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TURKEY'S POSITION WITHIN THE GLOBAL CLIMATE CHANGE REGIME IN THE CONTEXT OF ITS ACCESSION TO THE EUROPEAN UNION

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Danışman: Yrd. Doç. Dr. RANA İZCİ

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To my parents Ülkü & Enver Gedikkaya

ÖZET

Son yıllarda uluslararası gündeme hızla giren iklim değişikliği sorununun önümüzdeki yıllarda da ülkelerin gündeminde üst sıralarda yer alması beklenmektedir. Bu tez, küresel iklim değişikliği konusunda son yıllarda artarak devam eden uluslararası işbirliği sürecini ve bu işbirliği sonucunda ortaya çıkan küresel iklim değişikliği rejiminin oluşumunu tarihi bir perspektifle günümüze kadar incelemekte ve 2012 sonrası döneme yönelik gelişmelere dair öngörülerde bulunmaktadır.

Bu genel çerçeve içerisinde, tezin amacı Türkiye'nin bu rejim içerisindeki yerini inceledikten sonra, 2012 sonrası dönemde gelişerek devam etmesi beklenen rejimin içinde daha aktif bir şekilde bulunmasının gerekliliğini ve önemini belirtmektir. Türkiye Kyoto Protokol'üne değil de, henüz sadece Birleşmiş Milletler İklim Değişikliği Sözleşmesi'ne taraf olduğundan, ancak 2004 yılından itibaren bu rejimin içerisinde pasif bir konumda yer alabilmiştir. Halbuki, Türkiye'nin 2012 sonrası dönemde, küresel iklim değişikliği rejiminin içerisinde daha etkin bir şekilde yer alması Türkiye'nin yararına olacaktır. Bu sebeple, Türkiye bir an evvel özel şartlarını ve durumunu müzakere ederek Kyoto Protokol'ünü imzalamalı ve 2012 sonrası dönem için gerçekleşmekte olan pazarlık sürecine dahil olmalıdır.

Diğer taraftan, Amerika'nın Kyoto Protokol'ünden çekilmesi sonrasında, Avrupa Birliği küresel iklim değişikliği müzakerelerinde liderlik konumunu üstlenmiştir. Bu doğrultuda, Birlik olarak sera gazları salınımlarını azaltmaya yönelik çok ciddi hedefler koymuş, kararlar almıştır. Bu hedefler ve bunlarla bağlantılı politikaları kapsayan mevzuat, yeni üyeler de dahil olmak üzere, tüm üyelerce kabul edilip, uygulanmaktadır. Avrupa Birliği ile katılım müzakereleri sürmekte olan Türkiye'nin bu mevzuata uyum sağlaması katılım için bir önkoşuldur. Bu şartlar altında, bu tez Türkiye'nin özel şartlarını müzakere ederek bir an önce küresel iklim değişikliği rejimi içerisindeki aktif yerini almasının hem sürdürülebilir kalkınması ve hem de Avrupa Birliği ile olan ilişkileri çerçevesinde kaçınılmaz olduğunu savunmaktadır.

ABSTRACT

Over the last couple of decades, climate change has emerged to be one of the most complex challenges of the 21st century that the world community has to deal with. This thesis highlights the development of international cooperation on global climate change as well as the evolution of the global climate change regime within a historical perspective until the present and makes an attempt to foresee the possible future developments concerning the post-2012 period.

Within this general framework, this thesis aims to analyze Turkey's place within this regime and emphasize the need for active Turkish involvement in the post-2012 global climate regime. Over the years, Turkey has only become a passive member of the global climate change regime by signing the UNFCCC but not the Kyoto Protocol. However, it would be to the benefit of Turkey to become an active member of the global climate change regime in the post-2012 period. For this end, Turkey needs to start negotiating its special circumstances without losing time and take its place within the international negotiations concerning the post-2012 period.

The European Union has assumed leadership in the global climate change negotiations, particularly after the withdrawal of the United States from the Kyoto Protocol. Besides, it has set ambitious targets for reducing its greenhouse gas emissions in the near future and expects all the members, including the new member states, to align their policies and measures accordingly. Since, currently, Turkey continues accession negotiations with the European Union, becoming an active party within the global climate change regime is already what the European Union expects from Turkey. Under these circumstances, this thesis argues that it is to the benefit of Turkey to sign the Kyoto Protocol by negotiating its special circumstances with the aim of taking its place within the post-2012 climate regime. By this way, it would become possible for Turkey to continue its development in a sustainable manner with the support of the European Union.

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Under this pretext, I would like to commemorate my father Enver Gedikkaya with longing for the vision he had left behind which has given way to this study. On the other hand, I would not have been able to accomplish this thesis without the tremendous help and encouragement of my mother Ülkü Gedikkaya, my husband Mehmet Bal and my daughters Naz and Duru. I am indebted to all of them for their excellent support, patience and love.

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ABBREVIATIONS

AAU	Assigned Amount Unit
AC	Acceding Countries
AOSIS	Alliance of Small Island States
ASAM	Avrasya Stratejik Araştırmalar Merkezi (Eurasian Strategic Research Center)
ATO	Ankara Ticaret Odası
AWG	Ad Hoc Working Group
BAPA	Buenos Aires Plan of Action
CANZ	Canada, Australia and New Zealand
CBCC	Coordination Board on Climate Change
CBD	Convention on Biological Diversity
CC	Candidate Country
CDM	Clean Development Mechanism
CER	Certified Emissions Reduction
CFCs	Clouroflourocarbons
CH_4	Methane
CO_2	Carbon dioxide
COP	Conference of the Parties
DEFRA	Department for Environment, Food and Rural Affairs, United Kingdom
DPT	Devlet Planlama Teşkilatı
EEA	European Energy Agency
EIG	Environmental Integrity Group
EIT	Economies in Transition
ENB	Earth Negotiations Bulletin
ERU	Emissions Reduction Unit

FAO	United Nations Food and Agriculture Agency
GEF	Global Environment Fund
GHG	Greenhouse gas
GWP	Global Warming Potential
HFC	Hydroflourocarbon
IEA	International Energy Agency
INC	Intergovernmental Negotiating Committee
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
JICA	Japan International Cooperation Agency
JUSSCANNZ	Japan, the United States, Switzerland, Canada, Australia, Norway and New Zealand
LDC	Less developed country
LIFE	EU's financial instrument supporting environmental and nature conservation projects
LUCF	Land-use change and forestry
LULUCF	Land use, land-use change and forestry
MEDA	Euro – Mediterranean Partnership
METAP	Mediterranean Environmental Technology Assistance Program
MoEF	Ministry of Environment and Forestry
MOP	Meeting of the Parties
N_2O	Nitrous oxide
NGO	Non-governmental organization
NMS	New Member States
OECD	Organization for Economic Cooperation and Development
PFC	Perflourocarbon

R & D	Research and development
RMU	Removal of units for biological sinks
QELRO	Quantified emissions limitation and reduction objectives
SBI	Subsidiary body for implementation
SBSTA	Subsidiary body on scientific and technical advice
SCCF	Special Climate Change Fund
SF_6	Sulphur hexaflouride
SMAP	Short and Medium-term Priority Environmental Action Programme
SPO	State Planning Organization
TCMA	Turkish Cement Manufacturers' Association
TEMA	Turkish foundation for combating soil erosion, for rainforestation and for the protection of natural habitats
TGNA	Turkish Grand National Assembly
TNC	Trans National Corporation
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
VER	Voluntary emissions reduction
WBGU	German Advisory Council on Global Change
WMO	World Meteorological Organization
WRI	World Resources Institute
WTO	World Trade Organization
WWF	World Wildlife Fund

I. INTRODUCTION

Beginning with the 1960s, the international community has encountered a new challenge called as the climate change. In the 1960 and 1970s, climate change was perceived as a problem to be studied by the scientists. However, as scientific information improved, climate change has quickly managed to enter the political agendas of many countries. Grasping the international character of the climate change threat as a result of the Intergovernmental Panel on Climate Change (IPCC) reports, the international community has not lost time to take cooperative action. The United Nations Framework Convention on Climate Change (UNFCCC) which was signed in 1992 was the first step taken to combat climate change in this context. Although, the UNFCCC was designed as the first step in bringing the countries of the world together for a common goal, it was not binding in nature. However, scientific information, soon, showed that through these unbinding mechanisms, it would not be possible to combat global climate change. This situation, when coupled with the Second IPCC report in which it was stated that climate was changing due to human influence, has led to the start of preparations for a stronger agreement. The Kyoto Protocol which was signed in 1997 was the outcome of such efforts.

The signing of the Kyoto Protocol was a very important event in the formation of the climate change regime as giving way to the establishment of binding quantified emissions reduction targets for the industrialized Annex I countries of the UNFCCC to be achieved within the first commitment period between 2008-2012. Through the Kyoto Protocol, it has been possible to establish a regime on climate change which is operative at the global level. The Kyoto Protocol also stipulates the start of negotiations concerning the post-2012 period at latest by 2005. Therefore, starting from 2005, the world has been discussing the future commitments of the climate change regime. In other words, the international community, presently, is working to come up with new alternatives for the post-2012 regime which is expected to lead to an increase in the number of participants. These talks are expected to be finalized in 2009. Apart from Australia and the US, who have withdrawn from the multilateral climate change talks in 2001, the industrialized countries have accepted to take the responsibility of reducing emissions in the first commitment period. Concerning the second commitment period, both the involvement of the US as well as some of the major

developing countries such as China and India together with the advanced developing countries would be highly possible and important for further reductions.

On the other hand, the EU seems to be highly motivated to take action on the global as well as at the community level. The EU has acted as a leader most of the time with regard to climate change, especially, after the withdrawal of the US from the Kyoto Protocol. Nevertheless, leadership should not be conflated with hegemony. This thesis takes leadership as "the ability to give direction to institutional arrangements" (Young, 1989: 63) and employs the term leader as an actor which plays "important roles in seizing opportunities generated by exogenous events, structuring bargaining processes to focus on integrative rather than distributive issues and putting together deals or packages of provisions that offer enough attractions to all parties to elicit their support" (Young, 1989: 235). Recently, the EU has taken drastic measures and decisions with the effort of combating climate change. While the world community is discussing these issues, Turkey's position attracts attention. Unfortunately, it appears that it has not been possible to include Turkey within the international climate regime so far. In this study, the concept of international regimes is used in the same way as Oran Young has described. Accordingly, regimes are "social institutions governing the actions of those involved in specifiable activities... Regimes consist of recognized roles linked together by clusters of rules or conventions governing relations among the occupants of these roles" (Young, 1989: 12).

The present climate change regime is certainly a combination of the UNFCCC and the Kyoto Protocol. Turkey has ratified the UNFCCC in 2004, but still has not signed the Kyoto Protocol and consequently has not been able to utilize its mechanisms. In this respect, Turkey is not an active party of the present global climate change regime. And if its stand point does not change, it will never become an active party in the future global climate regime and will not be able to benefit from its mechanisms while coping with the impacts of global climate change and tackling with greenhouse gas emissions. Moreover Turkey might face international repercussions in terms of trade that are to be imposed on countries which fail to deal with greenhouse gas emissions adequately in the near future. Cost of inaction in the long run, therefore, appears to be very high for Turkey. Based on this hypothesis, the below arguments have been put forward in this thesis.

First of all, Turkey has to negotiate its special circumstances with the other Parties and acquire itself a suitable status for the second commitment period of the global climate regime with responsibilities it can accomplish. Special circumstances of Turkey arises from the fact that Turkey is a developing country, although it was placed under the Annex I of the UNFCCC. There are many considerations of Turkey on emission targets given its development plans. However special circumstances can change through time and depending on various factors such energy plannning and use, environmental policies and even urban planning. Therefore it is necessary for Turkey to review its development concerns and capacity to act and formulate them again for the negotiations to achieve the best results. However, as a precondition to start such negotiations, Turkey should first ratify the Kyoto Protocol. This thesis mainly claims that Turkey has nothing to lose by taking active part in the climate regime. On the contrary, Turkey would have lots to gain from such a commitment in the long run.

The aim of this thesis, therefore, is twofold; examining the place of Turkey within the global climate regime which has been established over the last couple of years and assessing the factors that might shape Turkey's position with regard to the emerging climate change regime. Understanding its place within the global climate regime due to its special status in the UNFCCC requires the assessment of both the international and domestic developments that have taken place with regard to climate change. Such an investigation is crucial since the international and domestic dimensions of Turkey's climate change policies are certainly interrelated.

The fight against climate change requires deep cuts in the greenhouse gas emissions of the world countries. Taking into consideration that it had been the increased use of fossil fuels since the industrial revolution of the 18th century which have lead to the increase in greenhouse gases in the atmosphere, fighting climate change touches the very heart of the industries as well as the economies of the countries over the world. Due to the capitalist nature of the present world economy, world countries tend to perceive issues related to their economic growth and development to be within their national interests. Therefore, climate change policies impose compliance costs on Kyoto parties due to these economic reasons. However, the capitalist system has also created its tools to decrease the burden of these policies through the market-based mechanisms under the Kyoto Protocol. Under these circumstances, the reduction of emissions to stabilize the level of greenhouse gases in the

atmosphere in an effort to fight climate change has become a mutual interest of the developed world. It was around this mutual interest that achieving global cooperation in this direction has been possible among the countries. Therefore, neoliberal institutionalist theory which sees international cooperation among the world countries to be possible if a mutual interest exists, can explain global cooperation on climate change successfully. In addition to this, the regime theory also can highlight the evolution and development of the climate regime of the present in detail. On the other hand, agreement on the terms of the regime has been difficult among the countries due to the differences in their national circumstances as well as the level of importance given to climate change at the domestic level. Nevertheless, the pressure through scientific information together with the creation of the market-based mechanisms, it has become possible to agree for most of the world countries. Only a few countries have been left off the climate regime which has been established. The US and Australia have been the two important countries who have not participated in the Kyoto process. Their national interests at that time of the agreement have not matched with the mutual interests of the international community and as a result they have chosen to stay out. Turkey is also one of the very few countries who has not taken place in the Kyoto process and unfortunately has only been able to become a passive member of the regime. However, Turkey has a different history.

The present regime has been the outcome of cooperation achieved at the global level led by the EU particularly for the last decade. The willingness of the EU to support the establishment of such a regime has been very important for the evolution of the present regime. Although, the regime has been led and developed mostly by the EU and despite the fact that Turkey has been one of the candidate members to the EU, Turkey has long stayed out of the climate regime. After becoming a Party to the UNFCCC in 2004, Turkey has just become a passive member of the regime. The only way Turkey has benefited from the regime has been through its utilization of some Global Environment Fund (GEF) financing during the preparation of its First National Communication. Apart from that, it is hard to see Turkey as an active member of the regime, since it has not been able to benefit from the mechanisms of the regime. This situation has been emanating from Turkey's misplacement during the preparation of the UNFCCC both as an Annex I and Annex II country under the Convention due to Turkey's OECD membership. Instead, Turkey should have been placed in the non-Annex I list together with the other developing countries. As a result of this development Turkey could not have signed the UNFCCC and has spent its years to change its status.

Although, in 2001, Turkey's name has been deleted from Annex II, the fact that it has stayed in the Annex I list has prevented its ratification of the Kyoto Protocol leading to its involuntary exclusion from the current regime.

The countries within the climate regime have started, as of 2005, to discuss the possible alternatives for the post-2012 framework. There are many different views that countries put forward, however, most of the developed countries together with the EU are pushing for broadening and deepening the commitments of the countries; also taking the large emitting developing countries such as India and China as well as advanced developing countries into consideration. The US is also expected to set national mandatory emissions targets not later than 2010 which might support the somehow engagement of the US in the global climate regime. The EU, on the other hand, has already made its official plans to reduce its emissions by 30% until 2020 under the condition that the international community joins as well. Even in the case the international community does not join, then, the EU has unilaterally committed itself to achieving 20% reductions as of 2020. It has already made the necessary arrangements such as the establishment of a common energy policy as of 2009 to achieve its goals. In addition to this, the IPCC becomes more certain with every new report it prepares that the climate is changing due to human interference in the atmosphere. The carbon market which has been established in line with these developments keeps growing as the tool of the capitalist economy to fight climate change.

In the light of the aforementioned outlook, another argument of this thesis is that, under these circumstances, the shape of the future regime will be very important for the future Turkish climate change policy. In case Turkey prefers to keep its passive attitude towards the regime, it might be forced to assume certain results which it would not be willing to experience like the regime theory recalls. These might either be in the form of some punitive actions to force Turkey for negotiations or the future place of Turkey within the climate regime might be written by the other members of the regime. If Turkey wants to negotiate its place on its own initiative, then it should ratify the Kyoto Protocol and start negotiations for the post-2012 period before it becomes impossible to do that. The recent international developments seem to make this pressure on Turkey; however, the domestic politics in Turkey is also very important for a successful climate policy. For domestic politics to support Turkey's active involvement in the regime, the economic benefits that Turkey might gain as a result of such policies should be understood at the national level, especially by the decision

makers. Therefore the international dimension of climate change is very important for the development of Turkey's future climate change policies. However, Turkey's domestic capabilities are also very important in the assessment of these developments as well as for the possible negotiations. Hence, the international and domestic dimensions of the Turkish climate policy interact with each other, they are interrelated.

From the Turkish perspective, membership to the EU has been a high priority issue for Turkey for almost the last half a century. Presently, Turkey is a EU candidate state and has started accession negotiations as of 2005. The EU has been the leader of the climate regime since the withdrawal of the US in 2001 from the international negotiations. Although Turkey is lagging behind the developments within the climate regime, ironically, it has been the EU which has been working and pushing to shape the future climate regime for the last couple of years. Under these circumstances, there is no way for Turkey to escape from facing the requirements of the climate change issue since this issue is one of the priority areas of the EU and its details are already present in the Acquis Communautaire of the EU which Turkey is required to align its policies to. Turkey's accession to the EU can only be actualized under the condition that Turkey integrates its policies with the Acquis of the EU which means accepting and implementing all the provisions existing in the Acquis.

Therefore, this thesis also claims that climate change issue will take an important place in the Turkey-EU relations in the near future. However, the determination of this relationship on this issue will depend on Turkey's actions. Within the perspective of its candidacy to the EU, Turkey has two interrelated reasons for ratifying the Kyoto Protocol. First, in case Turkey takes the initiative itself and ratifies the Kyoto Protocol which is already a part of the Acquis, in an effort to negotiate itself a suitable place in the post-2012 climate regime, such an attempt will have positive effects on Turkey-EU relations by eliminating a major obstacle during the accession negotiations. Second, due to Turkey's being a candidate state to the EU, which is the leader of the present regime, Turkey would have the opportunity of securing itself with a suitable place within the future climate regime in a more effective manner with the support of the EU. The negotiation of the national circumstances of a country is the right of every country in the world, since every country has different domestic capabilities. This is actually the concept which forms the backbone of the present climate regime that is 'common but differentiated responsibilities' for the countries. Such negotiations are not to be realized by only Turkey, in fact, most of the countries have already entered into such negotiations for

the first commitment period between 2008 and 2012 and they keep their negotiations for the post-2012 regime as well. This right has also been highlighted for Turkey in the Decision taken for Turkey by the UNFCCC that the different circumstances of Turkey would be identified due to negotiations. The ambiguity lies in the fact that Turkey has not made any proposals up until the present day to start such negotiations.

Until the present, the international dimension has shaped the climate change policy of Turkey. However, accession to the EU or the ratification of the Kyoto Protocol might change this situation. In case Turkey ratifies the Kyoto Protocol, then, Turkey would attain the chance of negotiating its own future in a way reflecting its national circumstances. Through this way, Turkey might become an active part of the climate regime where it would become possible for Turkey to benefit from the Kyoto Protocol mechanisms leading to a decrease in cost of compliance.

The present climate regime describes climate change as a systemic threat which requires collective action of the international community to fight against. The capitalist nature of the world economy requires an economic and industrial restructuring to be achieved for this end. The regime also requires the gradual participation of all the countries. Under these circumstances, Turkey cannot continue with its present position which is a vague description of Annex I Party membership under the UNFCCC. Clarification is needed to determine the actual status of Turkey within the climate regime and that depends on negotiations.

Another important point supported by this thesis concerns the development of a voluntary carbon market in Turkey. Since Turkey does not have the chance of becoming an active member of the climate regime until the beginning of the second commitment period due to the insufficient amount of time left for completing the procedural issues, the development of voluntary carbon markets in Turkey would be very useful for the introduction of such measures to the Turkish business world; serving as a learning process in a way preparing them for the possible climate policies of Turkey in the post-2012 period.

Due to its nature, the policies related to climate change affect policies in other various sectors such as energy, agriculture, industry, trade and foreign policies. Taking into consideration the significance of accession to the EU as well as the other policies which are

affected by the climate change decisions, this thesis also puts forward that climate change policies of Turkey should be evaluated and implemented within a broader foreign policy context.

In an effort to achieve all these aims, the thesis has been prepared in four chapters. Chapter I will be devoted to the historical development of the climate change issue as well as the global climate change regime. Turkey's involvement in climate change has been as a result of the international developments on climate change during the beginning of the 1990s. Otherwise, it appears that Turkey would not have become aware of the climate change issue since there had not been any visible direct impacts of climate change on Turkey at those years. Besides, Turkey was not conducting ample scientific research on the subject at those years either. Therefore after a short description of what climate change is, this chapter analyzes the achievement of international cooperation to combat climate change until the present day to be able to provide the necessary information to understand the international dimension of Turkey's climate change policies. Both the UNFCCC and the Kyoto processes are examined to be able to grasp Turkey's status within these initiatives. A review of the recent developments concerning the future commitments for the post-2012 period provides reflections for Turkey's possible steps in such negotiations.

As scientific information about climate change improved over the last couple of decades, it has been accepted that climate change is a long term issue. Therefore, rather than being reactionary, it is important to be proactive. In this respect, mitigation and adaptation measures are very significant in the fight against climate change. To be successful in such action, scientific research still continues to have a significant place in combating global climate change in the years to come. Theoretical research, therefore, both helps to explain and understand the past developments but also provides alternatives for future action. Although for most of the developing countries, this theoretical research is perceived as futile, theoretical explanations are very helpful in seeing how the issues are constructed worldwide and perceptions are developed about certain subjects accordingly paving the way for all the countries uploading their concerns at the international level. Parallel to this, in the second chapter, a theoretical survey has, therefore, been conducted to be able to explain the development of the climate change issue within the international community as well as at the domestic level, specifically for Turkey. Despite the existence of the vast literature on global climate change, it is still difficult to find satisfactory publications explaining Turkey's

position from a theoretical perspective. However, it is also a pressing need to define Turkey's climate change policy and recommend policy options for the post-Kyoto period and its negotiations through a theoretical viewpoint either to achieve a shift of environmental perceptions and economic concerns for a sustainable future or at least to support special circumstances at the international level. Therefore, it is necessary to discuss different theoretical standpoints on environment and particularly global climate change to provide fruitful debates for Turkey's future and also to pave the way for new studies which will focus on thorough conceptual analyses that can be employed by policy makers.

