitive, sustainable and secure energy system. Moreover they agreed to cut the emissions 30% below 1990 levels by 2020. They also discussed to cut the emissions 60-80% by 2050. So that is clear that EU is not waiting, it is taking action. Even "it is

determined to become a highly energy-efficient, low carbon economy (European Commission, 2007b:9)."

The goal of the Kyoto supporter states is to stabilize the emissions by 2020 and to reduce them by 2050. If the economic costs outweigh it will be difficult to reach the goal, hence EU's position at the post Kyoto process gains importance (European Commission, 2007b).

Climate Change results several damages which influence to Europe in many ways. Some kinds of indicators have been determined such as atmosphere and climate change, glaciers, snow and ice, marine systems, terrestrial ecosystems and biodiversity, water, agriculture, economy and human health. Such as stated in the UNFCCC too the most significant driver of the climate change is greenhouse gases. Therefore EU has been aimed to reduce the GHGs effects which cause global warming as a long term objective. Thus it aimed to limit global temperature rise to no more than 2°C above pre- industrial levels (European Commission, 2007b).

EU Emissions Trading Scheme (ETS) which was established by Directive 2003/87/EC launched in 2005 and it has a very important role to combat climate change. ETS aims "to cover CO_2 emissions from the stationary sources including power and heat generators, oil refineries, ferrous metals, cement, lime, glass and ceramic materials and pulp and paper (EEA, 2006:32)." Moreover it has been supposed to be the "biggest international trading scheme and a key pillar of the fast-growing global carbon trading market (European Commission, 2007b:10-11)."

On the one hand EU began to reduce the GHG emissions; on the other hand emissions from transportation continue to rise. So EU realised that it had to limit transport emissions too. EU also has been requiring the necessity of the reduction in others sectors too. For instance EU underlined that energy use in buildings, methane output from gas engines and nitrous oxide from combustion plants, the use of fluorinated gases and emissions from the agricultural sector would be reduced (European Commission, 2007b).

According to final report which was submitted to UNFCCC in 2007, EU 15 (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, and United Kingdom) decreased the emissions 0.8% (35.2 million tonnes CO_2 equivalents) between 2004 and 2005 years. Hence emissions of GHGs decreased by 2.0% in 2005 compared to 1990 under the Kyoto Protocol. So the report states that in EU 15 countries emissions of GHGs decreased by 1.5% between 1990 and 2005 years (EEA, 2007).

The report also points the decrease of GHGs in EU 27 too. In EU 27 countries (Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxemburg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and United Kingdom) emissions of GHGs decreased by 0.7% (37.9 million tonnes CO_2 equivalents) between 2004 and 2005. Finally the report says that EU 27 emissions of GHGs decreased by 7.9% compared to 1990 levels (EEA, 2007).

The biggest reduction of the GHGs emissions realised in Finland[33], Netherlands[34] and Germany[35]. Belgium, Denmark, France, Luxemburg, Sweden and UK are the other contributors of EU 15 to the reduction of GHGs. In the EU 15 the main sectors which have contributed the reduction of GHG emissions between 2004 and 2005 were "public electricity[36] and heat production, households[37] and services, and road transport.[38]". While

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[33] "Finland reduced emissions by 14.6% or 11.9 million tonnes CO_2 equivalents: emission reductions were mainly due to a substantial decrease in the use of fossil fuels in the production of public electricity and heat mainly due to electricity imports. Coal use, in particular, decreased (EEA, 2007)"

[34] "The Netherlands reduced emissions by 2.9% or 6.3 million tonnes CO_2 equivalents: less fossil fuel was used for the production of public electricity and heat. The household and service sector used less fuel due to a warmer winter (EEA, 2007)."

[35] "Germany reduced emissions by 2.3% or 23.5 million tonnes CO_2 equivalents: a shift from coal to gas in the production of public electricity and heat was one of the main reasons for the decrease in emissions. In addition, emissions from road transportation and from households and services declined substantially (*EEA*, 2007)."

[36] "CO_2 emissions from public electricity and heat production decreased by 0.9% (-9.6 million tonnes) mainly due to a reduction in the reliance on coal (EEA, 2007)."

some countries have been contributing to the reduction some others such as Austria, Greece, Ireland, Italy, Poland and mostly Spain[39] have been increasing their emissions (EEA, 2007). Although the EU seems to show a rather homogenous character due different Member State attitudes, it repeatedly states its determination to deal with the global climate change at different international platforms. The EU through its Climate Change Programme and Green Paper on Adaptation has been preparing itself to take important steps towards the climate change issue and even has important achievements. Moreover its search for low carbon technologies, efforts to integrate the environmental policy consideration into other policy areas, and increasing emphasis on sustainable development in its external policy strengthen its institutional capacities to deal with global climate change and other global environmental challenges. However despite its efforts to push the global climate chnage negotiations and to encourage more developing countries' participation should be supported by efforts to decrease its ecological footprint throughout the world.