It has not been possible to explain the climate change issue with a single theory either at the international or at the domestic level. This is also the case to explain Turkey's position to the climate change regime. Nevertheless, various theories can help to explain different issues. For instance, although some state behavior can be explained through realism, the development of the climate change issue might be explained better by structuralism which rests on the formation of new perceptions, norms and values. On the other hand, among many theories, international cooperation that has been achieved on climate change can best be explained by neoliberal institutionalism. This theory has been very useful to understand the architecture of the climate regime at the international level. The regime theory which has developed under neoliberal institutionalism has particularly been very helpful to understand the dynamics of the present regime. On the other hand, the political economy approaches have been very helpful to understand the various forces and interests which have shaped the perceptions of the countries about the climate change issue and the regime as well as the instruments of the regime. While the development of the climate change issue in Turkey as well as at the international level can also be explained through a structural perspective, to be able to understand Turkey's involvement in the climate regime, the two level analysis of Putnam is very significant. Turkey has been both under the pressure of domestic conflicts in the formation of its national interest as well as the international responsibilities it has been facing for the last couple of years concerning the climate change issue. The international dimension of climate change has been very important in Turkey's involvement in the climate change issue. Just as that, the shape of the future climate regime will also be very significant for Turkey's future involvement in the climate regime together with its special national circumstances.

In the third chapter, the major actors of the climate change regime are analyzed. The present climate change regime has been shaped as a result of the negotiations of these countries over the years. The post-2012 regime will also be shaped as a result of these on-going negotiations at the global level. Since Turkey would also need to negotiate with these countries with the aim of fixing a place for itself in the post-2012 period, the aims, national circumstances and priorities of these actors within the climate regime is of crucial importance. Especially, understanding the climate change policies of the EU, with which Turkey is continuing accession negotiations, is of great importance for Turkey. The ratification of the Kyoto Protocol is already a requirement in the Acquis of the EU which Turkey has to comply with. Since the EU gives high importance to the climate change issue, a candidate who has even not ratified the Kyoto Protocol presents an important problem during the accession negotiations. There are already voices rising from the EU that the ratification of the Kyoto Protocol might become a conditionality factor for the opening of negotiations on the environment chapter of the Acquis. Due to the candidacy of Turkey to the EU, the examination of the EU climate change policies sheds light on the expectations of the EU from Turkey in this matter. Taking into consideration the fact that internalizing the climate change policies of the EU within Turkey would require time and funding the urgency of the issue to be dealt with within the perspective of Turkey's EU candidacy gains significance. In addition to the EU, in an effort to both understand the past as well as the prospects for future, the policies of the US, the Russian Federation, Japan, Australia, India and China are also examined briefly.

The last chapter has been devoted to Turkey. First the international dimension of the climate change policy of Turkey has been analyzed since Turkey's involvement in the climate change issue has been through the international influence. The negotiations which Turkey has undergone until the present day have been examined to be able to assess Turkey's place in the present climate regime. Considering that the present climate regime is the outcome of both the UNFCCC and the Kyoto Protocol rather than the UNFCCC alone, this thesis claims that Turkey seems to be partially left out of the present climate regime. The UNCFFF has declared Turkey's Annex I status in 2001. However, at the same time, it has emphasized that Turkey had special circumstances which put it in a different position from those of the other Annex I Parties.

As a result of this decision, Turkey has not been able to sign the Kyoto Protocol with the fear that it might automatically become an Annex B Party with quantified emissions reduction targets. Therefore, as an Annex I Party, Turkey has not been able to benefit from the flexibility mechanisms of the Kyoto Protocol designed for the Annex I Parties. In addition to this, since it has not been possible to make the amendment to place itself as a developing country in the non-Annex I list to the UNFCCC, it would not be possible for Turkey to benefit from those mechanisms of the Kyoto Protocol designed for the non-Annex I countries, either. Moreover, Turkey has not made any proposals to negotiate its special circumstances as well. Turkey has been a passive member of the climate regime. The only initiative from Turkey has been its accession to the UNFCCC in 2004 as one of the last countries in the world. Through this accession Turkey has been able to prepare its first national greenhouse gas inventory and its First National Communication at the beginning of 2007.

This thesis argues that Turkey needs to negotiate its place in the climate regime of the post-2012 urgently since these negotiations are expected to be finalized in 2009. For this end, Turkey should first ratify the Kyoto Protocol. Otherwise, Turkey might be forced by other states to take place in the climate regime with a *fait a compli*. Since Turkey has experienced such a development during the past concerning its placement in the Annex I of the UNFCCC together with the industrialized countries of the world and has lost so many years to change such a decision by ending up with its present vague status, it should not let this happen once more. Turkey is certainly in the need for negotiating its position. At the present conjuncture, the punitive measures that might be used against those countries who are not taking part in the climate regime do not seem to be far away.

For this end, the relations between the EU and Turkey on climate change have also been analyzed as forming another very significant angle of the international dimension of the climate change policy of Turkey. Due to the fact that Turkey needs to negotiate its special national circumstances, an examination has been assessed with the aim of being able to grasp the nature of these circumstances. Depending on this examination, this thesis maintains the view that Turkey has become one of the advanced developing countries of the world. Therefore, during the negotiations Turkey might come together with the other advanced developing countries to make its voice heard better. Presently, the countries have started to discuss many alternative ways of emissions reduction commitments other than quantified

emissions reduction targets of the first commitment period. The First National Communication of Turkey can guide Turkey on deciding what Turkey can offer to the world to reduce or even to control its emissions. Presently, the goal of countries to continue their developments through controlling their emissions should be embraced by the world community as the new global value created by the climate regime which should actually be obligatory for a sustainable Earth. For those who care more about the economic aspects of climate change mitigation, there is not much to worry since the capitalist system has already created the necessary tools to curb down the costs of compliance.

When analyzed through a realist perspective, Turkey's climate change policy might seem to fit very well with the realist themes of interest. However, her interactions with several international actors, especially with the EU, challenge this realist stand. Therefore, neoliberal institutionalism provides a different and more satisfactory perspective to explain Turkey's position and offer a framework to act in line with the requirements of the global climate change regime.

Yet, there are some approaches which may well define Turkey's dynamics and perceptions lying behind its position until the present day, like the man-milieu relationship, rational choice theory and political behavior. Analyzing such theoretical approaches will also give some feedback to understand how Turkey tries to construct its special circumstances during the negotiations for the post-2012 period. The construction of these special circumstances also has the potential to shape the possible discourses of Turkey on environment, development, international environmental cooperation and vice versa. While the political economy approaches provide useful tools for Turkey both to form a strong link between environmental and economic concerns, Putnam's two-level metaphor helps Turkey to establish its position at the international climate change negotiations especially for the post Kyoto period. The interactions between national and international spheres of policy-making are important elements of Turkish global climate change policy and therefore, it is necessary to look at the issue from this perspective starting from the early stages of the climate change regime. It is obvious that at the very beginning of the global climate change regime, NGOs, scientific research, government institutions and public opinion did not have enough capacity and ability to shape Turkey's position in this newly evolving regime. As a result of the worldwide dissemination of new scientific findings about climate change, throughout the years, the role and involvement of national actors have gained significance in Turkey concerning climate change.

Concerning the negotiations for the post-2012 period, Turkey has to find a way to combine the requirements of international dynamics and its national concerns to benefit most from the new climate change regime while taking on responsibilities to combat climate change. However, this study does not intend to scrutinize into the details of policy-making process of Turkey or examine the role and development of national actors. It only tries to reveal a general picture of national factors and actors shaping the climate policy in Turkey with the hope of paving the way for further studies on the subject.

This is mainly a descriptive study. In this study, therefore, primary sources as well as current publications on global climate change including newspapers were used to be able to catch up with the rapidly evolving international developments. Interviews were also made with EU officials as well as officials from the Turkish Ministry of Environment and Forestry (MoEF), Ministry of Foreign Affairs, Secretariat General for EU Affairs and NGO representatives from Turkey and Europe. Websites of UNFCCC, OECD, World Bank, Rec Turkey and MoEF were also used to reach reliable and most current information.

II. GLOBAL CLIMATE CHANGE AND INTERNATIONAL COOPERATION

With the new scientific findings of the 1970s, global climate change has entered the world stage as a growing problem for the countries of the world. During these years, many environmental problems have attracted the attention over the world. However, climate change has managed to move from being the concern of scientific community to a global problem for which the international community has come together for a global solution. Taking into consideration the level of international cooperation achieved until presently, it becomes possible to assess the importance of the issue for the social, economic and ecological systems on the earth. Therefore, prior to the analysis of international cooperation on global climate change, it would be useful to start by describing what climate change is as well as its probable impacts on earth in the years to come.

2.1 Climate Change

Among the environmental problems of the last couple of years, climate change is, certainly, the most important and most difficult one to manage (Dessler & Parson, 2006: 1). In the United Nations Framework Convention on Climate Change (UNFCCC), climate change is defined as:

> ...a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods (UNFCCC, 1992, Article 1).

The climate change problem is linked to the excess amount of greenhouse gases (GHGs) present in the atmosphere. According to the Intergovernmental Panel on Climate Change (IPCC) findings, this excess amount of GHGs emanates mostly from human activities since the years of the industrial revolution. Starting from those years, the increasing usage of fossil fuels all over the world has given way to a climate change which is expected to have dramatic impacts on the future lives of many people on the earth (Yamin and Depledge, 2004: 20). The fact that the reasons of climate change were largely antropogenic in nature; that is the reasons of climate change were largely human-induced, has made this problem a global one to be fought against.

2.1.1 Greenhouse Effect and Human Impact

The life on earth depends on the moderating influences of gases which fold the planet to warm its surface and to protect it from harmful radiation. This warming capacity of these gases is known as the 'greenhouse effect' (Rosa, 2001: 492). The greenhouse warming theory was first put forward by the Swedish chemist Svante Arrhenius (1896) at the end of the 19th century. However, it has become a political issue only in the 1990s (Bodansky, 2001: 24).

In more detail, the Earth receives energy from the Sun. Almost one-third of this energy is reflected directly back to space by the Earth's atmosphere. The surface of the Earth together with the atmosphere absorbs the remaining two-thirds of this energy. Much of this remaining radiation absorbed by the lands and oceans are emitted back to the atmosphere. This radiation is absorbed by the atmosphere and reradiated back to the Earth. This is called the 'greenhouse effect'. It is through this greenhouse effect that the surface of the Earth is warm enough, otherwise, the temperature of the surface of the Earth would be below the freezing point of water. Therefore, through the greenhouse effect, life on Earth becomes possible for humans. However, some human activities, especially the burning of fossil fuels and land use changes have led to the intensification of the greenhouse effect, and resulted in climate change (IPCC, 2007a). Hence, the increasing greenhouse effect is the main concern for the world.

According to the IPCC's 1996 report, the global mean temperature has increased over the last century by between 0.3 and 0.6 degrees Celsius. The 80s were the warmest decade on a global scale and 1990 and 1995 were the warmest years ever recorded. Hence, people are deforming the atmosphere in such a direction that it will bring irreversible climate change which might challenge "the sustainability of many ecosystems and all forms of social organization" (Rosa, 2001: 493).

Water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone are the major greenhouse gases. However, nitrous oxide (N_2O), sulfur hexaflouride (SF_6), hydroflourocarbons (HFCs), perflourocarbons (PFCs) and cloroflourocarbons (CFCs) are also greenhouse gases. The most important greenhouse gas is carbon dioxide (CO_2), resulting primarily from the burning of fossil fuels. It has long been put forward by the scientists that changes in the carbon dioxide composition of the atmosphere could lead to global warming. Scientific monitoring has clearly demonstrated the accumulation of the main greenhouse gases in the atmosphere. Since 1750s, the preindustrial times, the accumulation of these gases has "led to a positive radiative forcing of climate", tending to warm the surface and to

produce other changes in the climate (Rosa, 2001: 493). In its 1996 report, the IPCC has announced that the atmospheric concentrations of greenhouse gases have grown significantly; carbon dioxide (CO_2) by 30%, methane (CH_4) by 145% and nitrous oxide (N_2O) by 15%. These results have led to a scientific and epistemic consensus which has been concluded in the 1996 report of the IPCC that "the balance of evidence suggests a discernible human influence on global climate" (Rosa, 2001: 493).

2.1.2 The possible impacts of climate change

Climate change might have far-reaching impacts for the world and humanity. An increase in global temperatures might lead to an accelerated hydrological cycle which might result in severe droughts and floodings in areas that are now productive farming regions. In some regions, there might be increases in natural events like hurricanes or in some others there might be increases in tropical diseases. The national and global food supplies, trading structures, the overall world economy, even the structure of political alliances might change. Hence, as a result of the possible changes in the present distribution of resources among the nations, the balance of power between them might also change (Luterbacher & Sprinz, 2001: 7).

Climate change threatens human survival in various ways. For instance; it affects freshwater availability, food production, human health, recreational opportunities, risks of extreme whether events like floods or droughts. Predictions concerning the impacts of climate change are difficult and uncertain. These impacts differ from region to region. For example, the effects of a few degrees increase in temperatures over a desert and over a forest would be very different from each other. In addition to this, the impacts may depend on the dimension of climate change. In some regions precipitation, humidity or winds might increase, whereas, in other regions these might show a decrease (Dessler & Parson, 2006: 81). All of these might have different impacts on the lives of people.

As a result of climate change, the weather is expected to become more variable and unstable which would have dramatic effects on the daily lives of people as well as businesses. Unfortunately, the adverse trends in the weather conditions are expected to affect mostly the poor countries and communities with limited resources to adapt. In every region, while droughts may lead to water shortages, heavy rainfalls might lead to floods. As a result, many diseases may extend their geographical ranges. Countries might face serious changes in agricultural activities and patterns based on changing temperatures as well as food scarcity.

On the other hand, sea level rise might threaten the small-island states as well as the coastal regions of the countries (Yamin & Depledge, 2004: 22).

2.2 International Cooperation on Global Climate Change

Climate change has been introduced to the world community in the 1960-70s by the scientific community. Its development as a global political issue has almost taken two decades. Within rather a short period of time, the countries of the world have been able to assess the importance as well as the global nature of the issue and have managed to cooperate under the UNFCCC as being the first international effort on climate change. Certainly, the time period between the emergence of scientific information on climate change and the signing of the first global initiative; the UNFCCC has witnessed various developments which have contributed to the evolution of climate change as a political issue over the years giving way to the UNFCCC[1].

2.2.1 Reaching Scientific Consensus

As early as 1960s, scientists proved that atmospheric concentrations of carbon dioxide –the primary greenhouse gas in the atmosphere- were increasing. One of the major facts showing this increase was the so-called Keeling Curve (Graph 2.1). This curve has paved the way to the growth of scientific concern in the late 60s and early 70s (Bodansky, 2001: 24).

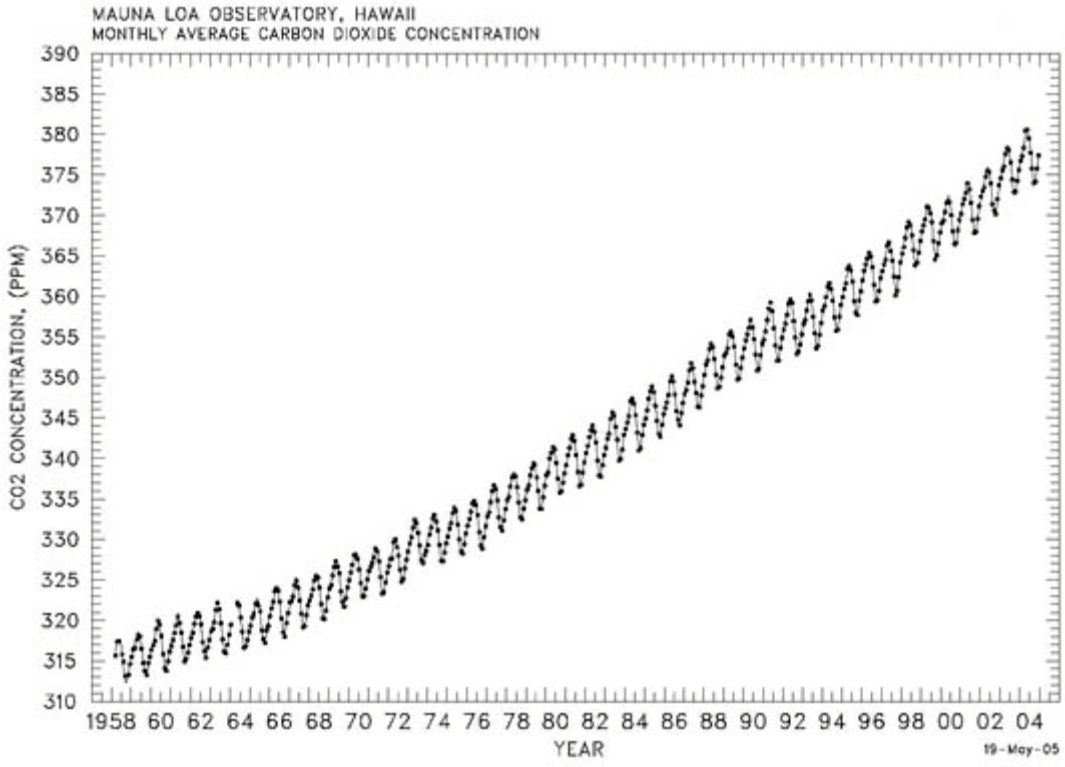
The Keeling curve is the graphical expression of the variation in the concentration of CO_2 since 1958. It takes its name from Charles David Keeling of the Scripps Institution of Oceanography, who was the first person to make these regular measurements of CO_2 concentration in the atmosphere since 1958. This curve is seen as the evidence of man-made increases in GHGs which is thought to cause global warming (Scripps Institution of Oceanography, 2005).

In the 80s, the development of computer technology has allowed more sophisticated work to be performed and consequently predictions to be more reliable. The United States National Academy of Sciences has concluded in its report of 1979 that "there is no reason to

[1] It is the economic implications of the global climate strategy which have transferred the negotiations in 1990 from the science-based bodies (the World Meteorological Organization and the United Nations Environment Programme) to the political framework of the United Nations General Assembly. The limitations on greenhouse gases affect the heart of the industrialized countries in terms of their energy and transport sectors, thereby touching the interests of many companies and lobbies (Cutajar, 2004: 62).

doubt that climate change will result and no reason to believe that these changes will be negligible" (Bodansky, 2001: 24).

Graph 2.1. The Keeling Curve



Scripps Institution of Oceanography
http://scrippsnews.ucsd.edu/Releases/?releaseID=687

In 1988, NASA scientist James Hansen has announced in the US Senate Committee that he was 99% certain that global warming was underway (Pielke, 2000: 9). His statement has quickly attracted attention from the public, media and policy-makers. In the same year, the IPCC has been established which came up with similar conclusions (Dessai *et al.*, 2003: 184).

2.2.2 Establishment of the International Panel on Climate Change (IPCC)

The IPCC has been established by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) in 1988 due to the recognition of climate change as a potential global problem. It has been open to all the members of the UN and the WMO. The major aim of the IPCC is to provide comprehensive, open and transparent

scientific, technical and socio-economic information relevant to understanding the scientific basis of human-induced climate change. Analysis of the potential impacts of climate change as well as options for adaptation and mitigation are also among the goals of the IPCC. The IPCC does not operate research on climate change, but rather it bases its assessments on the peer reviewed and published scientific and technical literature. This important characteristic of IPCC forms the basis of its objectivity regarding its publications[2].

The IPCC[3] has three Working Groups and a Task Force. Duty of the Working Group I is to assess the scientific aspects of the climate system and climate change. Working Group II aims to assess the vulnerability of socio-economic and natural systems to climate change. This group also analyses the impacts of climate change as well as the options for adaptation. The Working Group III concentrates on the options of reducing GHGs to mitigate climate change. The fourth group is the Task Force on National Greenhouse Gas Inventories (Yamin & Depledge, 2004: 466-470).

2.2.3 Reports of the IPCC

The IPCC publishes assessment reports, special reports and technical papers to present current scientific data and findings on the state of climate change in order to help policy makers. While special reports and technical papers are prepared at the special request either by the Subsidiary Body for Scientific and Technological Advice (SBSTA) of the IPCC or by other international regimes as well as individual parties, such as; International Civil Aviation Organization or the Meeting of the Parties (MOP) of the Montreal Protocol to contribute to world wide sustainability targets (Yamin & Depledge, 2004:468).

Assessment reports are the most important products of the IPCC which shape the international climate change negotiations. The First IPCC Assessment report has been published in 1990. The role of this report has been very important in the establishment of the Intergovernmental Negotiating Committee (INC) for the preparation of a Framework Convention on Climate Change under the United Nations. More than 500 scientists have been involved in the preparation of this report (Raustiala, 2001: 112). The Second IPCC

[2] For further information see IPCC Web Page: http://www.ipcc.ch/about/about.htm.
[3] The IPCC meets once in a year to take decisions on the work plans of the Working groups and the Task Force. The IPCC is managed by the IPCC Secretariat which is represented by WMO in Geneva. One of the major activities of the IPCC is to provide regularly assessment reports related to the state of knowledge on climate change. In addition to this, the IPCC prepares Special Reports and technical papers with the aim of providing independent scientific information (www.ipcc.ch/).

Assessment Report, which has been published in 1995[4], has been very important, too. It has provided the impetus for the negotiations which have been finalized by the adoption of the Kyoto Protocol in 1997. The tone of this second report has reflected greater certainty concerning human influence on climate change as well as a greater sense of risk concerning collective inaction. The Third IPCC Assessment Report has been finalized in 2001 and has been submitted to the 7th Conference of the Parties to the UNFCCC (COP7). In this report, the IPCC continued to support the reality of human induced climate change and, accordingly, has declared that again it was likely that there was human influence on climate change. According to the IPCC, likely was meaning between 66-90% probabilities. The Fourth IPCC Assessment Report has been published in February 2007. In this report, the IPCC has concluded that it was at least 90% certain that rather than natural variations, it was human emissions of greenhouse gases which were warming the Earth (IPCC, 2007a). According to this report, the temperatures would probably rise by between 1.8 and 4 degrees Celsius until the end of this century. Besides, sea levels are expected to rise 28-43 cm. The Arctic summer ice is expected to disappear in the second half of this century. Increases in heatwaves as well as tropical storms are very likely to be seen (BBC News, 2007).

On the overall, the IPCC has "represented an attempt to centralize and formalize the interaction between science and politics and to put governments in charge" (Raustiala, 2001: 112). The IPCC has played a very important role in the sense that it has been a central source of scientific information concerning climate change policies for the countries over the years. Its effectiveness resulting from its intergovernmental nature has been very important in keeping its reliable status (Raustiala, 2001: 113).

2.3 Formation of the Climate Change Regime

It is the late 80s and early 90s; that a wave of environmental activity concerning climate change has begun to develop in the world. The turning point in the global climate change negotiations is the conclusion of the Kyoto Protocol in 1997. Until 1997, many events have helped forming the climate regime.

During the 1960s, public consciousness has begun to develop in the world about the importance of sustainability on human lives. At those years, people began witnessing oil

[4] The 1990 and 1995 reports of the IPCC has signaled the importance of the problem. Especially, in its 1995 report, the IPCC has declared its famous statement that "the balance of evidence suggests that there is a discernible human influence on global climate" (IPCC, 1995).

spills, contamination of clean waters, waste related problems and increasing air pollution in most of the big cities. In 1987, the discovery of the ozone hole has been another important event attracting attention (Bodansky, 2001: 23).

In 1987, the World Commission on Environment and Development issued its first report as the result of three years' study and debate. This report called 'Our Common Future' which in the later years was referred to as the 'Brundtland Report' (named after the ex-prime minister of Norway) had a great impact on the globalization of environmental matters (Rosa, 2001: 492). The report drew attention to the fact that the present world trends in resource use and their environmental impacts could not continue indefinitely, therefore, they should be changed. The report also emphasized the important point that these environmental matters could not be solved within the scope of the nation state; instead they should be solved with global cooperation. The main idea of the report was 'sustainability'. Although the idea of sustainable development was not new, the Commission and the report attracted attention to the concept by bringing it to the global platform (Rosa, 2001: 492). With this report, new global problems were introduced into the global environmental agenda:

* The loss of tropical forests (deforestation)
* The growth of deserts (desertification)
* The loss of biological diversity (biodiversity)
* Large scale pollution of the oceans
* The appearance of holes in the stratospheric ozone layer
* Increases in atmospheric greenhouse gases (Rosa, 2001: 492).

The above mentioned global problems can clearly be separated into two groups: cumulative and systemic (Rosa, 2001: 492). Deforestation, desertification and loss of biodiversity emphasize the environmental impacts which are generally localized but their effects are worldwide because of their cumulative nature, therefore fall in the first class. Whereas ocean pollution, ozone loss and climate change are systemic in nature because their causes are initiated anywhere on earth and their effects are felt everywhere on earth, therefore they fall in the second class. Certainly, among these, global climate change, with its systemic pervasiveness emerges as one of the most important environmental matters of humans (Rosa, 2001: 492).

In 1988, in the Toronto Conference, it was announced that the states should develop a framework convention on the law of the atmosphere and that global carbon dioxide emissions should be cut by 20% by 2005. In the same year, the issue was also discussed in the United Nations General Assembly and it was accepted that climate change was a common concern of

mankind. As the result of the Hague Summit, and the Noordwijk Conference in 1989 as well as the Second World Climate Conference in 1990, which had attracted ministers and even heads of government, there had been agreement that industrialized countries should stabilize greenhouse gas emissions as soon as possible and that the signatories will promote new institutional authority to combat global warming, involving unanimous decision-making. Certainly, among these developments, the announcement of the IPCC First Assessment Report (1990) stating that "global mean temperature is likely to increase by about 0,3 °Celsius per decade under business-as-usual scenario" had been very important (Bodansky, 2001: 25). Actually, the understanding of the greenhouse problem in the scientific arena and the climate change regime had developed together; pushing each other.

2.3.1 Transition from Scientific Knowledge to Government Action

As a result of the various meetings and conferences held, scientific information about climate change has been disseminated to most of the countries of the world and helped the creation of an atmosphere for political action (Table 2.1).

Until 1988, nongovernmental actors, especially environmentally oriented scientists had dominated the climate change issue. The years 1988–1990 had been transitional when nongovernmental actors had still been active; however, governments began to play a greater role. In other words, in these years, climate change emerged to be an intergovernmental issue. Nevertheless, in the early 90s, mainly the governments of Western industrialized countries were interested in climate change as the result of the scientific research they have conducted as well as the environmental constituencies and ministries they have established (Bodansky, 2001: 28).

Although the issue was newly intergovernmental, splits became visible among groups of countries. The European Union together with the so-called CANZ group (Canada, Australia and New Zealand) supported the approach of establishing quantitative limitations on the national emission levels of greenhouse gases (targets and timetables). On the other hand, the United States together with Japan and Soviet Union wanted more emphasis on scientific research and the development of national rather than international strategies and programs. The reason lying behind this difference between the EU and the US can be explained by the disparities in the perceived costs of abatement. The US, having large reserves of cheap coal, has a high source of carbon dioxide per unit energy. On the other hand, for example, Germany subsidizes coal production and consumption and can save money by using natural

gas. Certainly, the reasons behind these differences cannot be reduced to an economic explanation. Another explanation can be made through an interest-based approach in which case it would be possible to argue that the US was trying to create a reputation for toughness in a much larger and longer term game. The differences in the national positions might have also be affected by domestic politics. In the Western countries, the climate change issue was the responsibility of environmental and foreign ministries. However, in the US it was coordinated by the White House Domestic Council where the Department of Energy, the Office of Management and Budget as well as the Council of Economic Advisors were dominant who were pessimistic about climate change and the economic costs of mitigation measures (Bodansky, 2001: 29).

Table 2.1 Key Events in the Formation of the Climate Change Regime

Conference	**Date**	**Organizer**	**Conclusions**
Villach Conference	1985	WMO & UNEP	* Significant climate change is highly probable * States should initiate consideration of developing a global climate convention
Toronto Conference	1988	Canada	* Global CO2 emissions should be cut by 20% by 2005 * States should develop comprehensive framework convention on the law of the atmosphere
UN General Assembly	1988	UN	* Climate change a "common concern of mankind"
Hague Summit	1989	Netherlands	*Signatories will provide new institutional authority to combat global warming, involving non-unanimous decision making
Noordwijk Conference	1989	Netherlands	*Industrialized countries should stabilize greenhouse gas emissions as soon as possible * Many countries support stabilization of emissions by 2000
IPCC First Assessment Report	1990	WMO & UNEP	* Global mean temperature likely to increase by about 0.3C Per decade, under business-as-usual emissions scenario
Second World Climate Conference	1990	WMO & UNEP	*Countries need to stabilize GHG emissions *Developed states should establish emissions targets and/or national programs or strategies
UN General Assembly	1990	UN	*Establishment of INC
UNCED Conference	1992	UNCED	*FCCC opened for signature
First Conference of the Parties (COP1)	1995	FCCC	*Berlin Mandate authorizing negotiations to strengthen FCCC commitments
Second Conference of the Parties (COP2)	1996	FCCC	*Geneva Ministerial Declaration
Third Conference of the Parties (COP3)	1997	FCCC	*Kyoto Protocol

Source: (Bodansky, 2001:25-26).

Apart from the Western industrialized countries, differences also emerged between the developed and developing countries, in other words between North and South. The developing countries argued that climate change should not be seen simply as an environmental issue but as a development issue as well. As a result, they tried to move the negotiations from the IPCC to the UN General Assembly. Accordingly, the 1990 December resolution authorizing the initiation of the negotiations announced the General Assembly rather than the IPCC for the preparation of a convention. Nevertheless, their unity did not go long. They could only agree on the need for financial assistance and technology transfer. The small island developing states supported the establishment of timetables and targets as a result of the fear of sea-level rise. They organized themselves under the name of Alliance of Small Island States (AOSIS) and played a major role in the UNFCCC negotiations in pushing for the reduction of the CO2 emissions. On the other hand, the oil-producing states questioned the science of climate change. The big industrializing countries like Brazil, India and China emphasized on their right to develop economically. According to them, it was the North who had historically been responsible for creating this problem; therefore it should again be the North who should be responsible to solve it (Bodansky, 2001: 30).

2.3.2 The United Nations Framework Convention on Climate Change (UNFCCC) Negotiations

Although international environmental law had developed significantly over the last couple of decades, it was not capable of regulating the newly emerging climate change issue. Therefore, there was the need for a new treaty concerning climate change. In 1990, the UN General Assembly established the Intergovernmental Negotiating Committee for a Framework Convention on Climate Change (INC/FCCC) to negotiate a convention. The FCCC was adopted and opened to signature on May 9, 1992 at the United Nations Conference on Environment and Development in Rio de Janeiro. The UNFCCC was signed by 154 countries and the EC during the Rio Summit. Except Turkey, all the OECD countries at that time have signed the Convention (Bayramoğlu, 1997: 145). After the ratification by 50 states, the Convention entered into force on March 21, 1994 (Dessa*i et al.*, 2003: 184). The Article 2 of the UNFCCC clearly defines its main objective as:

> The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level

> that would prevent dangerous anthropogenic interference with the climate system. Such a 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 enable economic development to proceed in a sustainable manner (UNFCCC, 1992, Article 2).

There are three country groupings within the UNFCCC with different responsibilities to combat climate change. However, these responsibilities are not binding commitments. This has been considered to be a big disadvantage for confronting the climate change threat. Nevertheless, UNFCCC is still an important step in paving the way to the more concrete and binding commitments which were required by the Kyoto Protocol. In addition to this, the UNFCCC has provided the initial international platform for further climate change negotiations. The Annexes under the UNFCCC define the 'mutual but differentiated responsibilities' and list the countries accordingly. Annex I parties are the industrialized countries which were members of the Organization for Economic Cooperation and Development (OECD) at that time[5] together with the countries with Economies in Transition (EIT). Annex II countries are the OECD countries that were listed in Annex I except the countries with EIT. Annex I Parties are required to reduce their GHG emissions individually or jointly to their 1990 levels. In addition to their Annex I commitments, Annex II parties are required to provide financial and technical assistance to developing countries as well as EIT countries[6]. Non Annex I countries are mostly the developing countries which are under the Convention recognized to be especially vulnerable to the adverse impacts of the climate change. All Parties to the Convention have to provide national communications that are reports indicating the steps in implementing the Convention. However the required contents of these national communications differ among Annex I and non-Annex I Parties (UNFCCC, 1992).

The Conference of the Parties (COP)[7] is the supreme body of the Convention. It is the highest decision making authority consisting of all the countries which are Parties to the Convention. Unless the Parties decide otherwise, the COP meets every year (Yamin &

[5] Only those countries which were OECD members in 1992 were considered as Annex I Parties. Later OECD memberships have not changed the Annex I list. For instance, Mexico is still a non-Annex I country although it became an OECD member in 1996.

[6] Article 4.3 of the UNFCCC lists the obligations of the Annex II parties. These obligations include development and transfer of environmentally friendly technologies both to the developing countries and EIT parties to reduce their emissions as well as helping them to adapt to the adverse effects of the climate change. Annex II parties are also responsible for providing financial assistance for these activities in these countries (UNFCCC, 1992, Article 4).

[7] The COP is responsible for the international efforts to address climate change. It is responsible for the implementation of the Convention as well as examination of the commitments of the Parties. It is one of the duties of the COP to review the national communications and emission inventories submitted by the Parties.

Depledge, 2004: 398). The meetings of the COP held until 2007 are listed in Table 2.2. The outputs of the COPs can be some legally binding instruments such as; amendments, annexes as well as amendments to annexes[8]. In addition to this, the COP can take decisions; which are statements by the COP with the aim of guiding Parties' conduct and implementation of the Convention. Besides, the COP can make declarations; which are political agreements drafted at the ministerial level. Resolutions, on the other hand, are used to provide the expression of COP, especially on some ceremonial issues, such as the expression of gratitude to the host country of the COP. The last type of output produced by the COP is the reports which contain the procedural and organizational arrangements within the COP such as the election of officers, documents presented as well as the summary of the opening speeches (Yamin & Depledge, 2004: 406-407).

Table 2.2 The List of COP Sessions Until 2007

COP	Dates	Venue
COP1	28 March – 7 April 1995	Berlin, Germany
COP2	8-19 July 1996	Geneva, Italy
COP3	1-11 December 1997	Kyoto, Japan
COP4	2-14 November 1998	Buenos Aires, Argentina
COP5	25 October-5 November 1999	Bonn, Germany
COP6	16-24 November 2000	The Hague, Netherlands
COP6 Part 2	13-27 July 2001	Bonn, Germany
COP7	29 October-9 November 2001	Marrakesh, Morocco
COP8	23 October-1 November 2002	New Delhi, India
COP9	1-12 December 2003	Milan, Italy
COP10	6-17 December 2004	Buenos Aires, Argentina
COP11	28 November-9 December 2005	Montreal, Canada
COP12	6-17 November 2006	Nairobi, Kenya
COP13	3-14 December 2007	Bali, Indonesia

Source: UNFCCC Web site.

Based on this information, the COP assesses the progress achieved by the countries. For further information on COP, see: http://unfccc.int/essential_background/convention/convention_bodies/items/2629txt.php.

[8] Ratification of each Party is required for the Protocols and amendments to the Convention for them to enter into force. However new annexes and amendments to the annexes enter into force automatically, except for the rejecting Parties (Yamin & Depledge, 2001:406).

Under the Convention, two permanent subsidiary bodies have been established to advise and assist the COP: the Subsidiary Body for Scientific and Technological Advice (SBSTA)[9] and the Subsidiary Body for Implementation (SBI). Both of these bodies are open to participation by any Party. Many representatives and experts sent by various governments work within these bodies. The SBI, on the other hand, provides COP with advice on all matters concerning the implementation of the Convention[10]. Both the SBSTA and the SBI meet twice a year (Yamin & Depledge, 2004: 415-418).

One year after the Convention's entry into force, the First Conference of the Parties (COP1) has met in Berlin, in 1995. In this meeting, it was agreed that the commitments were inadequate and it was decided to establish an ad hoc committee for the negotiation of a protocol by 1997 aiming at the preparation of additional commitments (legally binding targets) for industrialized countries regarding the post-2000 period. This was known to be the Berlin Mandate. The negotiations continued for two years ending up with the Kyoto Protocol in 1997. Initially, little progress was made, countries questioned every detail. COP2 in 1996; during which the Geneva Ministerial Declaration was adopted, had been a turning point, because it reaffirmed the need for legally binding quantified emission limitation and reduction objectives (QELRO) as well as the will to act in the absence of consensus for the first time. Therefore, the Geneva Ministerial Declaration has provided further impetus to the on-going negotiations (Bodansky, 2001: 34).

2.4 The Kyoto Protocol

In 1995, the Intergovernmental Panel on Climate Change has made the serious warning that "the balance of evidence suggests a discernible human influence on global climate" and that "climate will change due to anthropogenic causes" (IPCC, 1995: 22). This

[9] The major task of SBSTA is to provide the COP with scientific, technological and methodological advice. SBSTA especially works on "promoting the development and transfer of environmentally-friendly technologies and conducting technical work to improve the guidelines for preparing national communications and emission inventories" (UNFCCC website: www.unfccc.int/essential_background/convention/convention_bodies/items/2629txt.php).

[10] However, its most important task is the examination of the information in the national communications and emission inventories submitted by the Parties. The SBI has the responsibility to review the financial assistance given to the non-Annex I Parties and gives advice to the COP on the financial mechanisms operated by the Global Environment Fund (GEF). The SBI provides advice to the COP on budgetary and administrative matters as well. For further information on the working of SBI, see: UNFCCC website www.unfccc.int/essential_background/convention/convention_bodies/items/2629txt.php

warning has been very important for the negotiations of the Kyoto Protocol (Schulze *et al*., 2002: 506).

As a result, in 1997, at COP3, in Kyoto, the Kyoto Protocol was signed. It has created several 'flexibility mechanisms' or Kyoto Mechanisms, including International Emissions Trading, Joint Implementation (JI) as well as Clean Development Mechanism (CDM). For the Protocol to enter into force it should have been ratified by at least 55 Parties and the GHG emissions of these parties should account for at least 55% of the total emissions from Annex I countries in 1990. However, details about how the flexibility mechanisms would work were left for future negotiations. One year later, at COP4, in Buenos Aires, the parties agreed on a work plan to develop the detailed rules of the flexibility mechanisms (Dessai *et al*., 2003: 184). It was clear at that time that the obstacles to global action were political rather than scientific in nature.

2.4.1 The Aim Of The Kyoto Protocol

The aim of the Kyoto Protocol is to contain and even reduce the main greenhouse gases in the atmosphere. The main source of greenhouse gases is the fossil fuel emissions; in large part CO_2. The Kyoto Protocol aims to reduce the emissions of CO_2 in ways that can reflect the major national differences in emissions, wealth and capacity. The effects of CO_2 has attracted attention to the use of energy in the industrialized world, leading to the plans to invest in research and development in the field of alternative and renewable energy sources. However, GHGs that the Kyoto Protocol covers are not limited with CO_2. The other gases which are listed in Annex A of the Kyoto Protocol are methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6)[11]. Annex A also includes the sources as well as the sectors from which these GHGs are emitted into the atmosphere (Kyoto Protocol, 1997).

The nature of the climate change issue has required new approaches like the adoption of 'common but differentiated' responsibilities which have led to the leadership of the richer and higher-emitting industrialized countries (Grubb, 2004: 16). Therefore, Annex B of the Kyoto Protocol lists the quantified emission limitation or reduction commitments of the

[11] All these gases are put together in the same basket for accounting purposes weighed by their respective global warming potentials (GWP). GWP is defined by the IPCC as the measure of the relative effect of a substance in warming the atmosphere over a given time period which is compared with a value of one for carbon dioxide (UNFCCC, 2005:25).

Annex I Parties under the Convention. All in all, the Kyoto Protocol's target is to reduce the emissions to a rate that can be re-absorbed by natural processes (Schulze *et al.* , 2002: 506).

In a nutshell, the Kyoto Protocol aims to achieve the worldwide reduction of GHG emissions which are responsible for the current global warming. The Protocol tries to achieve a balance between technically and economically feasible ways to reduce the anthropogenic emissions as well as to reduce the concentration of carbon dioxide and other GHGs in the atmosphere. Its focus is to promote energy efficiency, switching to cleaner energy sources and the technological innovation needed for attaining these goals (Cutajar, 2004: 66).

The Kyoto Protocol sets a legal framework for remedial and precautionary action against the possible impacts of climate change by supplementing and strengthening the Convention. Therefore, only the UNFCCC Parties could become Parties to the Protocol. Due to this reason, the Conference of the Parties serves as the Meeting of the Parties (MOP) to the Protocol. Besides, the Protocol is supported by the IPCC on scientific, technical and methodological matters, in the same way provided to the Convention (UNFCCC, 2005:24).

2.4.2 The important elements of the Kyoto Protocol

Under the Protocol, the Annex B countries are the 24 countries plus the European Union listed in Annex I to the UNFCCC (see table 2.3). These countries are the industrialized and high per capita income countries. The base year has been chosen by the UNFCCC to be 1990 since it has been the year when the first report of the IPCC formally declared climate change as a serious issue[12] (Grubb, 2004: 18).

With the Kyoto Protocol, Annex I Parties under the Convention have committed themselves to a reduction that

> ..their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A do not exceed their assigned amounts, calculated pursuant to their quantified emission limitation and reduction commitments inscribed in Annex B and in accordance with the provisions of this Article, with a view to reducing their overall emissions of such gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012 (Kyoto Protocol, 1997, Article 3.1).

In 2000, the per capita emissions of the industrialized countries have been almost ten times bigger than those of the developing countries[13]. In fact, this is an important reason why the industrialized world has taken the responsibility to deal with the climate change issue

[12] The EIT Parties, however, were able to choose another base year. Additionally, any Party could choose either 1990 or 1995 for emissions of HFCs, PFCs and SF_6 (UNFCCC, 2005:25).

without the support of the developing world. On the other hand, the low emissions and large population of developing countries present a potential threat as these countries develop over the years in terms of growth in their emissions. Therefore, the inclusion of the developing world into the climate negotiations will be inevitable in the coming years (Grubb, 2004: 16).

Table 2.3 Countries included in Annex B to the Kyoto Protocol and their emissions targets

Country	Target (1990-2008/2012)
EU-15, Bulgaria, Czech Republic, Estonia, Latvia,Liechtenstein, Lithuania, Monaco, Romania,Slovakia,Slovenia, Switzerland	-8%
US	-7%
Canada, Hungary, Japan, Poland	-6%
Croatia	-5%
New Zealand, Russian Federation, Ukraine	0
Norway	+1%
Australia	+8%
Iceland	+10%

Source: http://unfccc.int/kyoto_protocol/background/items/3145.php

According to the Protocol, the reduction should be at least 5% when averaged across all Annex B nations in order to minimize adverse effects of climate change (Kyoto Protocol, 1997, Article 2.3). Therefore, each Annex I Party of the UNFCCC is committed under the Kyoto Protocol not to exceed its assigned amount in the first commitment period between 2008-2012. The specific commitments vary among countries resulting in country specific 'assigned amounts' for emissions between 2008-2012 (see table 2.3). For example, some countries are allowed to increase emissions like Australia (+8%), while others should make reductions. In addition to this, the creation of carbon sinks[14] is allowed to offset emissions which can be achieved by planting new forests (afforestation and reforestation) instead of deforestation as alternative ways of reducing the emissions[15] (Kyoto Protocol, 1997, Article 3.3).

Under the Protocol, the Parties are obliged to implement climate change policies and measures at home which lead to reductions in emissions. These include; enhancing energy

[13] According to the International Energy Agency (IEA), the share of Annex B countries in global CO_2 emissions as of 2000 were 60% (UNFCCC, 2005:25).

[14] A carbon sink is a natural reservoir which absorbs CO_2 from the atmosphere. The major sinks are oceans, plants and other organisms which use photosynthesis to remove carbon from the atmosphere and release oxygen instead.

[15] The Parties were given the right to reduce their emissions through increasing the amount of carbon sinks in the land use, land-use change and forestry sector. However, only certain activities are allowed to be utilized with this aim (UNFCCC, 2005: 25).

efficiency, promoting renewable energy, favoring sustainable agriculture, recovering methane emissions through waste management, encouraging reforms in relevant sectors to reduce emissions, removing subsidies and other market distortions, protecting and enhancing GHG sinks and reducing transport sector emissions (UNFCCC, 2005: 26). To help the Annex I Parties reach their emission reduction targets, the Protocol allows Parties, through its flexibility mechanisms, to take action with the aim of reducing emissions in other countries and credit the results within their own reduction targets, to be supplementary to their domestic efforts. Although the cost of reduction efforts differs from region to region, the effect for the atmosphere is the same wherever that action is taken on the Earth (UNFCCC, 2005: 27-28).