Ecologic capacity of the World is certainly not an issue only for US and Europe but also for the big developing countries such as China, India. However, different from the US, China and India have been searching for new sources and innovative ways to achieve sustainable development. For instance In Kerala Indian people have been presenting new ideas on the sustainability of humanity and governance. Besides India, China also has been leading technological development in recent years. In China, for instance several new technologies are being used with regard to shift to the usage of solar energy from widespread usage of fluorescent lamps. Chinese and Indian administrators have been trying to produce new sustainable economic models, mostly, with their widening economies and increasing ecological footprints they have to take urgent measures for sustainable economic

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[37] "CO_2 emissions from households and services decreased by 1.7 % (7.0 million tonnes). Important decreases in emissions from household and services were reported by Germany, the United Kingdom and the Netherlands. One general reason for the decrease is the warmer weather conditions (milder winter) compared to the previous year (EEA, 2007)."

[38]"CO_2 emissions from road transport decreased by 0.8% (6 million tonnes). This is mainly attributed to Germany, and is due to increased amounts of diesel oil driven cars, the effects of the eco-tax and fuel buying from outside Germany (fuel tourism) (EEA, 2007)."

[39] Especially in Spain "the increase in greenhouse gas emissions by 3.6% or 15.4 million tonnes CO_2 equivalents came mainly from public electricity and heat production. This is due to a rise in electricity generation from fossil thermal power stations (17 %) and a decrease in electricity generation from hydropower plants (-33 %) (EEA, 2007)."

development and environmental protection. However western style consumption patterns together with unplanned urban sprawl, inefficient infrastructures and growing population have already caused various environmental problems such as air and water pollution which seriously threaten the well being of people and the ecosystems. Such stresses on the ecosystems however are likely to create large scale environmental degradation which in turn decreases both ecological and social resilience especially in the developing countries of the region. World Watch Institute therefore argues that sustainability should be the main concern for the emerging economies. In fact the rise of China and India is a serious call for people the wakening in all over the world on the issue that everyone should be rather determined creating sustainable economies (World Watch Institute, 2006: 23).

According to Sunita Narain who is the director of Indian Science and Environment Centre, both China and India should not implement the western growing model, because that model can easily destroy these countries (Narain, 2006: XIX). Industrialised countries decreased the impacts of the pollution by huge financial investments and funds. But China and India do not have such a chance. That is why they have to take precautions from the very beginning. Even tough industrialised countries succeed to repair environmental damages in their own cities, they; their life styles, production patterns, their industrial waste, are the main reasons of most environmental challenges such as global climate change which drags the world people in to the disasters. At that point being different from the US, these two developing countries apply new technologies. Although they have been using coal sources for years, in recent years they are both working on biotechnology.

Today in contrast to US, China has been leading the usage of small wind turbines, water generators and biologic gas foundations. Such as China, India also has been supporting the usage of renewable energy sources. The analyses show that they can be the leading actors on the energy issue all over the world in the near future. That scenery forces the EU to be in cooperation with these countries and their neighbours (World Watch Institute, 2006). While EU was applying different norms to achieve the international sustainability US desired to compromise in the Rio text. Lightfoot and Burchell state that WSSD presents “an ideal opportunity to assess the EU’s sustainability within a multi dimensional framework and its and its ability to adapt the role of environmental leadership

(Lightfoot and Burchell, 2005:80)." To become a normative international power EU has the ability to diffuse its norms especially the norm of sustainable development on the world stage (Lightfoot and Burchell, 2005). Moreover Ian Manners argues that sustainable development has become one of the norms of the EU (Manners, 2002). Meanwhile several developing countries also believed the necessity of sustainable development and looked for the support of the EU (Lightfoot and Burchell, 2005). For instance through Partnership and Cooperation Agreements as well as development –cooperation and trade policies the EU can even promote environmental norms to third countries in its close neighbourhood. That's to say while the US become the most threatening actor to sustainable development EU was seem as the only actor who saves it in the eyes of many developing countries. However it is still a big necessity for the EU to reduce its footprint while investing more on energy efficiency and technological innovations for low carbon economy as well as promoting sustainable consumption and production models within and outside its boundaries.