To be eligible to utilize the mechanisms, the Annex I Parties must have ratified the Kyoto Protocol and they have to comply with the methodology and the reporting requirements of the Protocol (UNFCCC, 2005: 29).

The three mechanisms of the Kyoto Protocol are the international emissions trading, joint implementation and clean development mechanism to increase the economic effectiveness of climate change policies. Emissions trading is also known as a cap and trade system which offers economic incentives to the Parties of the Kyoto Protocol with binding quantified emissions reduction targets. Article 17 of the Kyoto Protocol enables Annex I Parties to trade their emissions in order to reach their emission reduction targets under the Kyoto Protocol. Emissions trading helps Annex I Parties to take advantage of the lower cost opportunities to reduce their emissions. Through emissions trading[16], Annex I Parties which have already met their targets and still have assigned units which are not used can transfer these units to the other Annex I Parties that have already used up their assigned units but could not have met their reduction targets (UNFCCC, 2005: 32-33). Only those Annex I Parties which are also Parties to the Kyoto Protocol with emission limitation and reduction commitments inscribed in Annex B can participate in such emissions trading (Kyoto Protocol, 1997, Article 17).

The Protocol allows nations and the private sector to trade carbon dioxide equivalent units from technological developments (like improving power station efficiency) and from additional activities in forestry and agriculture. Trade can be achieved either between the

[16]In the global emissions markets, industrial firms are allowed to buy the rights to pollute (to emit carbon dioxide) from other firms which have already reduced their emissions below their allowable levels. It is also possible to purchase these pollution rights from developing societies which have still not yet reached their allowable emissions thresholds. The pollution markets create rewards for those innovative firms through balancing the costs of reducing pollution by selling unused emissions credits to other firms that need them. On the other hand, the firms who need them then are able to delay emissions reductions and has gained the time to make necessary investments which would enable reductions (Lutzenhiser, 2001: 513).

Annex B nations (Kyoto Protocol, 1997, Article 6: Joint Implementations JI) or between industrialized Annex B nations and developing non-Annex B nations (Kyoto Protocol, 1997, Article 12: Clean Development Mechanism CDM).

The CDM allows for the transfer of environmental friendly technologies to the developing countries through the investments of the developed world. Through the CDM[17] projects, the Annex I Parties can implement sustainable development project activities to reduce emissions in the non-Annex I Parties. By this way, the Non-Annex I Parties get the chance of continuing their development in a sustainable way. Hence, the ultimate objective of the Convention is being met. Besides, the certified emission reductions (CERs) which are generated as a result of such CDM activities can be used by the Annex I Parties to help them meet their emission targets. The rules surrounding the CDM activities have been laid out in the Marrakesh Accords[18]. The CDM projects have begun as of 2000. The CDM Executive Board has been elected at COP7 (UNFCCC, 2005: 29-31). The CDM, being an alternative for achieving the cost effectiveness of climate change policies, plays an important role for supporting the willingness of the Parties to meet their emission targets[19].

Under JI, the Annex I Parties are allowed to implement projects in other Annex I countries, which reduce emissions or increase removals by using sinks. Such projects in other Annex I countries, generate emission reduction units (ERUs), which can be used, then, by the investing Annex I Parties to meet their own emissions targets. JI projects are most likely to take place in the EIT countries, since there are more opportunities in these countries to cut emissions at lower costs. Like the CDM, the JI projects must be approved by all the Parties under the terms that the implementation of these projects would lead to emission reductions which are additional to any that would have occurred without the project[20] (UNFCCC, 2005: 31).

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[17] The major aim of the CDM is to provide incentives to developed countries and their firms to invest in climate-friendly projects in developing countries because they generate emission reduction credits that can be applied toward developed country emission targets. From the perspective of the developing countries, the Clean Development Mechanism intends to help them move on to more "sustainable and lower emitting paths of economic development" in which case the costs are carried by the developed countries themselves. The logic behind this system is that over time the developing countries will also be brought into the system of "quantified commitments" based on the fulfillment of commitments on the part of developed countries (Grubb, 2004: 17). However, this system is now being criticized for failing to motivate the developed countries to reduce their own emissions at home, instead look abroad for other chances. The CDM has created an excuse for these countries.

[18] With the Marrakesh Accords, afforestation and reforestation activities have also been included in the CDM. All Parties are required to approve the CDM projects. This is achieved through designated national authorities set up by Annex I and non-Annex I Parties. Projects must lead to real, measurable and long-term climate benefits (UNFCCC,2005: 29).

[19] For CDM, see also (Matsuo, 2004), (Rowlands, 2001a).

[20] For JI, see also (Schmitz & Michaelowa, 2005).

Concerning the first commitment period between 2008 – 2012, the Protocol specifies 'Assigned Amounts' for countries (allowed national emissions) which can be adjusted through the international flexible mechanisms. The Protocol foresees the starting of the negotiations for the second commitment period no later than 2005. Those countries which over-achieve their first period commitments will be able to use their unused allowances in the second commitment period. Apart from this, the Protocol requires that all the countries, including the developing countries, report on national emission inventories. Although the mechanism of non-compliance is weak compared to those of the national systems, it is openly stated that if the quantified commitments are not met in the first commitment period, then that party automatically becomes disqualified to participate in the mechanisms and will be penalized by a 30% penalty factor from allowed emissions in subsequent rounds (Grubb, 2004: 17-21).

2.4.3 The Main Groups In The Kyoto Negotiations

Within the climate regime, Parties have formed political negotiating coalitions. These coalitions or groups are based on the common interests or cultural, economic or geographic similarities of the countries. The degree of cohesion, objectives as well as the modes of operation among these groups differ considerably. Some are active in the overall international arena, whereas the activities of some others are limited only to the environmental issues. Those who do not belong to any of the groups are very few, however, some others belong to more than one groups.

The existence of party groupings in the climate regime is very important. Through these coalitions, Parties can pool their resources for a stronger negotiating base. In addition to this, through these groups, sharing information and views becomes easier. Besides, by the help of the groups, the number of negotiating parties decreases dramatically, since the members of the groups speak with common voice. On the other hand, the groups have the risk of being dominated by the views of the powerful states, drowning the views of the weaker countries. Some of the major groupings are; the Umbrella group consisting of the USA, Canada, Japan, Australia, Norway, New Zealand and the Russian Federation, the EU group, the G77 consisting of developing countries with China and Saudi Arabia, the group of Association of Small Island States (AOSIS), who face the risk of being drowned by sea level rise, G11 which are the European countries with economies in transition, the Environmental Integrity Group headed by Switzerland (Yamin & Depledge, 2004: 33-48).

The G77 and China is the largest negotiating coalition within the climate regime. The aim of this group is to redress the unequal balance of global economic and political power in favor of developing countries. This group has been established in 1964. They are all non-Annex I Parties under the Convention. China, Brazil, India and Saudi Arabia are among the most powerful states of this group. The large number of members runs the risk of ineffective negotiations due to the difficulty of the weaker and smaller states to make their voices heard (Yamin & Depledge, 2004:35-36).

The members of the AOSIS are highly vulnerable to climate change due to the sea level rises as being one of the impacts of climate change. The group has been established in 1990 during the Second World Climate Conference. Most of the members of AOSIS are also members of the G77. This group has been very active during the negotiations. However, the most important common issue which unites them is their vulnerability to climate change. On the other hand, their national circumstances are quite different from each other. Due to this reason, differences of opinion exist among the members (Yamin & Depledge, 2004: 38).

The EU is the most cohesive negotiating group in the climate change regime. The EU presents a common position on all issues with a single voice. However, regarding certain decisions, the EU might also face the difficulty of agreeing on a common stand due to the differences between the more economically developed and energy efficient northern Members and the EITs together with the Southern Members. The EU group aims to be the leader of the climate change regime (Yamin & Depledge, 2004: 42-43).

The Umbrella Group and JUSSCANNZ (Japan, the US, Switzerland, Canada, Australia, Norway, New Zealand) is a looser group of Annex I Parties operating in the climate change regime. The difference between the two is that JUSSCANNZ includes Switzerland whereas the Umbrella Group includes the Russian Federation and Ukraine which support unrestricted emissions trading. This group supports flexibility and cost effectiveness, however, the members have different national circumstances. This is the reason of this group being a loose one (Yamin & Depledge, 2004: 46).

The Environmental Integrity Group (EIG) has been established in the aftermath of the Kyoto negotiations. Switzerland did not share the views of the Umbrella Group when it was established. Therefore, Switzerland has been left out of the groups. In an effort to take place in a group during negotiations, it has come together with the other two outsiders; Mexico and South Korea, Non-Annex I Parties but OECD members, and formed the EIG. Although, the national circumstances and statuses of these countries are different from each other, their

common aim is to promote the environmental integrity of the climate change regime (Yamin & Depledge, 2004: 47-48).

Even though most of the Parties in the climate regime had different national circumstances, they had been able to unite under the UNFCCC and later the Kyoto Protocol for the common good of the Earth. While the UNFCCC had provided the first basis of such cooperation, the Kyoto Protocol had been the first concrete step towards reducing emissions in an effort to combat climate change. After this very important step, the Parties began to shape the details of the regime in the following COP meetings.

2.4.4 Developments in the Following COPs

With the aim of finalizing the unfinished business from Kyoto, at COP4, in 1998, the Buenos Aires Plan of Action (BAPA) has been adopted, which included details of the flexibility mechanisms, developing country issues, sinks and compliance. This work was due to be completed at COP-6 which took place in The Hague in November 2000. By this Plan, a programme has been set out to work on the operational details and implementation of the Protocol (UNFCCC, 2002: 10).

After the publishment of the legal text of the Protocol, it has become clear that many terms in the text were not clearly defined and the language was sometimes ambiguous. As a result, the SBSTA has made a request to the IPCC to clarify and define the terminology and enlighten procedural issues. In 2000, the IPCC published its advice in the Land Use, Land Use Change and Forestry Report (LULUCF-report) (Schulze *et al*., 2002: 507). After this IPCC report, the Sixth Conference of the Parties (COP6) has met in The Hague in 2000 with the aim of settling the unresolved issues and to prepare a legal document forming the basis for the ratification of the Protocol (UNFCCC, 2002: 10). Towards the end of COP6 at The Hague, there were still many problems to be resolved. Unfortunately, no agreement has been reached at COP6[21] and the US has withdrawn from the global negotiations. The negotiations

[21] One of the reasons for the failure of the COP6 may be the rather weak performance of the European Union. At the Hague, the EU was not in a position to counter the various proposals of the United States and the Umbrella Group mainly because coordinating the fifteen member states and the Commission for a final word was a difficult task. In addition to this, in the climate talks, the EU is represented by the EU presidency, which rotates every six months, rather than the Commission. The involvement of the Presidency does not allow for the development of a medium or long term negotiating strategy because every Presidency has its own ambitions and priorities. From another perspective, the EU was able to withstand the pressure of the US and the Umbrella Group at The Hague (Ott, 2000: 285).

were extended into a second part; 'COP6bis', which would be held in Bonn in June 2001 (Schulze *et al.*, 2002: 512).

In early 2001, the IPCC has released its Third Assessment Report emphasizing that the potential impact of global warming might be worse than it had judged in its last assessment report of 1996. In this latest report, the IPCC forecasted that the rise in temperatures due to climate change will be between 1.5 and 6 degrees Celsius starting from 2001 until 2100. At its greatest extent, this would be a bigger change than the difference between the present and the last ice age. Hence, many lives would be at stake (Ott, 2000: 278).

During the time between The Hague and Bonn, the US government has changed and the new administration has withdrawn from the Kyoto negotiations. President Bush has declared that climate change was real but he has announced that the US was producing 25% of the industrial goods in the world by only using 20% of the fossil fuel, while the others were using 80% of the fossil fuel with lower efficiencies. COP6bis has been held in July 2001, in Bonn and has been finalized with the 'Bonn Agreement on the implementation of the BAPA' without the United States (Schulze *et al.*, 2002: 512). The Bonn Agreement has been another milestone in the Kyoto process. Consensus over key political issues has been reached under the BAPA. For the EU, the Kyoto Protocol was saved and for G77/China it was the triumph of multilateralism over unilateralism (Ott, 2001: 475).

The political deal which was reached in Bonn in 2001 even without the United States had to be translated into finer legal text and the BAPA be completed. This took place at COP7 in Marrakesh. The Kyoto Protocol rulebook was finally finished and put together in the so-called Marrakesh Accords[22], almost a 250-page long document (Dessai *et al.*, 2003: 184).

One of the major results of COP7 concerned compliance. An Enforcement and Facilitation Branch was formed which organizes and controls compliance. The procedure for non-compliance was agreed. In addition to this, it was agreed that nations who participate in the trade of carbon-units would be obliged to setup an emission registry. Nations would be obliged to report their GHG emissions. Incorrect reports would lead to the suspension of eligibility for the trade of units[23] of carbon dioxide equivalents (Schulze *et al.*, 2002: 515).

[22] The Marrakesh Accords consisted of a package of draft decisions on the details of flexibility mechanisms, reporting and methodologies, land use, land-use change and forestry (LULUCF) as well as compliance with the Kyoto Protocol. All of these were to be adopted during the first COP/MOP. There has also been support for the developing countries such as capacity building, technology transfer, responding to the adverse effects of climate change and funding (ENB, 2006: 2).

[23] Trade of carbon dioxide equivalents would be possible in the following units:

* Assigned amount units which contain the rights for emissions in 2008 to 2012 (AAU)

2.4.5 Evaluation of the Kyoto Protocol after Marrakesh

At the end of the COP7, whether the Kyoto Protocol has been saved or sunk further has become a topic of discussion. Sacrificing environmental integrity for economic flexibility was the price to pay to keep the Umbrella Group with the process without US participation. Hence, after the Marrakesh Conference, compared to the original Kyoto Protocol (pre-COP6 Kyoto), the regime acquired more amounts of sinks in the form of either forests or agricultural lands. In addition to this, under the new terms, agricultural practices were not to be capped any more, representing extra credits, unlike forest management (Dessai *et al.*, 2003: 196). Afforestation and reforestation has become allowable activities under the CDM. Large amounts of sinks credits were given to whoever has called for them. It was decided that all the surplus units at the end of the commitment period would be carried over to the second commitment period which would be a disadvantage for the newcomers. In addition to the above, one of the major disadvantages of the Marrakesh Accords has been the complex regime it has created with a lot of institutions (Dessai *et al.*, 2003: 196).

All in all, the Hague-Bonn-Marrakesh process has finalized the Kyoto Protocol architecture leaving no more unresolved issues which would prevent the ratification of the Protocol. With the Marrakesh Accords, it has become possible to know how the Kyoto Protocol would work up until the end of the first commitment period in 2012. Although, presently, it is easy to criticize the Marrakesh Accords, it is the result of the ten years long negotiations on one of the most complicated global problems of the day. Multilateral processes are not easy since efforts are made to meet the interests and expectations of almost 180 sovereign states (Grubb, 2004: 19).

A positive innovation of the Marrakesh Accords was the establishment of three new funds for developing countries. In fact, these funds together with the financial pledge of 450 million Euros by some developed countries were the main reasons why G77/China have accepted the rest of the deal. The creation of the Kyoto mechanisms is another positive development. Besides, a carbon market has been created where international emissions trading between developed countries would start in 2008 within defined procedures. Very importantly, “the atmospheric commons have been definitively commodified with the Marrakesh Accords” (Dessai *et al.*, 2003: 197).

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* Removal of units for biological sinks (RMU).
* Emission reduction units as part of joint implementation projects (ERU)
* Certified emission reduction (CER) (Schulze *et al.*, 2002: 515).

Another positive creation has been the possibility of having unilateral CDM projects, where a developing country Party can perform the project itself and then sell the credits in the international market. With the Accords, there has been clarity about how emissions would be counted, traded, subtracted and added which has been very important for the control of compliance. In the Protocol, little or no mention has been made on the nuclear option. In fact, the use of nuclear power plants avoids the emission of 700 million tons per year of CO_2 in the European Union which would have been produced with non-nuclear fuels currently employed regarding the same amount of electricity (Banks, 2000: 483).

COP8 which has been held in New Delhi, in 2002 has marked a new phase of negotiations whose focus has been on the implementation of Marrakesh Accords. Additionally, those issues which were not on the agenda due to the pressing negotiations related to the BAPA, have taken their place in the COP8 agenda[24]. During COP8, the usual division between the developed and developing country positions continued. At the end of the meeting, in the Delhi Declaration, development and poverty eradication has been accepted to be the major priorities of the developing countries, therefore, implementation of the UNFCCC commitments should be managed according to the development levels. Under these circumstances, it had not been possible to call for broadening commitments in the COP8 (ENB, 2002: 1).

At COP9, which has been held in Milan, in 2003, there has been over 5000 participants from the governments, the non-state organizations (NGOs) and media. Decisions taken during this meeting included definitions and modalities including afforestation and reforestation activities under the CDM, guidance on LULUCF, Special Climate Change Fund (SCCF). Due to this reason, COP9 will be remembered as the 'forest COP'. Besides, COP9 has demonstrated to the world how the climate change issue has managed to remain high on the political agendas of many NGOs, business groups and the academic world (ENB, 2003:1).

During COP10, at Buenos Aires, in 2004, the Parties have adopted the Buenos Aires Programme of Work on Adaptation and Response Measures. Decisions have also been taken on technology transfer, LULUCF, financial mechanisms of the UNFCCC, education, training and public awareness. Besides, lengthy discussions have taken place concerning the commitments for the post-2012 period (ENB, 2005: 2).

[24] Some of these have been decisions related to improved guidelines, for non-Annex I national communications, several issues under the financial mechanism, research and systemic observation, cooperation with relevant international organizations as well as methodological issues.

2.5 Recent Developments Concerning the Post-2012 Period

COP11 has a special place in the climate change regime since both the eleventh session of the Conference of the Parties to the UNFCCC (COP11) and the Conference of the Parties serving as the First Meeting of the Parties to the Kyoto Protocol (COP/MOP1) have been held together for the first time resulting from the coming into force of the Kyoto Protocol in February 2005. Hence, COP11's successful outcome was very important for the future negotiations and implementation of the climate change regime. There have been over 9500 participants in the event as well as important issue areas to be concluded. The most urgent one has been to implement the Kyoto Protocol, since it was in force as of February 2005. For the Kyoto Protocol to function effectively the adoption of the Marrakesh Accords which included the technical details that are key to the effective functioning and integrity of the Protocol and its mechanisms was necessary. In COP11, the Marrakesh Accords have been adopted quickly setting the Protocol in motion (ENB, 2005: 18).

Another important issue to be handled concerned the improvement of the operation of the Protocol and the Convention. The major issue areas which needed improvements have been adaptation and the CDM. The development of a five-year programme related to adaptation has already begun at COP10. Concerning CDM, many new rules have been adopted at COP11 in an effort to move the CDM forward (ENB, 2005: 19).

According to Article 3.9 of the Kyoto Protocol, negotiations concerning the second commitment period were to start no later than 2005. Coincidentally, the entering into force of the Kyoto Protocol and the start of the negotiations for a second commitment period have taken place at the same year, in a way complementing each other. This is another reason which makes COP11 a very important meeting in the climate change regime. Exploring options for future cooperation in a way which reflects the full range of interests of the Convention has been given a start in COP11 and COP//MOP1. In line with this, a new subsidiary body to discuss post-2012 commitments has been decided to be established; the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG). It has also been decided at COP11 to consider long-term cooperation under the UNFCCC. This would be realized through a series of four workshops constituting a Dialogue about the issue until COP13. The four topics to be studied under the Dialogue were; 1.advancing development goals in a sustainable way, 2. Addressing action on adaptation, 3. Realizing the full potential of technology and 4. Realizing the full potential of market-based opportunities (ENB, 2007a).

When all the outcomes of the COP 11 and COP/MOP1 have been evaluated, it becomes clear that the success of these meetings have exceeded expectations, making COP11 a historic one[25].

In May 2006, the AWG1 and the Convention Dialogue 1 have met for the first time in Bonn together with the 24th meeting of Subsidiary Bodies (SB24). During AWG1, the need for information on scientific, technical and socio-economic topics to enhance ambition for further commitments concerning Annex I Parties as well as the potential of meeting these commitments have been emphasized. While at the Convention Dialogue 1, Parties exchanged views on the four areas to be studied under the Dialogue (ENB, 2007a).

During COP12 and COP/MOP2, which have taken place at Nairobi in 2006, issues related to the Protocol's flexibility mechanisms, compliance and capacity building have been discussed. The first amendment to the Kyoto Protocol has been adopted. As a result of this amendment, Belarus has taken on emissions reduction commitments under Annex B to the Kyoto Protocol. The major focus has been on possible future frameworks concerning the post-2012 period (ENB, 2006: 1).

The second sessions of AWG and the Dialogue have taken place in Nairobi, in November 2006 together with COP12 and COP/MOP2. In the AWG2, a work program on mitigation potentials and ranges of emissions reductions, possible means to achieve mitigation objectives as well as consideration of further commitments by Annex I countries have been agreed. The Dialogue, on the other hand, has focused on advancing development goals in a sustainable way and realizing the full potential of market-based opportunities. Besides, during COP/MOP2, the Russian Federation has come up with a proposal on procedures to approve voluntary commitments (ENB, 2007a).

2.5.1 Proposal of the Russian Federation

The existing frameworks of the UNFCCC and the Kyoto Protocol are very strict; they are not open to new kinds of memberships or different ways of commitments. They even do not contain any reference for those countries who want to take on voluntary commitments to reduce or limit their GHG emissions under these frameworks. Even if there had been, the mechanisms for approval are very long and time-consuming. During COP12, the Russian

[25] For more information on COP11, see also Rec Turkey, 2005c, 2005d.

Federation has highlighted these major deficiencies of the Kyoto system (Submission by the Russian Federation, 2006).

For the developing countries as well as for those countries whose economies are growing rapidly, climate change is not a priority issue. There are more important issues for them like food and energy security, health care and developed infrastructures are more important for public welfare. The participation of these countries in the global effort towards climate change can only be realized if those actions to be taken would enhance their economic development and integration into the global economy. Under these circumstances, voluntary commitments would only be effective and become attractive if these measures to reduce or control emissions are aimed at the same time to narrow the gap between the industrialized and the developing world as well as serve at achieving sustainable development goals (Submission by the Russian Federation, 2006).

There may be various kinds of voluntary commitments:

1. Absolute GHG emission reduction targets: These are the percentage reductions according to a base year in all economic sectors or only in specific sectors.
2. Relative GHG emission reduction targets: These kind of commitments can be based on relative figures such as; energy intensity of GDP, carbon intensity of GDP, energy intensity per capita, carbon intensity per capita. These commitments can either be applied to the whole country or specific sectors. Argentina has come up with a voluntary initiative in 1999 to limit its GHG emission growth. It has proposed not to exceed 0.5% GHG emission growth when GDP grows by 1%. However, Argentina has not received an answer from the UNFCCC on this issue.
3. Commitments based on implementation of national policies and measures: These kinds of commitments can be developed in those sectors with further access to the external carbon market. It can be realized by introducing taxes or through price policy which leads to energy savings and deployment of new technologies.
4. Commitments based on development, deployment and expansion of low-carbon technologies (Submission by the Russian Federation, 2006).

Voluntary commitments can be conditional, that is; commitments are taken under the condition that the needed technology and financing to achieve these voluntary targets will be provided. Voluntary commitments can also be unconditional, that is; the voluntary targets are achieved through using domestic resources. Voluntary commitments are no-regret emission reduction measures by the countries. If the voluntary targets are not achieved, there will not

be any penalties for that party as part of a non-compliance regime. However, if the voluntary targets have been achieved, then that Party gains financial and technological benefits. These possible benefits can be emissions trading, technological assistance, and financing of adaptation and the establishment of an insurance fund for companies transferring technologies to developing countries (Submission by the Russian Federation, 2006).

In addition to these, the Russian Federation has proposed that procedures to let countries move from one category to another, namely; to Annex I, should be made easier. The proposal has also emphasized on the necessity of introducing a new differentiation principle for countries according to the level of their economic development and national circumstances. Therefore, the Russian Proposal on voluntary commitments should be seen as a very important offer at the international level since this proposal highly takes into account the national circumstances of countries and satisfy their ambitions of achieving sustainable development (Submission by the Russian Federation, 2006).

The third sessions of the AWG and the Dialogue have been held in Bonn[26], in May 2007 together with the 26th meeting of the Subsidiary Bodies (SB26). The discussions continued at both meetings. In the Dialogue, some Parties began searching what would happen after the reports of these workshops are submitted to the COP13 (ENB, 2007a).

The fourth sessions of AWG and the Dialogue have been held in Vienna, at the end of August. In the final workshop of the Dialogue, the delegates have tried to work on building blocs for long-term cooperative action as well as the next steps to be taken. Some cross-cutting issues like financing have also been discussed. In the AWG4, conclusions were adopted referring to the recent IPCC findings that the global GHG emissions were expected to peak in the next 10 to 15 years and that it was necessary to reduce these emissions below half of 2000 levels by 2050s to be able to stabilize their concentrations in the atmosphere. Under these circumstances, Annex I Parties, as a group, need to reduce emissions by a range of 25-40% below 1990 levels as of 2020 (ENB, 2007b).

Both the AWG and the Dialogue will be presenting the reports of these meetings to the COP13 which will be held in December 2007, in Bali. The Vienna meetings have been one of the key meetings under the UNFCCC process as a successful step towards negotiations of the post 2012 period (ENB, 2007b).

[26] See also Müller, 2007 for the Russian Proposal and the Bonn 2007 climate talks.

2.5.2 The Present Climate Regime and Options for the Post-2012 Framework

The regime of today depends on five basic elements. First of all, it is climate-centric meaning that all of the provisions are to be able to achieve and maintain a tolerable level of GHG concentrations in the atmosphere. Second, it assumes the universal acceptance of a single set of principles and rules. Third, it sets a property rights model in which the permitted global quota of emissions is divided among parties according to some equitable or practical formula. Fourth, it aims to create efficient markets in which property rights will be traded to yield emission reductions at the lowest total cost. Fifth, it enforces compliance with defined sanctions by a body internal to the regime. The regime puts limits to outputs rather than inputs. The countries are free to choose which input to control to decrease the output. Hence for the developing countries, it is a long and politically hard way to manipulate that input which will help them develop in a much more climate friendly way (Heller & Shukla, 2003: 114).

Many factors are important in the positions that the Parties are taking within the post-2012 negotiations. Some of these are the "national responsibilities for the past GHG emissions, present emission levels, projected emission trends, national opportunities for GHG reductions and the cost of these reductions, existing challenges in meeting the Kyoto targets and possible incentives offered inside and outside the process for active participation in a post-2012 regime" (Ecologic, 2006a: 34).

The EU-25 has been committed to Kyoto's fixed target approach, and works to deepen and broaden commitments among more countries. The US still seems to reject the fixed target approach of the Kyoto Protocol. It is looking for a long term technological solution to the climate change problem, therefore is expected to increase research and development. However, there are also recent signs that the US might set emissions target at the federal level resulting from pressure coming from the States in that direction. Most States have already set emissions targets unilaterally together with various other measures to combat climate change (Brewer, 2006: 15-26). Australia, on the other hand, having large coal mines, was rejecting the Kyoto Protocol together with the US. Instead, it supports long term technological solutions like researching on carbon capture and geological storage as well as hydrogen and fuel cells. Japan favors voluntary agreements, pledges and technological approaches. It seeks the inclusion of all the major emitters in the post-2012 framework. On the side of China, there is special emphasis that the developed countries should carry the responsibility of combating climate change. However, China is also pushing to improve its

own energy efficiency. For the next commitment period, China is interested in enhancement of the CDM as well as the improvement of the financial resources and technology transfer. India is on the same line with China; supporting that it should still be the developed world to take the lead through deeper targets and increased CDM (Ecologic, 2006a: 34).

The advanced developing countries such as Brazil, South Africa, Korea and Mexico are interested in such measures which would provide strong incentives for the developing countries to reduce or limit their emissions. AOSIS supports Kyoto's fixed target approach as well as deeper and broader commitments by major emitters. The environmental NGOs press for the GHG reductions based Kyoto approach and seek for the involvement of non-Kyoto Parties as well. The business community on the other hand is concerned about the business opportunities created by the climate change regime through the flexibility mechanisms as well as an indication concerning the future markets (Ecologic, 2006a: 35).

The negotiations for a post-2012 framework are concerned with identifying various issues. These include the concentration level of GHGs to be stabilized in the atmosphere, the degree of effort needed to achieve such levels of concentration (such as 5.2% below 1990 levels), the application of common but differentiated responsibilities to developed and developing countries, the length of the second commitment period, the types of commitments, achieving technology development and transfer, the equitable burden sharing for adaptation and the role of flexibility mechanisms in the second commitment period. All of these issues are needed to be discussed in detail to be able to come up with a more effective as well as deeper and broader post-2012 framework (Ecologic, 2006a: 36). The time period until 2009, when it is expected that the negotiations will be finalized, is of utmost importance both for the countries of the world to secure themselves with suitable arrangements within the future climate regime as well as the Earth itself to be preserved for the generations to come.

It is possible to list three different approaches for agreement upon post-2012 commitments: 1. Top-down approaches: First, an overall reduction target for the global community is assessed. Then responsibility among the countries is distributed among the countries through negotiations. 2. A menu approach: Those countries in different groups as a result of their different levels of development and capabilities are permitted to choose from a menu of possible commitments. 3. Bottom-up approaches: Countries could decide what kinds of commitments they could take (Ecologic, 2006a: 30).

2.5.3. Ecological Concerns to the Present Agreement:

It is clear that the Bonn Agreement and the Marrakesh Accords have been important steps in the international efforts concerning climate change. However, some major ecological issues have not been resolved. One of them concerns biodiversity such that some decisions of the FCCC risk biological diversity. Therefore, it is necessary that the climate convention and the Convention on Biological Diversity (CBD) be coordinated. This is especially true for primary forests which are at the same time carbon sinks. The definition of land for afforestation endangers natural grasslands, heathlands, and scrublands. The use of primary forest will turn large areas into sources and will have serious impacts on global biodiversity (Schulze *et al*., 2002: 516).

The other ecological issue which needs to be resolved concerns verification. It is sufficient to submit annual reports without controls to reach the eligibility requirements. Verification is not required. Although these concessions risk the future of forests and biodiversity, they were made to achieve a full status for emission trading (Schulze *et al*., 2002: 516).

2.5.4 Development and Climate

For the last couple of decades, concerning climate change, the most important challenge for the international community has been the establishment of a multilateral framework to control the GHG emissions from the industrialized countries that were and are the largest emitters. In the near future, this will continue to be so. However, devising and implementing effective strategies to achieve climate friendly actions in developing countries turns out to be a second challenge.

Climate and development; both concern issues of energy, transport, land use and food security which are the priorities of the developing countries. Development and climate intersect. The impacts of climate change such as water shortages, agricultural disruption and coastal flooding create threats to development. On the other hand, development is itself the reason for climate change. Therefore, changes in development paths are needed to stabilize the climate (Heller & Shukla, 2003: 111).

On a per capita basis, the GHG emissions of the developing world are far below those of the developed countries. However, the total GHG emissions from the developing world are expected to surpass those of the developed countries within a decade or two (Heller & Shukla,

2003: 111). Development is the reason lying behind the rising developing country emissions, namely the need for energy and economic growth which are supported by investment and technology that support the conventional paths of development. In fact, strategies driven by core development priorities can at the same time produce climate benefits. As had happened in China, motivated by economic goals, rapid improvements in energy efficiency have led to a significant decrease in the growth of GHG emissions. Actually, the development of strategies which can produce climate benefits as well as economic expansion is the only politically viable way for climate mitigation. It is clear that the developing countries will need to increase their energy production and consumption for sustained growth. In the emission scenarios of the IPCC, to be able to weaken the historical linkage between growth, energy and carbon output, the importance of technological innovation and diffusion has been highlighted as well as the organizational and institutional arrangements that encourage and maintain them. Unfortunately, the international climate regime has not been successful in providing neither the incentive nor the means for developing countries to pursue alternative paths which are more climate friendly (Heller & Shukla, 2003: 113).

2.5.4.1 Assistance to Developing Countries

Concerning the developing countries, in the UNFCCC, the developed countries pledged to provide new and additional resources and to promote technology transfer to support climate action in developing countries. The developed countries have reported many bilateral and multilateral projects and contributions to the UNFCCC Secretariat over the last couple of years. For example, some developed countries had helped some developing countries to cover the cost of fulfilling Convention commitments like preparing emission inventories and national communications. Some reports are for projects concerning forest protection. Between 1997 and 2000, such contributions from developed to developing countries was around $12 billion (Heller & Shukla, 2003: 116).

Some of the funding to the developing world goes through the Global Environmental Facility (GEF). This was established in 1992 to fund projects with global environmental concern. The ‘incremental cost’ principle governs the GEF; developed countries are to pay the agreed full incremental costs of developing country efforts under the Convention. Incremental funding has been very successful in pushing advanced technologies. In 2001, three new funds were established to support technology transfer, capacity building, adaptation planning and other needs in developing countries. The Special Climate Change Fund aims to

assist countries whose economies are highly dependent on income generated from fossil fuels. The Least Developed Countries Fund and the Adaptation Fund were to be financed by a charge of 2% of the reductions issued for CDM projects. However, there is no commitment by the developed countries for specific levels of funding. Actually, the regime of today is centered on emission outputs rather than inputs which are very parallel to fundamental development needs. This regime has created a market-based mechanism with only limited potential to channel private investment to climate-friendly areas. Unfortunately, it has created no stable assistance from developed to the developing world. This easily explains the reason behind the lack of developing country interest in Kyoto mechanisms (Heller & Shukla, 2003: 117). Certainly, any effort to engage the developing countries in the international climate regime should take into account the trends that shape present development patterns.

Since 1990s, there has been a serious rise in private resource flows from developed to developing countries which is closely tied to the ongoing transformation of advanced developing economies. In fact, from 1990 to 2000, in almost 120 developing countries, more than $ 680 billion was invested. For example, as the demand for power rose, countries like Brazil, China, India and Mexico welcomed foreign investors and initiated energy sector reforms to attract them. These investments were made in both in green field projects; in generation by independent power producers, as well as in the privatization of existing assets; mainly in distribution systems (Heller & Shukla, 2003: 121).

Actually, the best support has been developed by the EU. A selective assistance; coupling economic support with commitments to reform and performance monitoring, has been developed in the various partnership and association agreements with its eastern and southern peripheries (Heller & Shukla, 2003: 124).

Developing countries have a core set of development objectives; like food security, water, energy, transportation, and urbanization. Unfortunately, the activities performed to achieve these priorities are in fact the inputs leading to emissions output. A successful climate policy should find or create opportunities to shift these fundamental drivers in climate-friendly directions. Climate policy in the developing countries should be formulated in such a way that it should provide the incentive to choose that option which is likely to avoid or reduce the GHG emissions. In addition to this, it is better that climate policies be focused on inputs and motivate action at the sectoral level rather than at the project level. This way is better for the investment behavior of the developed country firms whose funds and resources are key to the climate-friendly development of the developing countries (Heller and Shukla, 2003: 126).

Certainly, developing countries will embrace climate goals and commitments if they can be linked to mechanisms generating resource and technology flows which will help meet them. The encouragement of incentives for and the removal of barriers to regional cooperation on energy can also be an important tool to attract developing country attention concerning climate-friendly development.

Unfortunately, a successful cooperation has not been achieved between the developed and the developing countries (North and South) since the establishment of the Framework Convention on Climate Change. The reason for this is that climate change is not yet a political concern of development policy. It sounds to be less important vis a vis the pressing issues of food security, poverty relief, energy growth and access, urban transport and land use. Another reason is the framework for burden sharing which the developing countries find to be unjust and undeserved. And the last reason for the lack of cooperation between developed and developing countries is the perceived failure of the developed countries to fulfill commitments to transfer recourses with the scale and effect expected through the climate regime. Nevertheless, efforts to go beyond these present difficulties will continue. An important step would be the acceptance that high-priority development goals might be served by the ancillary benefits of climate actions. In addition to this, in many developing countries, climate-favoring activities are emerging as ancillary benefits of sound development programs. Therefore, it is quite possible to build environmental policy upon development priorities and interests which are the central concerns of public and private actors in the still evolving political economies of developing nations. It is clear that only by this way; the developing countries will be able to go through development paths with lower emissions (Heller and Shukla, 2003: 135).

2.5.5 Responses to global climate change: Mitigation and adaptation

While, in some parts of the world, the debate continues whether the climate changes or not, the global average temperatures have increased by 0.7° Celsius in the world and by 0.95° Celsius in Europe above their pre-industrial levels (Commission of the European Communities, 2000). Therefore especially in the last couple of years the question of how to mitigate the impacts of climate change in the years to come has taken the center stage. In fact, mitigation and adaptation policies are not mutually exclusive policy options. Indeed they are complementary. Risks of damages resulting from climate change can be reduced both by mitigation and adaptation. However it should be noted that if GHGs keep increasing in the

atmosphere, adaptation may not be feasible or even not possible (Schneider and Lane, 2006). Basically mitigation means reducing the magnitude of change through decreasing greenhouse gas (GHG) emissions whereas adaptation denotes reducing the consequences of any magnitude of climate change (Wilbanks *et. al*., 2003: 30).

In the 1990s, it was believed that internationally coordinated action would be able to overcome many threats resulting from climate change. However, over the years, this view has changed. Presently, it is accepted that it is impossible to avoid the impacts of climate change. Even today, it is possible to observe changes which are consistent with the impacts of climate change, such as glacial retreat, thawing of permafrost, shifts of plant and animal ranges. Therefore, adaptation to climate change has become a necessity. (Wilbanks *et. al*., 2003: 30)

Although mitigation and adaptation complement each other, they have differences in essence. First of all, the timing of their effects is different. The benefits of mitigation can be seen in time and are global in scale. The benefits of adaptation can be seen much more quickly and more likely to be local. Mitigation focuses on GHG emissions while adaptation focuses more on those sectors which are more sensitive to climate impacts. Both mitigation and adaptation have co-benefits meaning other benefits besides reducing climate change impacts. Adaptation is more in the control of local governments whereas mitigation needs international agreements to create effective action. Related to this is that the costs of mitigation is distributed among the international community whereas the costs of adaptation are born by the particular populations where these strategies are implemented. Scientific research supports that "the ability of adaptation investments to accommodate higher impacts is relatively smaller, increasing the relative value of mitigation in avoiding impact costs" (Wilbanks *et. al*., 2003: 31). This results in the conclusion that mitigation and adaptation, in fact, complement rather than compete with each other. If the impacts of climate change can be mitigated successfully, then the adaptation of the resulting impacts will be easier (Wilbanks *et al*., 2003).

There is a wide variety of adaptation options ranging from proactive to reactive majors. However, vulnerability assessment is key to development of successful adaptation policies specific to different country conditions to the climate change. Mainly, there are three dimensions to assess the vulnerability of a country to climate change. These are mainly; exposure, sensitivity and coping capacity. When a country tries to reduce its vulnerability to the impacts of climate change, mitigation reduces exposure to climate change. On the other hand, adaptation reduces sensitivity for example by finding new crops which are more

resilient to temperature change and improves coping capacity such as example by developing new health care systems (Wilbanks *et. al*., 2003).

2.5.6 Future of the Climate Regime

According to the former Executive Secretary of the UNFCCC, Michael Zammit Cutajar, Kyoto Protocol is "an economic instrument that uses flexible targets and market mechanisms to limit greenhouse gas emissions at the least cost" (Cutajar, 2004: 62). The builder of its market orientation was the US who nevertheless opposes it economically. However, for the global regime to be meaningful, participation of the US is very important as well as this being a prerequisite for the engagement of large developing countries into the global regime. The next phase of negotiations should focus on ensuring equitable global engagement (Cutajar, 2004: 62).

A major handicap of the Kyoto Protocol is regarding its short-term vision. It covers a short period of time and does not give any information as to what will happen at the end of this period (2008-2012). It only requires that the negotiations for the new targets will start in 2005 (Cutajar, 2004: 65). It is true that the Kyoto Protocol has focused intensively on the first commitment period, however, it should not be forgotten that the major aim was to "provide the structure for a dynamic, evolving regime that can effectively tackle climate change over the course of the century" (Grubb, 2004: 21). The present emission targets should be seen as the "first concrete step in a much longer-term process of negotiating emission commitments over successive periods" (Grubb, 2004: 21). Such a massive and long-term problem can not be solved with a one-step action. However, the real impact of the Protocol will depend on the "degree and scope of follow-up to this initial action" (Grubb, 2004: 21).

Despite whatever has been done up until today concerning greenhouse gases, presently, a degree of global warming is inevitable. Therefore, it is very logical to work for increasing the resilience of the existing systems. National systems should be improved accordingly. So, resilience and adaptation should gain global importance and should take their place in the economic and development scenarios of the countries. In addition to this, although the political and economic character of the climate regime is evident, climate strategy continues to be driven by scientists and environmentalists in the negotiations. Therefore, politicians must get on the stage, opportunities should be searched for to increase participation and to raise the topic up the political agenda at the risk of "blurring the environmental image" (Cutajar, 2004: 68).

It is also important to look at the issue from a security point of view. Long-term climate change can lead to global instability due to its impacts on food, water and migration as well as natural resources. This kind of an approach might help those countries to grasp the importance of the subject. Looking through the perspective of the political economy of coal might also be helpful. For the foreseeable future, coal is the cheapest most plentiful source of energy. It is vital for industrial growth over the world. In fact, up until today, coal interests have been one of the reasons of opposition to climate change action. Therefore, finding ways of encouraging more efficient 'clean coal' technologies and emission standards will be very important. Besides, the involvement of private sector and the global corporations will enhance the economic relevance of the climate change process (Cutajar, 2004: 68).

The ratification of the Protocol actually resembles the first step in a long way to stabilize the GHG emissions at a safe level. It seems that the first commitment period will just be a test drive. The Kyoto Protocol's impact on the atmosphere will almost be negligible. The targets of the future commitment periods and the development path that the world will undertake during this century will shape the future climate regime and outcomes (Dessai and Hulme, 2001). Until today, mitigation issues dominated the climate regime, in the coming years it will be the adaptation issues as has been called in COP8 in New Delhi, since a degree of climate change is already happening no matter what has been done. It was announced in the IPCC Third Assessment Report that those with the least resources have the least capacity to adapt and are the most vulnerable. This should be taken very seriously by the LDCs and the developing countries (Dessai *et al.*, 2003: 200).

The US, being the major emitter of carbon dioxide, is needed to take responsibility in the climate regime. As Murphy has emphasized, it might be possible to ignore the US in other contexts, however, because of its global nature, this is not possible in climate change (Murphy, 2000).

It is hard to predict the status of climate change on the global agenda in the coming years. The war on terror might be a threat to its pace. However up until now, climate regime has been successful in continuing its timetable even after the events of September 11. COP7 in Marrakesh was achieved right after these events. The Doha World Trade Organization meeting and the World Summit on Sustainable Development in Johannesburg in August 2002 were both convened and each was concluded with decisions which have relation with climate change regime due to trade and multilateral environmental agreements. The negotiations for the targets of the second commitment term are very important. If the first term was a test drive, then the second term should have tougher targets. The climate change problem still

needs human creativity to be solved, since this is just the beginning of a long journey. Further negotiations will continue in the coming years. In this way, a new kind of environmental governance will evolve concerning climate change where important decisions will be adopted in big conferences which have actually been taken as a result of the ongoing diplomatic negotiations and lobbying by state and non-state actors. Therefore, the success of this kind of an environmental regime will be dependent on the nature of international relations and the degree of multilateralism in the coming years. As Timothy Wirth, the President of the UN Foundation has summarized:

> The US must partner with others around the world on a program to develop alternative energy systems. The technological revolution needed for the urgent move to a hydrogen economy, for example, coupled with increased national investment in research for environmentally safe transportation, would yield huge results for the global environment. Such a far-reaching program would have a major stimulative effect for the world economy and would place the US again in a position of genuine global vision and leadership (Wirth, 2002: 77).

For the present, considering the levels of unemployment, underemployment and even poverty in many parts of the world, low-energy scenarios or alternative technologies might seem hard-to-achieve goals; economic growth needs to continue, especially in the developing regions. Energy consumption must continue to expand with strict environmental controls. Ferdinand Banks argues that there is much less oil and gas in the earth's crust than commonly believed. He continues that given the negative attitude toward nuclear energy almost everywhere as well as the present economic/technical shortcomings of unconventional energy sources, the dependence on coal may reach an excessive level. Therefore, strict provisions are needed to burn this coal in an environmentally safe manner (Banks, 2000: 481). Climate change is a unique challenge to humanity. As Hermann E. Ott has clearly emphasized:

> It is a challenge to humans' technological and social ingenuity, our ability to adapt to changing conditions and, most importantly, our ethical capability to act today in response to a threat that will not seriously affect ourselves, but will have grave impacts on the lives of our children and grandchildren..... Suffice it to say that the issue involves nothing less than a technological and social revolution within the next 100 years-the conscious development of a global society that has outgrown its fossil-fuel resource base (Ott, 2000: 278).