EU also presented a bridging role between the US and the developing countries. Moreover while despite the US refuse the EU se the timetables for the targets. "In areas such as energy, climate change and biodiversity the EU found the task of convincing the other states more difficult. The EU pushed strongly for a target of halting and reserving the current loss of natural resources and biodiversity by 2015, despite the US pressure (Lightfoot and Burchell, 2005:84)." With regard to energy area EU aimed to achieve clean energy and the share of renewable energy sources. The EU planned to achieve renewable energy sources 15 % of the total energy source by 2015. Rather than US pressure the EU afforded to make other major actors such as China, Canada and Russia party to Kyoto Protocol (Lightfoot and Burchell, 2005). Its global actorness on the climate change issue is therefore very significant to establish and enhance sustainability first among its Member states and then to diffuse its norms all around the world. Otherwise equity concerns can not be fulfilled which in turn likely to create unsustainable development patterns even within the EU.

V. CONCLUSION

Environmental protection and prudent use of limited natural resources have significant and even vital role on the continuity of the human life and development. However it is obvious that global importance of environment comes into view whenever environmental degradation hits the highest point and leads to big tragedies. Today due to high degrees of pollution and global climate change people in different parts of world, but especially in developing and less developed countries face large scale disasters. Historically developed countries are responsible for the creation of most of the existing environmental challenges since they overexploited many resources during their development process. Nonetheless not all the developed countries show the same willingness to combat with these environmental problems and listen to the demands of developing countries. They argue for instance as in the case of global climate change negotiations, developing countries have to share the burden of international measures to mitigate the climate change. In response developing countries strive for their right to pollute as the developed nations did in the past. Their claim, however, can not be acceptable given the current state of the global environment. Moreover developing countries part in the climate change and in some other environmental challenges is ever increasing and ending up with more pollution and scarcity problems. Therefore developed countries have to help developing countries to develop in sustainable manners and protect the environment. But first they have to show the willingness to decrease their demand on nature, that's to say, have to invest in sustainable development in all parts of the world.

There are certainly various means to search for sustainability. Although global disasters for the most part forces countries to think on environmental protection and take necessary measures there is an ongoing dilemma on how to achieve environmental protection since the early 1970s not only at the state level and in public but also between environmentalists. Briefly when states face serious environmental challenges, some environmentalists firmly insist on the certain limits to protect the environment while others support the possibility of both environmental protection and economic growth at the same

time. Limits question also constitutes the one of the important aspects of the sustainable development although the latter asserts that environmental protection is not an obstacle for economic development and vice versa. However advocators of ecological modernisation do not talk about any limits. Indeed they perceive the environmental problems as externalities arising from the market failure and struggle to recover this externality problem. Hence the first chapter of the thesis involved different approaches of environmental protection and in particular focused on the historical evolution of the sustainable development with a view to underline the international environmental cooperation. 1972 United Nations Conference on Human Environment was therefore considered both as the first step to introduce the concept of sustainable development into the international relations and as the key international event paving the way for further international cooperation on environment. Participants of the conference for the first time in history warned the counties about continuing global environmental degradation and poverty by giving the message of 'Only One Earth'. Certainly 1972 Conference and subsequent conferences took place with the aim of supporting and finding the ways for practical implementation of the sustainable development. In other words these conferences are the most important steps of the way through the sustainable development. Hence first chapter concludes that sustainable development has been shaped so far by numerous international conferences in which European Union member states also have been taken their places.

Global effects of local activities are very important as in the case of coal-fired plants in Beijing and acid rain in Japan. That certainly causes the internationalisation of ecological systems and problems. Aforementioned mega -conferences have also speed up the internationalisation of environmental policies throughout the world. However each actor has still its own preferences and priorities. Even among the major industrialised actors which shape the global environmental politics and share similar development concerns there are serious differences about how to deal with environmental problems. Yet international cooperation is the essential element for sustainable future. The role of the EU as a leading environmental actor is therefore very significant since its *sui generis* structure presents interesting examples for linking the domestic and international environmental policy making. The EU-US differences on the other hand with regard to environmental

protection in general and sustainable development in particular indicate that many factors affect the evolution of environmental policies along with the development concerns. These factors can be listed briefly as institutional structures, media, scientific communities, interest groups and party politics. Therefore second chapter involved a comparison of global roles of the EU and the US; two major environmental actors' positions in a number of environmental issues. Their similarities and differences in these issues clearly affect the international climate change negotiations. Moreover the disparities among them demonstrate that the post-Kyoto area will be open to new disagreements and even to new transatlantic tensions.