Actually, although it has taken years to agree on the Kyoto Protocol, it is only a modest step. On the other hand, it represents a very bold approach for many countries. It is believed that unilateral implementation of climate policies negatively affects the competitiveness of national economies. Therefore, most states are aiming at global participation in the regime (Ott, 2000: 279). In this respect, theoretical explanations for an in depth understanding of international cooperation on climate change is necessary to be able to grasp the nature as well as the dynamics of the present climate change politics.

III. THEORETICAL EXPLANATIONS FOR INTERNATIONAL COOPERATION ON GLOBAL CLIMATE CHANGE

Environmental problems are, with their very nature, common to all the countries. The last decades of the 20th century have particularly witnessed the evolution of many environmental problems like ozone depletion, desertification, marine pollution, acid rain, loss of biodiversity, destruction of tropical forests as well as climate change. These common threats often create a motivation to cooperate and produce new regimes, institutions and other forms of cooperation. Following tables present some of the international environmental agreements witch have been signed from 1971 to 2001 (Table 3.1 and Table 3.2). The high number of agreements attracts attention. However, efficient international cooperation is not necessarily the outcome in all cases.

TABLE 3.1: List of International Environmental Agreements on the Atmosphere (1970- January 2007)

Protection of the Atmosphere	**Ozone layer**	Climate change
Convention on Long-Range Transboundary Air Pollution, 1979 (1983)	**Vienna Convention for the Protection of the Ozone Layer, 1985 (1988)**	United Nations Framework Convention on Climate Change, 1992 (1994)
Protocol on Long-term Financing of the Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP), 1984 (1988)	Montreal protocol on Substances that Deplete the Ozone Layer, 1987 (1988)	**Kyoto Protocol to the United Nations Framework Convention on Climate Change, 1997 (2005)**
Protocol on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30 per cent, 1985 (1987)		
Protocol concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes, 1988 (1991)		
Protocol concerning the Control of Emissions of Volatile Organic Compounds (VOC) or their Transboundary Fluxes, 1991 (1997)		
Protocol on Further Reduction of Sulphur Emissions, 1994 (1998)		
Protocol on Heavy Metals, 1998 (2003)		
Protocol to Abete Acidification, Eutrophication and Ground-level Ozone, 1998		

Source: http://www.ymparisto.fi/default.asp?node=7030&lan=en#a2 accessed on 05.05.2007.

Table 3.2 List of International environmental agreements on protection of the environment in general

Protection of the Marine Environment and Watercourses	**Protection of Flora and Fauna and Biological Diversity**	**Wastes**	Chemicals
Convention on the protection of the Marine Environment of the Baltic Sea Area, 1992 (1995) **Convention for the protection of the North East Atlantic, 1992 (2000)** Convention on the Protection and Use of Transboundary Watercourses and International Lakes, 1992 (1996) **International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969 (1976)** Protocol relating to Intervention to the High Seas in Cases of Pollution by Substances Other than Oil, 1973 (1986) **International Convention on Oil Pollution** Preparedness, Response and Co-operation, 1990 (1995) **The Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances (HNS Protocol) (not in force yet)** Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, 1972 (1979) **Agreement on the Implementation of a Project on Pollution, "Sewage Sludge Processing", 1971 (1973)**	Convention on Biological Diversity, 1992 (1994) Cartagena Protocol on Biosafety, 2000 (2004) **International Convention for the Regulation of Whaling, 1946 (1983)** Statutes of the International Union for Conservation of Nature and Natural Resources, 1984 (1967) **Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar Convention), 1971 (1975)** Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), 1973 (1976) Convention on the Conservation of Migratory Species of Wild Animals, 1979 (1989) **Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas, 1992 (1999)** Agreement on the Conservation of Bats in Europe, 1991 (1999) African-Eurasian Migratory Water Bird Agreement, 1996 (2000) **Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention), 1979 (1986)**	Basel Convention on the Control of Transboundary Movements of hazardous Wastes and Their Disposal, 1989 (1992) **The Basel Protocol on Liability and Compensation (not in force yet)** Decision of the OECD Council concerning the Control of Transfrontier Movements of Wastes Destined for Recovery Operations, 1992 (1992)	Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and pesticides in International Trade, 1998 (2004) **Stockholm Convention on Persistent Organic Pollutants (POPs), 2001 (2004)**

Source: http://www.ymparisto.fi/default.asp?node=7030&lan=en#a2 accessed on 05.05.2007.

At present, the climate change issue seems as the most important and complex environmental problem of the world. Its complex nature requires a multidisciplinary research and study for a through understanding and explanation. To start with, the most outstanding feature of the climate change problem is that it is a global problem, common to all the states,

not an issue to be dealt by a particular region or a state. This global nature requires global action. Therefore, international cooperation is at the heart of dealing with this global problem. Nevertheless there are many factors that affect international cooperation and lead to success or failure in the end. The increasing number of actors involved in climate change negotiations (and the implementation of the measures in countries and throughout the world), the chaotic nature of the atmosphere and the complex ecosystem integrity are some of the factors that complicate the success of international cooperation on the climate change issue[27]. Therefore a precise assessment of the theoretical debates on the factors that affect international cooperation will be helpful to examine the current state of negotiations. To start with, the nature of climate change should be examined pertaining to its political impacts throughout the world.

3.1. Global Commons: The Challenge of International Cooperation and Global Climate Change

Global commons are the natural systems and resources like the atmosphere, outerspace, the oceans and the Antarctica which belong to all humans rather than individual nations. An important feature of these resources or commons is that they are finite, which means they are limited in their amounts. In addition to this, they are subtractive, which means that when a part is consumed by one actor, that part is no longer available to the others. In this respect, the capacity of the atmosphere to absorb GHG emissions is limited. Once this capacity is over, it cannot absorb the remaining emissions. Characteristically, national jurisdiction is not effective over these areas (Soroos, 2005: 38-40). In fact, life on earth depends on the preservation of the global commons which is the responsibility of all the

[27] Factors slowing down global cooperation can be examined in three main headings. The major impediments against stronger global cooperation are the economic costs related with necessary policy actions as well as uncertainty factors. The North-South debate is another factor which slows down international cooperation since it turns out to be rather difficult for the two spheres to come to terms with respect to legal arrangements. All of these factors have been available in the climate change negotiations. Despite the IPCC reports, there was scientific uncertainty concerning the causes of climate change; whether it was part of a natural cycle or anthropogenic. The economic costs related to the decisions to cut down greenhouse gas emissions were high. In addition to these, coming to terms with the developing world had been somehow difficult since the developing countries perceived the application of uniform policies to be unjust. With respect to international cooperation on climate change, another factor has been important in slowing down the speed of cooperation and that is the different degrees of expected climate change impacts on different states. In accordance with this, those states that will be facing serious climate change impacts in the coming years have been more willing to cooperate internationally. For example, some small island states who are expecting to face severe climate change impacts have strongly supported international cooperation. On the other hand, those states that are not expecting severe climate change impacts to take place in their country have rather been slow to implement climate policies and cooperate globally (Bayramoğlu, 1997: 191-192).

states. This is called as ecologic interdependence[28]. Having realized the importance of this, in the early 80s, the concept of sustainable development was introduced with the aim of reorganizing the relation between economics and the environment. This was formally introduced in 1987 with the publication of 'Our Common Future' known as the 'Brundtlant Report'. Sustainable development, basically, aims to achieve a new way of economic development which does not threaten ecologic well being or environmental integrity (Bayramoğlu, 1997: 1-24).

With the recent technological developments, the world has become a smaller place. The states began to share more interests than ever with the other states of the world rather than the region. The common economic, political, social, technological and environmental interests of the states strengthened interdependence among them and led to the increase in institutional arrangements to achieve cooperation to protect global commons.

3.1.1 Atmosphere as a Collective Good

Some environmental problems are local, for example; some industrial activities at the local level might pollute the lake waters nearby. In such a situation, the reason leading to this kind of pollution is local as well as the consequences it brings. These consequences are born by those who live nearby. On the other hand, climate change results from the various activities of the individuals, firms and countries all over the world. What is more, the impacts of climate change are global; they are not limited to countries or regions, though these impacts vary according to the geographical location and the level of economic and social development. Therefore, it is a concern for every nation and every human as Luterbacher and Sprinz have put forward:

> There is no *a priori* relationship between the quantity of greenhouse gases that a region or a country emits and the consequences for that same area in terms of climate change. Global climate change therefore raises the issue of the relationship between the general use of resources by human populations and the ultimate limits of this use (Luterbacher and Sprinz, 2001:9).

As Soroos underlines; only some of the environmental problems are in close relation or directly related with the global commons (Soroos, 2005: 35). However, the famous

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[28] Ecologic interdependence forces nations to reorganize their political priorities and national interests in accordance with global policies so that multilateral cooperation can be achieved to protect the environment (Bayramoğlu, 1997: 20).

metaphor of the tragedy of the commons is clearly applicable to the human induced global climate change (Soroos, 2005)[29]. First of all, the atmosphere is a global commons that is beyond the jurisdiction of all states since no one can "take the possession of the gases" (Soroos, 2005: 40). The atmosphere is a collective good which every individual has access to. However, such a right brings certain responsibilities for those who acquire them. The problem is that the resources associated with using the atmosphere are limited. Atmosphere has been long viewed as a global sink resource since humans freely dispose all their pollutants into it (Soroos, 2005: 44-45). The excess of GHGs over a specified amount disturbs the normal functioning of the climate system. Therefore, "a relatively stable and benign climate" which can be considered as a *pro qua non* for human development can also be defined as "a global public good" (Soroos, 2005:45). In that "overuse or misuse of a commons" depletes their capacity to regenerate themselves and limit their capacity to be used at any time (Soroos, 2005: 41). Thus, implementation of restrictions or limitations either in the form of voluntary or regulatory measures becomes inevitable to avoid any environmental disasters (Soroos, 2005, Vogler, 2005a). To be able to solve these kinds of commons problems, taxes may be imposed on certain users to decrease over-using due to increased costs, rules and quotas can be established to limit usage. (Luterbacher & Sprinz, 2001: 10). In fact, rules and quotas have been the backbone of the Kyoto Protocol[30].

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[29] Garrett Hardin's (1968) "metaphor of the tragedy of the commons" explains this resource use dilemma. Hardin emphasizes that self-interest and the lack of constraints on access to natural resources leads to the over-exploitation of these natural resources. The notion of the freedom to use such natural resources without limitation, since effects of such behavior is not felt directly by the performer, is a factor which most of the time hinders international cooperation to initiate action (Luterbacher and Sprinz, 2001: 9).

According to Hardin, it is not possible to solve problems of global commons only with technical solutions. A technical solution only gets use of the techniques of natural sciences; however, does not require a way of change in human values and ideas of morality (Hardin, 1968: 1). The decision to apply taxes as well as other kinds of economic tools to limit the use and deprivation of global commons is not enough to achieve the targeted results. The development of moral values among people together with trust is necessary to be able to efficiently apply the required policies. It is through education that the natural tendency to do the wrong can be counterbalanced (Hardin, 1968: 2).

Hardin gives the example of a herdsman using a common pasture to breed his cattle, who is assumed to be a rational man, and hence, seeks to maximize his gain. Within this context, the positive utility of adding one more animal to the cattle is almost +1; on the other hand, the negative utility resulting from the effects of overgrazing (since the other herdsmen had also added animals to their herds) is only a fraction of –1 (Hardin, 1968: 1). Breeding cattles on pastures open to all is a natural action for the humans for centuries. The increase in the number of animals has been balanced by wars, poaching and disease. However, when the number of animals exceed the carrying capacity of the land, humans face serious problems. Hardin concludes:

...the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another... But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit – in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all (Hardin, 1968: 1).

[30] This nature of climate change presents challenges to bargaining theory approaches. Bargaining theories assume that the parties know the interests of each other as well as the consequences of certain actions on each

In any case, international cooperation is essential for the governance of global commons. However, on the international arena, cheating and free-riding can be cited as major problems hindering international cooperation. To be able to achieve a collective good at the international level, international cooperation and the formulation of an institutional framework to eliminate free-riding is necessary. This, in turn, can be achieved through the establishment of trust among the members that the parties will not cheat or free-ride as well as the emergence of successful threat of retaliation strategies. This can be associated with a Prisoner's Dilemma situation in which a detrimental equilibrium is reached in a one-shot situation. However, cooperation will develop as a result of threats of retaliation. Thus, the international climate change regime both creates a public good and establishes rules for mutual restrictions to avoid mutually negative outcomes (Luterbacher & Sprinz, 2001: 13). As has been pointed out by Vogler, providing environmental governance means the establishment of common property regimes for the global commons (Vogler, 2005a: 53).

Scientific efforts are, on the other hand, required to define the problems (such as its scale and root causes) and to offer solutions (Williams, 2005:406). However, its impartiality can highly be contested and its objectivity can harshly be questioned in some cases (Williams, 2005). Moreover, scientific uncertainty is one of the internal components of the present environmental challenges. All in all, reliable data and empirical knowledge are still important factors for policy-makers and also for international cooperation (Williams, 2005). At that point, it is necessary to look at the relationship between environmental policy-making and scientific knowledge. As has been in the case of climate change problem, the developments in scientific knowledge have pushed the international community into cooperation for solution. Therefore, being informed about the scientific knowledge has been a very critical factor for the development of international cooperation against climate change.

3.1.1.1 Epistemic Communities

The epistemic community theory which was first, put forward by Peter M. Haas, focuses on the significance of knowledge and cognitive processes related to international cooperation and regimes. According to this theory, the important elements of the analysis of

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other''s interests. However, concerning climate change, it is hard to evaluate the benefits of greenhouse gas emissions reductions for parties. In addition to this, there is still a certain level of uncertainty concerning both the reasons and the effects of climate change. This makes the situation harder to assess. Since there is uncertainty, the interests and the payoffs can only be calculated on a probabilistic rather than deterministic

international reality are the scientists and scientific knowledge. Epistemic communities are "transnational networks of knowledge based communities that are both politically empowered through their claims to exercise authoritative knowledge and motivated by shared causal and principled beliefs" (Haas, 1992: 3). They achieve an important task by decreasing the uncertainty related to many global environmental issues and, hence, promote cooperation. Haas especially emphasizes the importance of epistemic communities in environmental issues, since they distribute knowledge among the states and the international community as well as lead the states through a learning process which pushes states to reconsider their respective policies. Epistemic communities are also very effective in the evolution of the regimes. New information leads to new behavior which might lead to enhanced cooperation. Concerning environmental problems, new information is vital for humans to take action to preserve the earth (Haas, 1992). Nevertheless, cognitive theory, alone, is not powerful enough to explain the actual international conditions. Therefore explaining the international conditions only through epistemic communities and social learning ignores the importance of international institutions in international cooperation. Without the institutions, the spread of knowledge and new policies would not be realized. Due to this reason, the epistemic community theory, rather than having full capacity of explaining climate change and international cooperation, can only complement the neoliberal institutionalist theory in its explanations concerning climate change politics.

In case of climate change, during the late 80s and the beginning of 90s, the IPCC has, in fact, acted as an epistemic community. These environmental scientists have been very successful at raising the profile of climate change. Their close relations with the WMO and UNEP have helped greatly to the dissemination of scientific knowledge about climate change. However, this influence has been limited since after 1991, the national governments became more active in this issue especially with the transfer of responsibility from the WMO and UNEP to the United Nations (Rowlands, 2001b: 61). Under this intergovernmental umbrella, IPCC remained to be the scientific authority. Since scientific debate continues as part of the political process of climate change, cognitive approaches will continue to be important to the understanding of climate change in the future, too. Climate scientists seem to continue playing an important part in international climate politics (Raustiala, 2001: 115). In sum, the cognitive approaches have been very useful in bringing the climate change issue to the international platform as a major problem. In this sense, they will continue to be important as

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fashion, hence, action can only be taken on precautionary principles. This is the logic behind the efforts to reduce emissions (Luterbacher & Sprinz, 2001: 13).

dissemination of new knowledge about this issue will continue to be a driving force for the political process in the coming years.

3.1.1.2 Scientific Uncertainty

Concerning the climate change politics, scientific communities have access to global policy formation. The reasons behind this are that in the reduction of uncertainty as well as the unnecessary political risks, scientists are necessary. In addition to this, as research improves to offer clearer guidance, the expectation of receiving this new information gives them an influential base in the political process. Since science is not thought to be political, the voice of the scientists sounds neutral and trustable. It is through this neutral way that the issue of climate change has become a scientific discourse. The political involvement of scientists in the climate change issue has not been witnessed before in international politics (Newell, 2000: 40-41). The degree of scientific certainty which is necessary to take action differs from state to state according to the costs related with the necessary actions. To illustrate for the US, there is always need for more scientific certainty, whereas for the Netherlands, there is no need for high level of certainty to take action (Newell, 2000: 51). Then again, in the climate change politics, it appears that scientific expertise does not have a positive relationship with the political leadership in the international arena. The US, Canada and Australia all had strong climate research capacities; nevertheless, all had been laggards in the negotiations (Newell, 2000: 57).

The impact of scientific community in the international negotiations had been conditional on the "perception of the possibility of joint gains by the parties in question" (Newell, 2000: 57). As a matter of fact, those who perceive that there were gains in supporting climate change policies, did so by choosing to take science seriously (like those who were already one step further on climate friendly technologies; the EU). These countries led the international negotiations and somehow did not let international cooperation to break or come to a halt. The others, who foresaw disadvantages as a result of supporting these policies, have chosen to stay out of international cooperation. The United States has been one of the prominent ones among these countries together with Australia. Ironically, climate change science was most advanced in the US, however, due to the possible negative effects of climate change policies, the US has chosen to stay out of international cooperation emphasizing continuing scientific uncertainty (Dessler & Parson, 2006: 151).

Most state policies, in fact, require decisions under uncertainty which considers the potential risks and costs of responding too strongly versus not responding strongly enough. When evaluated this way, climate change is just like the other important policy areas; like responding to a security threat (terrorism), making economic policy as well as managing all kinds of risks to life, health and safety. The logic behind all these policies is that they are taken on precautionary grounds; concerning the risks that these problems might become a reality some day in the future (Dessler & Parson, 2006: 153).

With the recent findings of the IPCC, science is almost certain that human activities are changing the climate. Accordingly, even the US has chosen to change its policy of climate change to a one which accepts climate change as a threat to mankind, however, still does not support the means of the international community in fighting climate change (Brewer, 2007).

3.1.2 Prisoner's Dilemma and Collective Action

The factors which decrease the possible success of international cooperation on global environmental issues like climate change are free-riding, non-action and cheating possibilities of the states. These actions are based mostly on the uncertainty associated with the global threat. Since there is uncertainty on who will face what, in other words, uncertainty associated with the interests and payoff structures of the countries, it becomes easy to escape from the required responsibilities that a state should bear as a consequence of its being a member of the international community who has access to this common good (Luterbacher & Sprinz, 2001: 13-15). This is like a Prisoner's Dilemma[31], parties cheat as long as they do not

[31] Two prisoners have committed a crime together. They are separated from each other and are questioned in separate cells. They cannot communicate. Under the circumstance that if one prisoner confesses, he will be sentenced for 1 year in prison, the other will get 10 years of prison. If both confess, each of them will stay 5 years in prison. If both deny, both will stay 60 days in prison. No matter what the second prisoner chooses, it is always better for the first prisoner to confess and vice versa. If the first prisoner denies, the second can confess and end up with one year, however, the first one gets ten years. If the first prisoner confesses, and the second prisoner will confess too they will end up with 5 years in prison. Therefore, according to the prisoner's dilemma, both prisoners will make the same calculation and choose to confess and end up either by 5 years of prison or 1 years. Whereas, if they had the chance of cooperation by communicating, then they would agree to deny and end up by 60 days each instead of 5 years (Dougherty & Pfaltzgraff, 1996: 509).
In the prisoner's dilemma model, communication is not allowed. Therefore, especially for the prediction of socially undesired outcomes like pollution or climate change, this model is very useful. The failure results because the prisoners are not allowed to communicate. They cannot agree on a common strategy to reach the collective good. However, in real life, parties communicate with each other, they reward cooperation and punish defection. Therefore, in real life, there is always an incentive to seek for mutual gains and reach an optimal outcome. Parties are interested in gaining the benefits related to the accomplishment of the collective good. As a result, people tend to cooperate, however, there is also a rational for them to defect as well (Svendson, 2003: 30-31).

trust each other. However, building trust through agreements and retaliatory measures as well as successful control mechanisms and issue linkages through the establishment of institutions and regimes improves cooperation. Global climate change has created a cooperative challenge for the international community and to the international relations scholars who try to understand and explain the dynamics of such cooperation at the global level which for sure requires interdisciplinary studies (Luterbacher & Sprinz, 2001: 13-15).

When binding agreements are not possible, international cooperation is conditional on the cooperation of the others. If one side fails or refuses to cooperate, this will affect the whole process since there might be others who start refusing as well. At this point, the conditional strategies of deterrence gains significance in the sense that they should be important enough as well as credible to be taken into account (Grundig *et.al*, 2001: 158). There should be a cost of inaction. If the cost of inaction is high enough, then the parties will be more inclined to cooperate[32].

3.2 Theoretical Perspectives on Global Climate Change: The Explanatory Challenge:

Neorealism and neoliberal institutionalism are the two major perspectives of international relations to explain world politics. Neorealism rests on the basic realist assumptions that the states are the major actors on the international scene, that these states act in an anarchic environment where each state tries to achieve its own national interest at the expense of the others. In spite of the recent increases in international cooperation, neorealists still try to understand the world politics through anarchy and power politics. On the other hand, neoliberal institutionalism, being a synthesis of realism and liberalism seems to explain the reality of the present better than neorealism.

The roots of this debate between the neorealists and the neoliberal institutionalists go back to the earlier periods of the international relations[33]. These two schools of thought have

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[32] In the climate change regime, if emissions reductions policies are undertaken by all the countries, then each country is better off . However, given that the other countries are undertaking emissions reductions policies, the welfare of those countries who do not undertake such measures is higher. In addition to these, unilateral emissions reductions policies are not effective (Pinto & Harrison, 2003: 912). Therefore, the ideal solution to the global climate change problem should cover all the countries.

[33] However, their systemic development with an international perspective rather than domestic has started with the World War I. The end of the World War I has shown that European diplomacy was not enough to create peace. Under these circumstances, the idealists came onto the world scene. They believed that conflict and war could be eliminated through collective and multilateral efforts. International institutions and laws could be established to maintain world peace. In their perception, human nature was "good" and "altruistic", therefore, war was not an intrinsic phenomena of international relations. However, just like the end of the World War I had given way to the development of the idealist approach, the end of the World War II led to the emergence of

been very useful for the explanation of world politics up until today, although presently, neither of them, alone, can be sufficient for explaining the complex politics of the globalized world. Today's world has much more diverse and complicated issues to deal with compared to the bipolar world of a couple of decades ago. Climate change is one of these problems which require cooperation at the international level as well as decisive action at the national level. Due to this character of climate change, the two prominent schools of thought; neorealism and neoliberal institutionalism still can serve well for the explanation of the climate change regime as well as in understanding the dynamics of this regime both at the national and international levels, although both of them fail short of accomplishing this task alone.

3.2.1. Neorealism and the Global Climate Change

When the neorealist approach is applied to the climate change issue, as the first thing to do, the existence of a hegemon and the related balance of power should be searched. Looking back at the negotiations of the FCCC and the Kyoto Protocol, however, it is hard to identify one single power as a hegemon. Until the withdrawal of the US, the preferences of the US have been reflected to a certain extent in the FCCC and Kyoto Protocol. For example, the flexibility mechanisms to meet industrialized countries' emission reduction objectives have been included in the Kyoto Protocol as a result of the US insistence. On the other hand, concerning the supplementarity principle[34], the EU has won the debate and as a result, the US

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realism in international relations. In contrast to the idealists, the realists perceived the states as the principle actors in the international system which is an anarchic system. Among states, the most important issues are those related to military and security fields. For them, national survival and struggle for power are the main goals of a state; therefore, self-help is a very important principle. The realists see balance of power and its preservation as the most important stabilizing factor. Within this framework, for the realists, cooperation can only take place in the form of transitory alliances serving to the balance of power among opposing state blocs (Rowlands, 2001b: 44).

The international affairs of the 1960s and 1970s led to the refinement of realism. Kenneth Waltz redefined some of the aspects of classical realism while introducing the basic assumptions and the principles of neorealism. According to Waltz, the behavior of the actors in a system is determined by the structure of the system. Therefore, the choices available to a state within the international arena are limited by the behaviors of the others. In other words, the structure of the system shapes the relations among states. (Dougherty & Pfaltzgraff, 1996: 85) In this respect, the approach of Waltz differs from the classical realists only with a little touch. The neorealists, though still pessimistic about the prospects of cooperation, nevertheless supported international cooperation on world economic dilemmas with the leadership of a powerful single actor willing to use its power. This case is labeled as the 'hegemonic stability theory' where the actor is the 'hegemon' (Rowlands, 2001b: 44, Young, 1989: 202).

With the decline of the hegemonic power of the US, international institutions emerged on the world stage to regulate state behavior in the absence of a hegemon (Newell, 2000: 24).

[34] The objective of the supplementarity principle is to limit the application of the Protocol's flexibility mechanisms and establishes that they should be supplemental to domestic action in meeting the emissions reductions targets. The Protocol does not quantify suupplementarity. The EU had proposed that domestic action

had withdrawn from the process. Under these circumstances, it is not possible to talk about a single hegemon, who with its power would lead the negotiations in line with its own preferences.

When trying to explain the climate change issue through the neorealist approach, the concept of power, one of the core concepts of realism, needs to be analyzed. Apart from using military power, use of power in economic terms might be more relevant in this issue. An actor might threaten the other to use trade sanctions. Presently, under the World Trade Organization's (WTO) rules, this seems quite difficult. Power might be used, as Susan Strange has used it, as structural power to establish the context within which others make decisions (Newell, 2000: 11). Another kind of power can be the ability of an actor to use its power to transform the particular environmental resource. That is the contribution of that actor to the total effort is such important that reaching an effective agreement without its participation considerably weakens the effort. This is true of the US who is responsible for 25% of the total world CO2 emissions. However, with this situation, the US was affected both by action and inaction. Nevertheless, although its participation was very important, its withdrawal could not stop the other countries to continue at its expense. Under these circumstances, it becomes impossible to perceive the US as a hegemon. The same is true for the EU as well. Although the EU was able to continue with the negotiations after the US withdrawal, its position is away from being a hegemon but rather a leader. The deal which has been finalized reflects the preferences of many countries, even the small island states. Certainly, it has been a tough deal between the EU and the other groups with lots of give and takes and issue linkages surrounding the negotiations, and the final agreement has rather been the culmination of this mixed bargaining process. Therefore, neorealism seems to fail in explaining the influence of the other states in the negotiation process giving way to the final agreement. Undoubtfully, power has played a role in the negotiations; however, the less powerful states have also been influential in manipulating the direction of the negotiations (Rowlands, 2001b: 49).

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should represent at least 50% of a Party's mitigation efforts. The US did not accept. This has been one of the reasons why COP6 negotiations had been broken and the US had left the negotiations. Today, Parties have to report on how they use the flexibility mechanisms as supplemental to domestic action (Lucia, 2007: 1).

In the final analysis, the US and the EU have acted as leaders rather than hegemons[35]. At this juncture, it is useful to make discrimination between the terms 'power' and 'influence'. Power is coercive and leads to involuntary submission. On the contrary, influence is persuasive and leads to voluntary submission. (Newell, 2000: 34). In the climate politics, power would mean a permanent ability to affect policy outcomes. Taking into consideration the significant role played by the NGOs and other interest groups and lobbies, examination of the types of influence which have been exerted by particular groups would be much more helpful to understand global climate politics (Newell, 2000: 34).

After analyzing the concept of power within the climate change negotiations, it is helpful to examine the relationship between resource scarcity and conflict. In the past, population growth and consequently depletion of resources have produced many conflicts especially in the developing world. Homer-Dixon have found that environmental scarcity leads to economic deprivation which in turn leads to rivalries ending up with conflicts. As a last measure, people might be forced to migrate which again in turn lead to other kinds of conflicts (Dougherty & Pfaltzgraff, 1996: 164-165).

Climate change is now known to have severe impacts on some parts of the world due to rising temperatures. Not to mention the others, water becoming a scarce resource carries with it a big significance concerning the future. In parallel with what Homer-Dixon have found, the shortage of water is expected to be the major cause of conflict in the years to come. The changing temperatures will also have an impact on the agricultural base of countries. These might create the pressure for those communities who become short of water to migrate to other areas of the world where there is still water (Dougherty & Pfaltzgraff, 1996: 164-165). Therefore migration can be expected to create one of the major problems under the climate change issue (Dougherty & Pfaltzgraff, 1996).

The climate change negotiations and the formation of the climate change regime have been very useful for the neoliberal institutionalists in their argument towards the neorealists,

[35]Under certain circumstances, the leadership rather than the hegemony of an actor or a group of actors, somehow superior to others in certain respects, can act critically in designing of the institutional arrangements and inducing others to agree. The leader may use a variety of tools to convince the others to follow such as threatening others with negative outcomes like termination of aid, withdrawal of trade privileges or by offering rewards for cooperation like access to advanced technology and loans on favorable terms. In the climate negotiations, the EU has acted as a leader to induce the others to accept its favorable design of institution manipulating its pre-advanced technologies as a kind of reward to be transferred to those who cooperate as well as special funds. In this case, the difference between a leader and a hegemon needs to be made. A hegemon bears the burden of responsibility for the performance of the regime it imposes. There are significant costs associated with the role of being a hegemon. On the other hand, leadership results when an actor or a small group has substantially greater bargaining power than the others (Young, 1989: 88). Under these circumstances, the position of the EU can be understood to be leadership rather than hegemony.

who still emphasize that cooperation can only be exceptional, that international cooperation is growing in such a magnitude that it now challenges the state-centered and power-oriented explanations of international relations, especially with special reference to environmental problems. It seems that global environmental change and problems like climate change will continue to challenge the classical theories of world politics, by forcing the theorists to modify their earlier explanations with respect to the different types of cooperation evolving in the environmental sphere (Bayramoğlu, 1997: 195). Just like the realist and the idealist approaches have taken their times on the world scene due to their abilities of explaining the political realities of the world of that time, the recent emergence of the environmental problems on the international scene has led to the strengthening of the neoliberal institutionalist approach. New developments will lead to its redefinement and development in the coming years.

To conclude, the realists who perceive states to be concerned primarily with their own security and look for relative gains do not give value to cooperation most of the time. The environmentalists have used the term 'environmental security' to attract the attention of states to the subject, in other words, to move the subject up the political agenda, however, this has started the environmental security debate of the realists. The environmental problems had been perceived through the existing security notions of the realists. Besides, some of the old threats have been presented to be new threats in the shape of environmental conflicts (the struggle to access strategic resources). The result has been that military force was still necessary concerning environmental security. Certainly, environmental change can lead to interstate war for natural resources, especially for water. Countries sharing a river basin might get into conflict. Migration might be another reason for conflict or war (Paterson, 2000: 19-20). Nevertheless, evaluating climate change only through an environmental security perspective would be insufficient for a thorough understanding of the climate change politics of the present.

3.2.2 Neoliberalism and the Global Climate Change

The changing world politics towards the 1980s led scholars to search for new ways of understanding international relations. This search led to the construction of a new theoretical framework which considered transnational and transgovernmental relations to be very important and perceived 'interdependence' as a key concept (Bayramoğlu, 1997: 53). The supporters of this framework were scholars like Robert Keohane, Joseph Nye and Stephan

Krasner. The 1970s have been the years of détente as well as the time when economic, social and ecological issues started to be discussed at the international level. These new topics have, to a certain extent, decreased the importance given to the military and security concerns of the prior decades. The realist assumption that the states were the principle actors have been questioned as the result of these new developments in the world politics[36].

For the neoliberals, institutions are important in determining state behavior. Institutions help to the flow of information, create opportunities to negotiate. They help the governments to monitor the compliance of the others as well as to implement their own commitments. They sometimes help to achieve certain ends which, otherwise, would not have been possible to do (as the UN mediation between Iraq and Iran). Besides, they can decrease the costs related with some actions; like the arms control treaties. In addition to these, they affect the leaders' "understanding of the roles they should play and their assumptions about others motivations and perceived self-interests" (Paterson, 1996: 119).

Keohane studies international institutions under three categories: 1). Formal intergovernmental or cross-national nongovernmental organizations, 2). International regimes, 3). Conventions (Paterson, 1996: 119)[37]. Therefore, within the neoliberal perspective, it will be helpful to study the institutions of the climate change politics under these categories. By this way, it will be possible to analyze the roles of the UNFCCC, WMO, UNEP, IPCC, as well as the non-governmental organizations and interest groups. A brief description of the possible effects of institutions belonging to other international regimes, such as the WTO, will also be useful to be able to look at the climate politics from a broader perspective.

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[36] The roots of the neoliberal theories can be found in the studies of political integration, functionalism and neofunctionalism during 1950s and 1960s. Functionalists (like David Mitrany) believe in the spillover effect and assume that by finding common interests, cooperation can be achieved through functional organizations. The functionalists perceived non-political and technical experts rather than the political ones to be able to serve better to the needs of the governments. Effective cooperation in one area would give way to further cooperation in an other area. By this way, cooperation could be enhanced (Dougherty & Pfaltzgraff, 1996: 422).

The neo-functionalist theory is the redefined version of functionalism. Led by Ernst Haas, neofunctionalism differs from functionalism with the importance given to political authority compared to that of technical experts. In addition to this, for the neofunctionalists, spillover of functional organizations and cooperation would only be possible if the political elites of a country consider them to be in accordance with their interests (Dougherty & Pfaltzgraff, 1996: 423).

The interdependence theory is constructed on an idealist/liberal approach. According to the interdependence theory, societies are connected by multiple channels which are interstate, transgovernmental and transnational. The interstate relations are governed by multiple issues. The military issues do not dominate world politics and military force has lost its importance since it is not able to resolve economic disputes in the interdependent international arena and it is not used against those states where interdependence exists (Bayramoğlu, 1997: 54-55).

[37] However, Young perceives organizations to be entities different from institutions which have physical locations, offices, personnel, equipment and budget (Young, 1989: 32).

3.2.2.1 Institutionalization of Global Climate Change and International Institutions

Efforts for institutional arrangements at the international level provide the basis for the humans that they can exert some control over their own destinies. By this way, it is possible to have a meaningful sense of fate control. Based on this need, the twentieth century has seen a number of efforts to establish institutions with various aims like the League of Nations and later the United Nations, the Bretton Woods system (1944), the Treaty on Antarctica (1959), the GATT and the WTO... This important notion has been summarized by Young as follows:

> A society whose members have a diminished sense of efficacy regarding their ability to affect their collective fate is vulnerable to the actions of a wide range of illiberal movements and poorly situated to erect effective barriers against the occurrence of highly destructive events, such as escalating violence or disruptive changes in the natural environment (Young, 1989: 236).

The prominent organizations which have been active in the development of climate politics are the WMO, UNEP, IPCC, the INC and the convention bodies; the secretariat, the Conference of the Parties, the Subsidiary bodies. Some others were partly involved, like the International Energy Agency (IEA). All of them, together, have helped to the emergence of a general international norm that formed the basis for further policies (Paterson, 1996: 122). Concerning climate change, this study considers the contributions of the international institutions highly important in generating outcomes most of the time. They have been successful as generators of cognitive development and agenda-setting as well as creating the framework and the forum through which future negotiations will continue to take place. As Paterson has concluded:

> ...international institutions can be used to describe much broader patterns of interaction, where states occupy roles whose rules then come strongly to influence state behavior, even when a particular state may not feel that complying with those rules is in its short-term interest (Paterson, 1996: 127).

To illustrate, industrial countries should have targets for reducing GHGs, has emerged to be one of the primary rules of the climate regime (Paterson, 1996: 128).

International institutions are responses to collective-action problems on the globe. The benefits generated by the institutions are public goods. In an anarchic system, it can be expected that states would have powerful incentives to become free-riders in certain issue

areas which are governed by international institutional arrangements lacking a central authority as opposed to the one in a domestic system (Paterson, 1996). They would be expected to enjoy the benefits without complying with the rules of the institution[38]. Violations of the dictates of the international institutions, most of the time, get some kind of retaliation from the members (Young, 1989: 72). By this way, the members of an institution are forced to think twice before any violation. In addition to this, in the international arena, reputation for trustworthiness is an important feature of cooperation as well as a very important asset. Therefore, actors give a high value to their reputation since keeping this reputation is required for further cooperation which will lead to mutual benefits. In addition to this, for some members, outstanding records of compliance with the rules and procedures of the international institutions are associated with increasing respectability of that country. This is another factor which most of the time prevents actors from noncompliance (Young, 1989: 74-75).

For the neoliberals, the states are "rational egoists" (Keohane, 1993: 273) who work to reach their own goals and maximize their absolute gains. They perceive the anarchical nature of the international system as reinforcement for states to cooperate with the aim of reaching their goals and preserving their well-being. The necessary condition behind this scene is that their interests should be interdependent or common which will lead to a mutually beneficial cooperation. If states will gain more by blocking cooperation, then they do not cooperate. The states should believe that through cooperation, they can gain in the future. For them, international regimes and institutions are very effective in reshaping the interests of states. Therefore, they see international institutions as an important tool to promote and protect cooperation which in turn brings stability to the system (Keohane, 1993: 273-275).

According to the neoliberal institutionalists, cooperation is enhanced with the existence of mutual interests, if the shadow of the future is long and if the number of participants is small[39]. Certainly, mutual interests exist in the climate change issue. As has

[38] However, Young emphasizes that this kind of incentives are blocked most of the time with the fear of being excluded from the benefits as well as the public goods (Young, 1989: 72).

[39] In fact, the number of participants in the climate change regime is quite high. However, the formation of negotiating blocs, representing similar interests, have decreased the number of players involved in the negotiations (Rowlands, 2001b: 57). Nevertheless, reaching an agreement have turned out to be harder. This might be the reason why the climate negotiations have taken so much time. On the other hand, the world states have been quite successful in coming up with a strong regime and effective cooperation in the ozone depletion problem of the 1980s which was also a global commons problem like the climate change issue. Although the number of participating countries was high, agreement on cooperative action has been reached quickly and effectively. (Bayramoğlu, 1997: 197) This might lead the neoliberal institutionalists to modify their assumption with respect to the number of issues involved in the negotiations. When the number of participants and the number of issues to be negotiated are high, as have been in the climate change issue, the process might be rather

been the case of the 'tragedy of the commons', countries might accept that if they do not cooperate now, they might suffer in the long term. However, the level of this suffering will not be the same for all the countries of the world. While a small island state might face the threat of being erased from the maps and accordingly, strongly support emissions reductions and other related measures, Russia, facing the opportunities of having warmer summers, might prefer the status quo. As Rowlands has explained:

> The issue of global climate change, however, may not actually be accurately represented as a global tragedy of commons. Because of the spatial differences in the climate change impacts, as well as the differences in the net benefits or costs of abatement, some have greater motivation than others to endorse climate change policies. Varying vulnerability to both action and inaction means that different players have different perceptions of the relative costs of action and inaction, and therefore adopt different strategies (Rowlands, 2001b: 56).

Therefore, although it might be hard to generalize about the interests of all the states as has been done in a case of tragedy of the commons, it is still possible to expect the convergence of interests of a considerable number of countries which would enhance cooperation to a certain extent. Concerning the climate change negotiations, it is clear that the interests have played a very important role in the formation of cooperation. Looking at the future of climate change cooperation, it is highly probable that cooperation will continue. The international developments since 1990 have led to the establishment of many institutions; Conference of the Parties and its secretariat as well as various associated bodies. This will have a positive impact on further cooperation since the representatives of the states will have more confidence in the system that the issue will continue to stay on the international agenda (Rowlands, 2001b: 56).

Although, the realist school of thought does not perceive the institutions to have importance on the collective outcomes, international institutions are difficult to get rid of and they even adjust to changes very slowly. In certain circumstances, even the pressures from major powers might not succeed in quick changes. This explanation can help to understand the US position during Kyoto negotiations. Although the US had made a hard pressure to change some of the obligations, it had not been successful in changing the collective choice and this had led to the withdrawal of the US from the process. Certainly, the development of international institutions and regime formation require complex processes of collective choice. Since the institutions are the determinants of collective outcomes at the international

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slow and the outcome might be less satisfactory. However, when the number of issues to be negotiated is few, then cooperation can be effective even though the number of participants is high.

level, understanding of these complex processes of collective choice becomes very important (Young, 1989: 64-66).

It should be noted that the international cooperation and institutionalization of the climate change issue has not been realized over night in a vacuum. Developments continued one after another as new information spread around the world, thus creating a global consensus over time. Starting from the 1960s, environmental security and the protection of the environment have developed as universal values among the developed world. This growing consciousness about the environment and the associated value judgements have led to the creation of environmental ethics. This has been emphasized in the Brundtland Report of 1987, as 'intergenerational equity', meaning that it is the duty of the present generations to feel responsible for the future generations in maintaining a healthy natural environment. Current generations should not overuse the natural resources of the environment in a way that would threaten the survival and the well-being of the generations to come (Bayramoğlu, 1997: 200). As a result of this new understanding, it can be argued that individuals and states have become more committed to fight climate change. These new values and norms embraced by the people in the developed world have led to organized activities and green political movements as well as interest groups which had been very influential in the formation of the present climate regime. As new information is being disseminated to the world, new institutions; non-governmental organizations, epistemic communities, interest groups are being evolved as the important agents of environmental politics. Given this perspective, the importance of the human factor as to seek information and utilize the information to create new values and norms in a way to produce action, should not be missed. While the neoliberal institutionalist theory successfully explains the formation of the climate change regime, the importance of the human factor and the recent developments of the related world views should not be underestimated which have created the background atmosphere for the evolution of cooperation[40] (Bayramoğlu, 1997: 200).

Evolution of scientific cooperation on climate change has started with the establishment of the IPCC in 1988. The IPCC reports of 1990, 1995, 2001 and 2007 have all signaled the human-induced climate change, warning the politicians that it might lead to major instabilities. The present distribution of resources among nations might change as a

[40] In fact, the analysis of all the three levels is important for a through understanding of climate change politics. At the individual level, new information is incorporated into new values. At the domestic level, these values find their expression in institutions and finally, at the international level, states coordinate their actions through cooperation. Although all these levels are important, the most indispensable activity, being international institutionalization and cooperation requires the most attention (Bayramoğlu, 1997: 201).

consequence of climate change. Hence, the balance of power among them might also change. However, since the major powers are located in the industrialized world, significant shifts in the power relations is not expected to happen in the near future. On the other hand, new institutions both on the environmental and security domains or the strengthening of the existing ones can be expected to deal with these new types of conflicts.

Towards the end of the 1980s, neoliberal institutionalism focused on economic, social, cultural and ecological issues resulting from the various interactions in the international field. The emphasis was made on the complementarity of the realist and the liberal approaches (Nye, 1988: 251). The inevitable importance of realism in understanding international relations have also been emphasized by Robert Keohane in one of his articles. In this article, Keohane underlines realism as a necessary component of understanding world politics due to its emphasis on power and rationality (Keohane, 1986: 159). Hence, the new liberal institutionalism has adopted the key realist assumptions such as the international system being an anarchic environment, the place of states in the international arena as the principal and rational actors and the importance given to self interest. However, they emphasize on the importance of international institutions and regimes in contrast to the realists. For the neorealists cooperation is possible but rather exceptional. For the neoliberal institutionalists, cooperation is already present in the international system since it is the way through which the states can work for their interests to reach their goals. The difference between the two approaches concerning cooperation emanates from their perception of total gains. While the neorealists give importance to the relative gains (distribution of power), the other school of thought gives value to absolute gains. For the neorealists, the positive developments of one country mean negative development for the others under the explanation of balance of power. Therefore, for the neorealists, cooperation is a very sensitive calculation since if the second party is getting relatively more, than the first party might refrain from cooperating even though that party will gain as well (Paterson, 1996: 118). Hence, for the neorealists, the possibility of international cooperation is rather low. The realists keep emphasizing and working on environmental security aspects of global environmental change, while the liberals, keep on analyzing international cooperation through regimes.

Most of the international institutions which had been effective in the development of climate politics like UNEP, WMO, IPCC, INC can be named as intergovernmental or

transnational actors which contribute prominently to the development of non-state actors[41]. The increasing role and influence of the non-state actors on the global environmental politics have already implications on climate change negotiations. Therefore, an examination of the nature and the role of these non-state actors would be helpful for a through understanding of the development of the climate regime.

3.2.2.2. Internalizing and Internationalizing the Global Climate Change: The Non-State Actors and International Cooperation

The non-state actors have been successful in attracting the attention of the states to the climate change issue by raising awareness of environmental challenges as well as agenda-setting, spreading of scientific information and providing a platform to exchange information and coordinate international negotiations. In addition to these, they provide policy advice, influence the process of international negotiation through political pressure, monitor the actions of the governments, and assist in the implementation process. More important than anything, the NGOs can be the "agents of social change" (Raustiala, 2001: 109). In fact, the governments have included these actors in the climate policy process by giving them access to participate in the meetings of the parties, lobby governments, prepare policy reports and interact with the public and media (Raustiala, 2001: 96). The development of the NGOs working for the protection of the climate has been in parallel with the evolution of the climate change issue in the global arena (Raustiala, 2001: 98). One of the most prominent ones is the Climate Action Network (CAN). CAN is a worldwide network of over 365 NGOs. These NGOs work to promote governmental and individual action to control human-induced climate change[42].