Current data provide evidence that global climate change is happening and its adverse affects have already disturbing human life and ecosystems in different parts of the world. It is clear that at the post Kyoto era adapting to the adverse effects of climate change will find more place at the international agenda though mitigation policies will continue to be the primary tools to stabilize the GHGs. The same concerns will also be important for the EU which has issued very recently a Green paper on adaptation and listed its priorities. The international dimension of EU adaptation policies can also offer new opportunities for assisting developing countries in their adaptation efforts. This in turn may enhance the global leadership role of the EU and help the EU to eliminate the possible tensions which might arise due to environmental refugees and scarcity related problems in its neighbouring area. All in all external dimension of adaptation policies can contribute to increasing the resilience of most vulnerable states and thus leading to poverty alleviation and sustainable development in the less developed countries. Moreover in the post Kyoto era evidently EU's leading position will also need to be enhanced through cooperation with especially growing powers such as India, China, Japan, Russia and Canada. Therefore the third chapter tried to analyze first the sustainable development concerns of the UNFCCC and the Kyoto Protocol and the current position of the EU as a global environmental actor and the future possibilities to enhance its actorness with special reference to the link between sustainable development and climate change policies.

Climate change problem has a close relationship with sustainable development, because, we have been living under the unsustainable standards which in the end cause

anthropocentric (human induced) climate change. Certainly ozone layer issue and the biologic diversity are about the sustainable development too. But to combat the climate change problem, radical solutions on the consumption and the production patterns gains more and more importance and urgency. Moreover to combat the loss of biological diversity the impacts of the climate change have to be prevented. Other global or regional environmental problems could be recovered if the climate change is halted. At that point mitigation and adaptation strategies gain importance.

It seems that both in mitigation and adaptation policies intra and intergenerational justice questions will play significant role in the post Kyoto area. For instance European Climate Change Programme which was established in 2000 refers to mitigation of climate change with the aim of identifying cost effective and environmental effective measures for cutting greenhouse gas emissions in the EU. Despite the reduction of GHG emissions anthropogenic damages on the environment have been resulting climate change for years. Despite all the struggles of the EU negative effects of climate change will go on years and years. Thus humanity has to adapt itself consequences of climate change. So adaptation is very important for people. In June 2007 EU published a green paper about adapting the climate change in Europe. So that deep cuts in GHG emissions and taking actions for the adaptation of people to climate change were emphasised in that green paper. According to that green paper Europe has to take some adapting measures to reduce the impacts of climate change.

Certainly EU has some deficiencies but on the other hand it is the only coherent leading actor all over the world. EU initially took its significant role in the UNCED by emphasising the need of the action on environmental threats in 1992 and then Kyoto Process to combat climate change. Post Kyoto Process especially refers to intergenerational and intragenerational justice, which are all underlined in the last chapter. While intragenerational justice encompasses various forms of justice such as social justice, ecological justice and gender justice within the same generation, intergenerational justice is the justice between generations. In brief sustainable development is composed of both

intragenerational and intergenerational justice indicating the three dimensions of sustainability that are namely; ecological, economic and social sustainability.

Furthermore post-Kyoto actions will have both economic and environmental consequences on all the actors. Hence the thesis also argued that if environmental protection and economic development could be achieved in a sustainable manner then both the cost of global climate change policies and its adverse affects could be could be minimized. The most important development is that sustainable development strategy is integrated into other EU polices too.

It is evident that some EU member states are more conscious in climate change issue while others are less enthusiastic about the measures and polices. Therefore the historical evolution of EU climate policy was not only affected by with the US responses and other actors' positions but also member states attitudes both within the EU and in the international arena. Moreover until now EU has been considered a restricted global leader in global climate change issue due to its institutional structure. If the EU genuinely wants to be an influential leader first it has to decrease its ecologic foot print and has to develop innovative methods for the sustainable consumption and production and then has to focus on equity concerns for the post-Kyoto era.

BIBLIOGRAPHY

Agrawala, S. and S. Andersen, 2001, "Explaining the Evolution of US Environmental Policy", in S. Agrawala and S. Andresen (eds), *US Climate Change Policy: Evolution and Future Prospects*, Energy and Environment, 12(2-3): 117-138

Bang, G., G. Heggelund and J. Vevatne, 2005, *Shifting Strategies in the Global Climate Negotiations*, *A Strategic Co-operation Project, Alternatives to The Kyoto Protocol,* FNI Report 6/2005 also published as CICERO Report 2005:08, Norway: The Fridtjof Nansen Institute, http://www.cicero.uio/media/3079.pdf accessed on 3 July 2007

Barnett, J., 2006, "Climate Change, Insecurity and Injustice", in A. W. Neil, J. Paavola, S. Huq and M.J. Mace (eds), *Fairness In Adaptation To Climate Change*, London: The Massachusetts Institute of Technology Press: 115-131

Becker, E., T. Jahn and I. Stıess, 1999, "Exploring Uncommon Ground: Sustainability and Social Sciences", in E. Becker and T. Jahn (eds), *Sustainability and Social Sciences. A Cross-Disciplinary Approach to Integrating Environmental Considerations into Theoretical Reorientation*, London and New York: Zed Books Ltd: 1-22

Burchell, J. and S. Lightfoot, 2004 "The EU and Sustainable Development: The Long Road from Rio to Johannesburg", in J. Barry, and B. Baxter, R. Dunphy (eds), *Europe, Globalisation and Sustainable Development*, New York: Routledge: 168-186

Boas, M., 2001, "Multilateral Development Banks, Environmental Impact Assessments, and Nongovernmental Organisations in U.S. Foreign Policy", in P.G. Harris (ed), *The Environment, International Relations, And US Foreign Policy:* Washington: Georgetown University Press: 178-197

Bodansky, D., 2003, "Transatlantic Environmental Relations", in J. Peterson, and M. A. Pollack (eds), *Europe, America, Bush, Transatlantic Relations in Twenty-first Century*, New York: Routledge: 59-68

Bretherton, C. and J. Vogler, *The European Union as a Global Actor*, 2006, second edition, New York: Routledge

CAN, Climate Action Network, http://www.climatenetwork.org/ accessed on 29 August 2007

Carter, N., 2001, *The Politics of the Environment: ideas, activism, policy*, Cambridge University Press, UK

Collier, U. (ed), 1998, *Deregulation the European Union Environmental Perspectives*, New York: Longman

Connelly, J. and G. Smith, 2003, *Politics and the Environment from Theory to Practice,* second edition, London and New York: Routledge

Dahl, A. L., 2001, "From Stockholm Via Rio To Johannesburg: Thirty Years of International Action On Environment and Sustainable Development", paper presented at *5th Annual Conference of the International Environment Forum*, 19- 21 October 2001, Hluboka nad Vltavou, Czech Republic, http://www.bcca.org/ief/ddahl01c.htm, accessed on 3 May 2007

Desombre, E. R., 2002, *The Global Environment& World Politics-International Relations for the 21st Century,* London: Continuum Publishing Group

Dryzek, J. S., 1997, *The Politics of the Earth Environmental Discourses,* United States: Oxford University Press

Economy, E. and M. A. Schreurs, 1997, "Domestic and international linkages in environmental politics", in M. A. Schreurs and E. Economy (eds.), *The Internationalization of Environmental Protection*, Cambridge: Cambridge University Press: 1-19

EEA, 2004, *Impacts of Europe's Changing Climate*, EEA report, no2\2004, http://reports.tr.eea.europa.eu/climate_report_2_2004/en/impacts_of_europes_changing_climate.pdf, accessed on 12 May 2007

EEA, 2005, *The European Environment*. *State and Outlook 2005*, Copenhagen

EEA, 2006, *Greenhouse gas emission trends an projections in Europe 2006*, EEA Report, No 9/2006, ISSN 1725-9177, http://reports.eea.europa.eu/eea_report_2006_9/en/eea_report_9_2006.pdf accessed on 27 July 2007

EEA 2007, "EU greenhouse gas emissions decrease in 2005", *Press Release* http://www.eea.europa.eu/pressroom/newsreleases/eu-greenhouse-gas-emissions-decrease-in-2005 accessed on 20 September 2007

Elliot, L., 1998, *The Global Politics of the Environment*, London: Macmillan Press Ltd

EU, 2006 " UN Climate Change Conference in Nairobi, Kenya :6-17 November 2006" http://ec.europa.eu/environment/climat/nairobi_06.htm

EU, 2007, "Climate change: Europe must take adaptation measures to lessen impacts of current and future warming", *EUROPA RAPID Press Release* Reference: IP/07/979, Date: 29/06/2007, http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/979&format=HTML&aged=0&language=EN&guiLanguage=en , accessed on 5 August 2007

EurActive, 2007 "*Analysis: The different paths to climate protection"* http://www.euractiv.com/en/sustainability/analysis-different-paths-climate-protection/article-158473 accessed on 21 July 2007

European Commission, 1996, *Communication from the Commission: Progress Report on Implementation of the European community Programme of Policy and Action in Relation to the Environment and Sustainable development "Towards Sustainability"*. Com(95) 624, Brussels, 10.1.1996, http://ec.europa.eu/environment /env-act5/prog-rep.htm accessed on 23 February 2007

European Commission, 2005, , *Analysis of post 2012 Climate Policy Scenarios With Limited Participation*, Technical Report Series, Technical Report EUR 21758 EN, ftp://ftp.jrc.es/pub/EURdoc/eur21758en.pdf accessed on 29August 2007

European Commission, 2006, *EU Actions Against Climate Change*, The European Climate change Programme, European Communities, http://ec.europa.eu/environment/climate/pdf/eu_climate _change_progr.pdf accessed on 12 May 2007

European Commission 2007a, *Green Paper from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, Adapting to Climate Change in Europe-Option for EU Action*, {SEC(2007)849}, COM(2007)354FINAL, Brussels, 29.6.2007, http://www.eur-lex.europa.eu/LexUriServ/site/en/com/2007/com2007_0354en01.pdf, accessed on 10 September 2007

European Commission, 2007b, *EU Action Against Global Warming. Leading Global Action to 2020 and Beyond*, ISBN 92-79-05059-6, http://ec.europa.eu/environment/climat/pdf/eu_action_against_climate_change.pdf accessed on 27 September 2007

Falkner, R., 2001, "Business Conflict and U.S. International Environmental Policy: Ozone, Climate, and Biodiversity", in P. G. Harris (ed), *The Environment, International Relations, And US Foreign Policy,* Washington: Georgetown University Press: 157-178

Hanf, K., A. Jansen, 1998, "Environmental Policy- the Outcome of Strategic Action and Institutional Characteristics", in Hanf, K., A. Jansen (eds), *Governance and Environment in Western Europe. Politics, Policy and Administration*, Longman, Harlow: 1-17

Harris, P. G., 2001, *International Environmental Affairs and U.S. Foreign Policy*, Washington: Georgetown University Press

Haque, M. S., 2000, "Environmental Discourse and sustainable Development: Linkages and Limitations", in A. W. Neil, J. Paavola, S. Huq and M.J. Mace (eds), *Fairness In Adaptation To Climate Change*, London: The Massachusetts Institute of Technology Press: 53-77

Hens L., B. Nath, 2003, "The Johannesburg Conference", *Environment, Development and Sustainability,* Volume 5, Numbers 1-2: 7-39

Homeyer, I. M, 2005, "Differential effects of Enlargement on EU Environmental Governance", in J. Carmin and S.VanDeveer (eds), *EU Enlargement and the Environment*, New York: Routledge: 52-77

IEEP, 2006, "*Drawing Process? The Implementation of the EU's 6th Environmental Action Programme"*, An IEEP Report for the European Environmental Bureau (EEB), April 2006, http://www.eeb.org/activities/env_action_programmes/IEEPFinalReport6EAP-April2006.pdf, accessed on 3 July 2007

IPCC, 2001, *Climate Change 2001:Mitigation, Contribution of Working Group III to the Third Assessment Report of the IPCC*, Working Group of III of the Intergovernmental Panel on Climate Change, http://www.grida.no/climate/ipcc_tar/wg3/pdf/9.pdf, accessed on 2 September 2007

IPCC, December 2004, 1*6 Years of Scientific Assessment in Support of the Climate Convention*, http://www.ipcc.ch/about/anniversarybrochure.pdf accessed on 26 June 2007

IPCC 2007, *Summery for Policy Makers, In: Climate Change 2007 Mitigation*, Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, [B. Metz, O.R. Davidson, P.R. Bosch, R. Dave, L.A. Meyer (eds), Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA., http://www.ipcc.ch/SPM040507.pdf, accessed on 29 September 2007

International Institute for Sustainable Development, 1997, *Sustainable Development Timeline,* http://www.iisd.org/rio+5/timeline/sdtimeline.htm accessed on 12 May 2007

International Indian Treaty Council, *The Johannesburg Declaration on Sustainable Development. From our Origins to the Future*, http://www.treatycouncil.org/new_page_524212221.htm accessed on 2 September 2007

Jacobs, M., 1999, "Sustainable Development as a Contested Concept*"* in Andrew Dobson and M. Jacobs (eds), *Fairness and Futurity*, New York: Oxford University Press: 21-45

Kramer, L., 2004, "The roots of Divergence: A European Perspective", in N. Vig and M. G. Faure (eds), *Green Giants? Environmental policies of the United states and the European Union,* Massachusetts Institute of Technology: 53-73

Kraft, M. E., 2002, "Environmental policy and Politics in the United States: Towards Environmental Sustainability?" in U. Desai (ed), *Environmental Politics and Policy in Industrialized Countries,* London: The Massachusetts Institute of Technology Press: 29-71

Langhelle, Oluf, 2000, "Why Ecological Modernisation and Sustainable Development Should not be Conflated", Presented at IPSA XVIII World Congress, Quebec, 1-5 August 2000, M.T 4.8. Ecomodernisation as a strategy for resolving developmental conflicts

Lankowski, C., 2004, "The Transatlantic environmental Dialog", in N.Vig and M. G. Faure (eds), *Green Giants? Environmental policies of the United States and the European Union,* United States: Massachusetts Institute of Technology: 329-345

Leshchow, A. (ed), 2002, *Environmental Policy Integration- Greening Sectoral policies in Europe*, London, USA

Liberatore, A., 1997, "The European Union: bridging domestic and international environmental policy making", in M.A. Schreus, and E. C. Economy (eds.), *The internationalization of environmental Protection,* Cambridge University Press: 188-212

Lightfoot, S. and Jon B., 2004, "Green Hope or Green Wash? The Actions of the European Union at the World Summit on sustainable development", *Global Environmental Change* 14(2004) 337-344,

Lightfoot, S. and J. Burchell, 2005 "The European Union and the World Summit on Sustainable Development: Normative Power Europe in Action", *Journal of Common Market Studies,* volume 43, Number 1, March 2005: 75-95

Mace, M. J., 2006, "Adaptation under the United Nations Framework Convention on Climate Change: The International Legal Framework", in A. W. Neil, J. Paavola, S. Huq and M.J. Mace (eds), *Fairness In Adaptation To Climate Change*, London: The Massachusetts Institute of Technology Press: 53-76

Manners, Ian 2002, "Normative Power Europe: A Contradiction in Terms" *Journal of Common Market Studies,* Vol. 40, Number 2, 2002: 235-259

McCormick, J. 2001, *Environmental Policy in the European Union*, New York: Palgrave

Meadows, Donella H., Dennis L. Meadows, Jorgen Randers, and William W. Behrens III, 1972, *A Report to The Club of Rome (1972),* http://www.clubofrome.org/docs/limits.rtf accessed on 5 June 2007

Mengi, A. and Nesrin A., 2003, *Küreselleşme ve Yerelleşme Çağında Bölgesel Sürdürülebilir Gelişme AB ve Türkiye Örneği,* Ankara: Siyasal Kitapevi

Müller, B., 2006, *Montreal 2005 What Happened and What It Means*, Oxford Institute for energy Studies, England

Narain S. 2006, "Önsöz", in Worldwatch Enstitüsü, *Dünyanın Durumu 2006, Özel Konu: Çin ve Hindistan,* İstanbul: Tema Vakfı: XIX-XXI

Ochs, A. and S., Marcus, 2005, "Conflict or Cooperation? Transatlantic Relations in the Environment Field" paper presented at *European Union Studies Association (EUSA), Biennial Conference* 2005(9th), March 31- April 2, 2005, Austin, Texas

Padilla, E., 2002, "Intergenerational Equity and sustainability", *Ecological Economics*, 41:69-83

Parson, E.A., P.M. Haas and Marc A. Levy, 1992, "A summary of the Major Documents Singed at the World summit at the Global Forum", Centre for International Earth Science Network (CIESIN) Colombia University, http://www.ciesin.columbia.edu/docs/003-312/permitNew.html

Perlot, Wilbur, August 2005, *Post- Kyoto and the position of the European Union,* Clingendael International Energy Programme, briefing papers, http://www.clingendael.nl/publications/2005/20050823_ciep_briefing_perlot_poskyoto.pdf accessed on 17 September 2007

Philip, A. B., 1998, "The European Union: Environmental Policy and the Prospects for sustainable Development", in K. Hanf and A. Jansen (eds) *Governance and Environment in Western Europe Politics, Policy and Administration*, New York: Longman: 253-276

Scheipers, S., D. Sicurelli, 2007, "Normative Power Europe: A Credible Utopia?", *Journal of Common Market Studies,* Volume 45. Number 2: 435-457

Schreus, A. M., 2004, "The Climate Change Divide: The European Union, The United States, and the Future of the Kyoto Protocol, in N. Vig, and M. Faure (eds), *Green Giants. Environmental Policies of the United States and the European Union*, United States: Massachusetts Institute Technology: 207-230

Scruton, R., 1996, Second Edition, *A Dictionary of Political Thought*, London: Macmillan Publishers Ltd.

Singh, Shekar, 1997, *Biodiversity Conservation through Ecodevelopment Planning and Implementation Lessons from India, South-South Cooperation Programme on Environmentally Sound Socia-economic development in the humid tropics,* Working Papers No21, 1997, United Nations educational, Scientific and Cultural Organisations, Man and Biosphere Programme, The World Academy of Sciences, **http://unesdoc.unesco.org/images/0011/001138/113896eo.pdf** accessed on 8 August 2007

Sitaraman, S., 2001, "Evolution of the Ozone Regime: Local, National, and International Influences", in P. Harris, (ed.), *The Environment, International Relations, And US Foreign Policy,* Washington: Georgetown University Press: 111-134

TEU, 1992, Treaty on European Union, http://europa.eu/abc/treaties/archives/en /entoc01.htm accessed on 28 August 2006

Teutonico, J. M. and F. G. Matero (eds), 2001, "Managing Change: Sustainable Approaches to the Conservation of the Built Environment*",* paper presented at The US/ICOMOS 2001 International Symposium

The 1972 Stockholm Conference http://www.ciesin.org/docs/008-570/box9.html, accessed on 24 September 2007

Tunney, j, 2004, "The WTO and Sustainability after Doha: a time for reassessment of relationship between political science and law?" in L. Barry, B. Baxter, R. Dunphy (Eds), *Europe, Globalisation and sustainable Development*, New York: Routledge: 186-213

UN 1998, *"Kyoto Protocol to the United Nations Framework convention on Climate Change",* http://unfccc.int/resource/docs/convkp/kpeng.pdf accessed on 17 August 2007

UN 2002, The Johannesburg Declaration on Sustainable Development, http://www.fire.uni-freiburg.de/GlobalNetworks/Africa/WSSD-Political%20Declaration.pdf, accessed on 2 September 2007

UN, 2005, *2005 World Summit Outcome*, A/RES/60/1, http://daccessdds.un.org/doc/UNDOC/GEN/N05/487/60/PDF/N0548760.pdf?OpenElement accessed on 15 April 2007

UN 2007, *United Nations Report of the World Summit on Sustainable Development, Johannesburg Summit* , South Africa, 26 August-4September 2002, http://daccessdds.un.org/doc/UNDOC/GEN/NO2/636/93/PDF/NO263693.pdf?OpenElement accessed on 2 September 2007

UN 1989, *United Nations, General Assembly, 85th Plenary Meeting, A/RES/44/228, part 1.3,* New York, 22 December 1989, http://www.un.org/documents/ga/res/44/ares44-228.htm, accessed on 3 May 2007

UNFCCC, 1992, *United Nations Framework Convention on Climate Change,* http://unfccc.int/2860.php accessed on 3 March 2007

UNFCCC, 1992, *United Nations Framework Convention on Climate Change,* FCCC/INFORMAL/84, GE.05- 62220 (E) 2007 05, http://unfccc.int/resource/docs/convkp/conveng.pdf accessed on 2 September 2007

UNCED, 1992, *Report of the United Nations Conference on Environment and Development*, A/CONF.151/26 (VOL.1), http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm accessed on 3 February 2007

UNIS, 2007, *Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change*, UNIS/INF/230, 31 August 2007, http://www.unis.unvienna.org/unis/pressrels/2007/unisinf230.html accessed on 29 September 2007

VanDeveer, S. and J. Carmin, 2005, "Assessing Conventional Wisdom: Environmental Challenges and Opportunities beyond Eastern Accession", in J. Carmin, S. VanDeveer (eds.) *EU Enlargement and the Environment*, New York: Routledge: 315-333

Vig, N. and M.E. Kraft (eds.), 2006, *Environmental Policy New Directions for the Twenty-First Century*, sixth edition, Washington: CQ Press

Vogler, J., 2003, The External Environmental Policy of the European Union" in Olav Schram Stokke and Øystein B. Thommessen (eds.), *Yearbook of International Co-operation on Environment and Development 2003/2004,* London: Earthscan Publications: 65–71.

Vogler, J., 2005, "The European Contribution to Global Environmental governance", *International Affairs,* Volume 81, number 4, July 2005: 835-850

Wagner, F., M., Axel, 2005, "Burden sharing targets for the EU Bubble in the second commitment period: CO_2 From the Energy Sector", in: John Klaus-Dieter; Rübbelkei, Dirk(eds): *Klimapolitik in einer erweiterten Europaischen Union,* Shaker-Verlag, Aachen, 2005: 79-102

World Watch Institute 2006, *Dünyanın Durumu 2006, Özel Konu: Çin ve Hindistan,* İstanbul: Tema Vakfi

WCED, 1987, *World Commission on Environment and Development, Our Common Future*, Oxford University Press: United Kingdom

Weiss, T. G., D. P. Forsythe and R. A. Coate, 2004, *The United Nations and Changing World Politics*, Westview, Boulter, 1989, First edition.

Wissenburg, M., G. Orhan and U. Collier, 1999, *European Discourses one Environmental Policy*, England: Ashgate

YOIS and AEGEE, 2003, *"What's a sustainable Europe?"* http://www.yois-europe.org/e72/e586/e173/doku_ggeu_ger.pdf accessed on 2 September 2007