The business NGOs are business groups which include the companies of fossil fuels (coal, oil, natural gas), automobiles, insurers, power generation, alternative energy suppliers (hydroelectric, solar, wind). The US-based Council for Sustainable Energy and the European Business Council for A Sustainable Energy Future are the two prominent business NGOs of the renewable and low-carbon energy sectors. The chemical sector is represented by the US-based International Climate Change Partnership. Certainly, the most powerful business NGO

[41] A non-state actor is any organization which does not have a formal or legal status as a state or agent of a state or as a constituent subunit of a state like a province or a municipality. They work to change policies. Epistemic communities like the IPCC are also non-state actors.
[42] See www.climatenetwork.org for further information.

is the US-based Global Climate Coalition[43] which includes the most powerful American and European corporations. The environmental NGOs work, in relation to climate change, for development concerns and poverty as well. In addition to these, consumer groups are also important NGOs in the present world. They work to protect the rights of the consumers. It is the US where they are the most active. They are also powerful players in the climate change issue (Raustiala, 2001:100-102).

The recent increase in the importance of the roles of the NGOs in certain issues might be seen as evidence of a weakening state in the face of a stronger global society. However, as Raustiala argues, this is not the case:

> ...this NGO activity comes not at the expense of state power, but rather to the mutual advantage of states and NGOs. The participation of NGOs in formal international cooperation such as the FCCC enhances the ability, both in technocratic and political terms, of states to regulate new areas through new international agreements. States have incorporated NGOs into international environmental institutions because it is politically advantageous to do so... (Raustiala, 2001:115).

In sum, within the present world structure, the decisions on climate change are taken by the governments. The success and the influence of the NGOs have been limited to the extent they have been able to shape the actions and beliefs of the governments (Raustiala, 2001: 116).

3.2.2.3 Collective Action and Environmental Regimes

During the 90s, when regional and international cooperation was flourishing, regimes and regime formation began to attract attention. The concept was introduced by John Ruggie in 1975. Ruggie has defined regimes as "a set of mutual expectations, rules and regulations, plans, organizational energies and financial commitments, which have been accepted by a group of states" (Ruggie, 1975: 570)[44].

Regimes have been studied through various approaches over the last decades. Regime formation has been analyzed by neoliberal institutionalists, neorealists and cognitivists. For instance, Peter M. Haas has divided regime theories into three groups: power-based, interest-based and knowledge-based explanations (Haas, 1993: 168), while Haggard and Simmons have divided regimes into four types: structural, game-theoretic, functional and cognitive. For

[43] This group of corporations oppose immediate action to reduce GHG emissions. The group was formed in 1989 by the business trade associations. The group aims the coordination of business participation in the global climate change issue whose interests are economic (for further information see: http://webhome.idirect.com/~muizelar/climate/).

them, regime analysis has been an experiment to reconcile the idealist and the realist traditions (Haggard and Simmons, 1987: 492-499).

States are regarded as rational actors. In the absence of effective rules, these rational actors can, therefore, easily act self-interestedly leading to joint losses. Hence the world can no longer take harmony for granted especially concerning the international society. As Oran Young has explained:

> We have known for some time that simply introducing organizational arrangements in the absence of social conditions required to sustain cooperation is not sufficient to solve collective-action problems in any human society.....international regimes and, more broadly, international institutions are properly understood as responses to the pervasive collective-action problems that make cooperation problematic at the international level (Young, 1989: 5).

Basically regimes are social institutions; they govern the actions of the involved parties. They are products of human interactions. Regimes are always created rather than being discovered according to the circumstances at hand. Regimes consist of a cluster of rights and rules[45] (Young, 1989: 15, 29).

As Young defines, institutions are "social practices consisting of easily recognized roles coupled with clusters of rules or conventions governing relations among the occupants of these rules" (Young, 1989: 32). Therefore the development of international regimes leads to the development of nongovernmental interest groups who are committed to defending the provisions of specific regimes and press governments to comply with their responsibilities. Regimes also lead to the growth of powerful interest groups in the member states who later form transnational alliances to make pressure on the related agencies for compliance with the regime requirements. Therefore, the conviction that in the absence of a central authority with enforcement power, actors have the incentive to violate the dictates of international institutions or free-ride whenever it is to their interest cannot be justified as a result of the arguments above. Certainly, violations will occur from time to time in the international arrangements; however, this cannot deprive the international arrangements from operating as the major constraints on human behavior in the international arena (Young, 1989: 78-80).

Regimes are not static but change over time. While regimes reflect the behavior of its participants, those actors with uncoordinated actions cannot have much influence over the

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[44] This concept was further developed by Stephan Krasner with his book International Regimes in 1983.

[45] Occupation of a certain role by an actor brings with it some rights. For example, the role of being a human being carries with it a right to live. Therefore, bundles of rights are carried with roles. Rules are the well-defined guides. to action which the members are expected to perform under specific conditions. Rules are implemented with the aim of limiting the exercise of rights (Young, 1989: 15-16).

character of the regime (Young, 1989: 83). International regimes transform continuously in response to changes in the political, economic and social developments. For Marxists, regime transformation is the result of internal contradictions, the growth of antiethical forces which lead to the breakdown of existing arrangements. The realists perceive existing institutional arrangements as the reflections of the power structure of the international society and therefore, expect regimes to transform in parallel with the shifts of power structures in that system. On the other hand, the liberals who value rational behavior and mutual benefits of cooperation explain transformation of the regimes as attempts to achieve adjustments to developments like technological change or population growth (Young, 1989: 101).

The recent increase in the environmental problems like the climate change, ozone depletion and acid rain has increased the attention given to environmental issues. The management of such global commons have become an important issue to be handled by the international community, since to be able to deal with the problems of global commons, collective action is necessary at the international level. At this juncture, environmental regimes and institutions play an important role as determinants of collective action. Environmental regimes have been established and developed over the last couple of decades to deal with various environmental problems, notably the regime concerning ozone depletion and the climate change regime[46]. Through these regimes, institutional arrangements have been designed with the aim of promoting the common good in the future. Since regimes are not actors by themselves, they can only affect the behavior of its members. Therefore, the behavior of the parties is an indication whether that regime had been effective or not[47].

Environmental regimes are also important because through these regimes, it has been possible for the humans to see that they can exert some control over their destinies (Young, 1989: 217).If a regime is defined shortly as a method to solve a policy problem at the international level, then it can be stated that "different kinds of environmental problems require different kinds of environmental regimes" (Hisschemöller & Gupta, 1999: 168)[48].

[46] Some of the other prominent environmental regimes are Sea Dumping of Low-Level Radioactive Waste, Management of Tuna Fisheries in the Pacific, the Convention on Long-Range Transboundary Air Pollution, Satellite Telecommunications, the Mediterranean Action Plan, and the International Trade in Endangered Species. See http://www.fni.no/publ/milesetal.html for further information.

[47] For instance, as of 15.07.2007, 175 countries have ratified the Kyoto Protocol. http://unfccc.int/kyoto_protocol/items/2830.php. 15.07.2007.

[48] It is possible to distinguish between four types of policy problems (A policy problem is "the gap between a set of values and an undesirable situation that can be bridged by government action" (Hissechemöller & Gupta, 1999: 155). 1. Some problems present a conflict of values rather than interests. Hisschemöller & Gupta call these kinds of problems "the moderately structured problems". In such problems, the negotiators present their national positions on a well-defined fashion, however; they find it difficult to agree on the problems and goals for policies. 2. A second type of policy problem is the "unstructured problem" where there is no agreement or certainty among negotiators or among the society in many countries. 3. The third type of problem is where the

Environmental regimes seem to continue to be the important determinants of collective action at the international arena for the management of the global commons in the years to come. While some environmental regimes are successful, others fail to achieve their objectives. This is related to the effectiveness of that regime.

3.2.2.3.1 Regime Effectiveness and the Global Climate Regime

To be able to evaluate whether a regime has been effective or not, most of the researchers ask how the world would differ from what it would have been if that regime in question had not developed. Regime effectiveness is, then, the difference between the two conditions. Most scholars, who study regime effectiveness, make the distinction between outcomes, outputs and impacts. Outputs refer to procedures and arrangements (like ratification of international agreements or creation of organizations) which help to the formation of a regime from paper into real concern. Outcomes are behavioral changes resulting from the operation of the regime; like compliance and conformance. Impacts refer to measurable problem solving capacity of the regime. Effective regimes get results in all of these three categories. However, regimes can produce outputs although they may not produce outcomes and impacts. On the other hand, the production of outcomes and outputs do not guarantee problem solving. Shortly, it is important to be sure that the achievement related to the problem is due to the consequences of the regime (Hisschemöller & Gupta, 1999).

The factors affecting the effectiveness of a regime can be the availability of appropriate institutional and organizational forums, institutional capacity, the development of regimes in neighboring fields, development of transnational coalitions, the occurrence of landmark meetings, issue linkages, and the availability of monitoring mechanisms (Hisschemöller & Gupta, 1999: 152).

Most analysts support the view that for a regime to be effective, the problem must be relatively simple, benign or well-structured; meaning that the interests between the countries involved should not be too conflicting. In malign problems, on the other hand, actors prefer to free ride a common good. The regimes concerning malign problems can become effective

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negotiators agree at the international talks but face implementation problems at home. These are called the moderately structured problems (horizontal). 4. The last one is the structured problems where the negotiators agree on almost all issues (Hisschemöller & Gupta, 1999: 168). The type of regime to be developed will vary in accordance with the type of problem being faced. One problem with this explanation is that sometimes the problem might be perceived to be somehow different from its actual shape. At this point, the perceptions of the actors involved also becomes important. As Hisschemöller & Gupta has underlined “one part of the problem can

if there are selective incentives for cooperative behavior, if linkages to more benign issues can be made and if the system has a high problem solving capacity (Hisschemöller & Gupta, 1999: 153)[49].

In the case of the effectiveness of the climate regime, it is necessary to answer the question of how much of the ambitious objective of reducing GHGs will be achieved through this regime. Regime effectiveness is related to two institutional design questions: How to design the institutions to help regimes achieving the objectives at a maximum level and how to establish the regimes which would assess progress towards those objectives. In the coming years, maximizing effectiveness will be a very important element of the climate regime to achieve. Any regime may become ineffective if it fails to achieve its objective. This may be the result of the lack of political will, failures of knowledge or failures of implementation. Therefore, a critical point is that the written goals of a treaty and the actual intentions of the members should match (Mitchell, 2001: 221).

The climate change regime specifies behavioral standards for compliance[50] as well as environmental standards[51] (Mitchell, 2001: 224). Compliance is mainly the change in behavior which is in parallel with the goals of the regime. Compliance can be measured as to the extent the behavior of an actor or the environmental consequences of this behavior conforms to the Treaty standards. A regime's success can also be evaluated through its compliance system. The regime will be successful if it can encourage the members to conform to the rulings (Mitchell, 2001). Three types of failures lead to compliance problems[52]:

1. Failure of obligational clarity: There should be clarity within the regime as to what must be done.

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be taken objectively given, while another part becomes socially and politically constructed" (Hissechemöller & Gupta, 1999:154).

[49] Concerning the climate regime, climate change is not a single issue, it covers energy, agriculture, transport and many more. In addition to this, it is linked to the inequalities in wealth, income and power which exists between the North and the South. These factors make it difficult to develop the climate regime further (Hisschemöller & Gupta, 1999: 154).

[50] As to what kind of acts must or must not be performed.

[51] Meaning the environmental outcomes that should be achieved.

[52] Although some compliance is achieved by some states, most of the others are likely to violate the rules of the regime. Especially concerning the developing states, Mittchell's explanation is helpful in this respect:

> Some states, particularly developing states, are likely to view preventing climate change as a worthwhile goal that is simply less pressing than other economic and social goals. Others may view the present and real costs of reducing emissions as greater than the future and uncertain benefits. Some regime opponents may explicitly refuse to sign and ratify the agreement. Others, however, may join but seek to violate the regime without being detected (Mitchell, 2001: 231).

In addition to these, noncompliance can also result from incapacity or inadvertence. The noncompliant party might have difficulties of achieving its target due to real financial, administrative and technological incapacities (Mitchell, 2001: 232).

2. Failure of performance clarity: The regime should be transparent in such a way that there should be information as to how the actors have behaved and what kind of environmental outcomes have been achieved as the result of these actions.

3. Failure of response clarity: The expectations of actors about how others will react to the actions both within and outside the scope of the regime have critical importance for the success of the regime (Mitchell, 2001: 231).

For instance although the Kyoto Protocol does not have the capacity to solve the climate change problem, it will help to manage the issue. Even this limited goal needs the regime and its members to establish rules, to create compliance information systems as well as noncompliance response systems and a program evaluation system consisting of clear expectations about what is required, with the aim of detecting intentional from unintentional noncompliance in an effort to encourage compliance and deter noncompliance. All of these require the establishment of considerable institutions with rules and goals to be implemented and achieved (Mitchell, 2001: 243).

Consequently the Kyoto Protocol is the output of the climate regime. The Kyoto Protocol's first commitment period will start in 2008 and terminate in 2012. The quantified emissions reductions that Annex I countries are responsible to achieve are set forth by the Kyoto Protocol. The end of 2012 will show whether the member countries will be able to achieve their targets or not. The achieved amount of reductions in GHGs will be the impact of the regime. The projects achieved through the CDMs, JIs and emissions trading will be the outcomes of the regime, since they will represent the changes in the behavior of many firms affecting climate change.

3.2.2.3.2 Critics of the regime theory

Taking into consideration the global dimension of the climate change problem and the requirement of collective action, getting help from the explanations of the neoliberal institutionalists becomes inevitable. Through the neoliberal institutionalist perspective, it is possible to explain the building of institutions through cooperation of the states. As a branch of this school of thought, regime theory helps, to a certain extent, to the understanding of the management of the climate change problem which is a global commons issue. Through regimes, the self-centered behavior of the states is limited, free-riding is deterred, and the learning process is enhanced for the states involved. However, regime theory is not so much

helpful when it comes to the "details and contents of agreements and the configuration of social and political forces that bring them into being and shape their very nature" (Newell, 2000: 23-25).

The success of a regime is determined, partially, by the nature of the problem[53] (Newell, 2000: 26). Regimes of cooperation can take the form of formal or informal institutions with common principles, norms, rules, rights and decision-making procedures. All of these lead to a conditionally cooperative equilibria. Regimes thus limit interdependent decision-making in such a way that they make inefficient outcomes less likely by coordinating actions and by fostering various forms of collaboration. Regimes can eliminate the incentives to free-ride through the threats to reduce the pay-offs of free-riders. As a result of such institutional arrangements which also includes monitoring, free-riding becomes more visible. Besides, the secretariats of the regimes encourage the states about the on-going process, thus helps them to meet their Treaty obligations. By the help of the regimes, the countries have the chance of choosing among the many equilibrium points which can be created as the results of cooperation. There is a 'multiplier effect' where nations who are playing conditional strategies without valuing the future might choose to stay out of the game as a result of the failure of their deterrent threats. In sum, through increasing possible payoffs, reducing uncertainty and coordinating the selection of equilibrium, regimes facilitate cooperation (Grundig *et al*., 2001: 161-162).

The framework convention/protocol model has already been used concerning the problems of acid rain in Europe, depletion of the stratospheric ozone layer, and the protection of regional seas. As has been for the others, the Framework Convention on Climate Change introduces the basic lines of the climate regime. At first, there were hopes that it would include clear commitments; however, it was finalized with the ambiguous aim of the industrialized countries to return back to the 1990 emission levels as of 2000. Therefore, its main achievement has been the establishment of a long-term process concerning climate change[54]. In contrast to the UNFCCC, the Kyoto Protocol specifies obligations and

[53] The climate change issue is a complex one, covering various policy areas. With this nature, it differs from the ozone depletion issue in which the building and management of a regime had been much more easier and fast. The pace of developments with respect to the climate change issue has been rather slow compared to the ozone depletion and acid rain problems. This is due to the broader and much more complex nature of climate change as well as the scientific uncertainty which still exists to a certain extent.

[54] Its purposes are to stabilize atmospheric concentrations at a safe level, to establish general principles concerning future work like principles of equity, precaution and cost-effectiveness, a process to improve the information base as well as to encourage national planning and response measures, to set up institutions to implement and develop the Convention.

mechanisms to control the GHG emissions of the developed countries listed in the Annex I of the FCCC (Bodansky, 2001: 201).

Framework conventions eventually aim to develop protocols with specific obligations. The stratospheric ozone regime has been a successful example of this process. The establishment of the ozone regime started with the very soft Vienna Convention on the Protection of the Ozone Layer which led to the much harder Montreal Protocol on Substances That Deplete the Ozone Layer. This Protocol has brought detailed obligations to limit the use of ozone-depleting substances, including trade sanctions to deter free-riders (Bodansky, 2001: 204).

Both the FCCC and the Kyoto Protocol have been established with the experience of existing international environmental regimes. Concerning the climate regime, the UNFCCC which has a soft approach, has led to the signing of the harder Kyoto Protocol in 1997 (Bodansky, 2001: 205). On the other hand, although regime theory is helpful in explaining the international dimension of climate change politics, it fails short of explaining the domestic dimension which cannot be separated from the international dimension with respect to climate change politics.

3.2.3 Global Environmental Governance and Global Civil Society

The liberal institutionalist perspective of global environmental change has been concerned only with "identifying the conditions under which states in an anarchic international system can cooperate" (Paterson, 2000: 16). The devices of such cooperative efforts have been the regimes. However, after 1990s, international regimes, which were governed with state-centrism, began to move towards global governance (Paterson, 2000: 8). As Paterson has described:

> Specifically, the notion of global governance is at least implicitly less state-centric than that of international regimes. It is used to invoke the possibility of broader shifts in global politics away from a world which can usefully be characterized as one of interstate anarchy, towards a situation where there are greater multiplicity of actors, many of whom operate transnationally....increasingly the possibility is being taken seriously that sovereign states are not the only entities capable of fulfilling governance functions (Paterson, 2000: 17).

For example, Wapner describes the functions of a "global civil society" as to mediate between states and citizens. Wapner perceives the evolution of such a "global civil society" through the increasing number of NGOs and social movements (Wapner, 1996 in Paterson, 2000: 17) . The integrated world markets as well as the increasing interstate organizations

break the domestic-international debate. These factors provide the basis for the development of a "global civil society". According to Wapner, these global networks have already began to fulfill some regulative/governance functions deliberately or unintentionally, since organizations help to disseminate norms which regulate social life (Wapner, 1996 in Paterson, 2000: 17).

For most of the neoliberal institutionalists, the global civil society is also a key institution (Rowlands, 2001b: 63). For them, global governance is possible in the absence of a world government. For the realists, there should exist a world government to achieve governance at the global level, however, they see it to be very hard (Paterson, 2000: 25). However, environmental groups increasingly have an important role in influencing state policies. In addition to this, they have an important role to play in the creation of a transnational civil society and definition of a new pattern of politics. As Hurrell puts forward; "the strength of such groups rests on their ability to articulate a powerful set of human values, to harness a growing sense of cosmopolitan moral awareness, and to respond to the multiple failures of the state system, both local and globally" (Hurrell, 1994: 163). This goal has become more attainable with the increasing levels of globalization which takes place both in the economic and social levels.

Hurrell defines the environmental movement as "sets of transnational actors and NGOs, loosely connected under the broad heading of the environmental movement" (Hurrell, 1995: 145). Within this movement, there exists the scientific community and transnational environmental pressure groups. This signifies the emergence of political interaction of the self-conscious construction of networks of knowledge and action by decentralized, local actors (Hurrell, 1995: 145).

Jagers & Stripple emphasize that "the will and the capacity to govern the atmosphere is diffused among several governors" (Jagers & Stripple, 2003: 385). Global climate governance thus refers to "all purposeful mechanisms and measures aimed at steering social systems toward preventing, mitigating or adapting to the risks posed by climate change" (Jagers & Stripple, 2003: 385). That's to say global climate governance is not only performed by states, but also by the epistemic communities, NGOs or private authorities. The starting point of this notion is that there is no global government responsible for this action. Because of this lack in the international system, the concept of global governance has been put forward. According to James Rosenau, global governance is "conceived of systems of the rule at all levels of human activity – from the family to the international organization" (Rosenau, 1995, quoted in Jagers & Stripple, 2003: 387).

For any group to be able to act together to reach a common goal, the development of social capital[55] is very important at all levels of the society. Trust is the key cultural element of social capital. Shared norms and culture will link people to each other in a way to form social networks. The interaction of people in these networks creates trust. In the creation of social capital, institutions again assume an important role. For instance when the level of trust is high, fewer crimes will be committed; there will be fewer free-riders and few will ignore rules. Therefore, collective goods can be attained only when sufficient level of social capital exists (Svendson, 2003: 32-35).

3.2.4 Institutionalism versus State-centric Perspectives

Actually, none of the theories is capable of explaining the international reality humans are facing today. Every theory has its own strengths and weaknesses. Most of the time theories complement each other. The issues which are left unresolved or overlooked by one theory can be explained by another theory. Nevertheless, among the approaches studied in this chapter, neoliberal institutionalist theory seems to be able to explain to a great extent the complex international relations of today, especially global environmental politics. Neoliberal institutionalist theory provides better explanations for the latest global developments concerning climate change. Through this theory, it becomes possible to examine the role played by international institutions in getting states cooperate for climate change and to show that under mutual interests, states have been able to cooperate through international institutions.

When the evolution of the climate change regime is analyzed, it can be seen that non-state entities like international institutions, nongovernmental organizations, epistemic communities and other interest groups have been very effective in policy formulation apart from the states themselves who are the major decision-makers. Therefore, it appears that the state-centric realist explanations are not very successful in explaining the evolution and the development of the climate change regime of today. Concerning the global environmental problems of today, international institutions are necessary for introducing the issues, accomplishing agenda-setting, coordinating scientific research and evidence, disseminating this information to the world and for holding regular meetings to formulate new policies.

[55] Social capital can be defined as the ability of people to work together for common purposes in groups and organizations.

These institutions are not supranational in character and do not overshadow the power of states, however, they act as the basis for international cooperation. In addition to this, these institutions attract the attention of states to the environmental problems and bring them together for exchange of opinions as well as creation of global norms and values (Bayramoğlu, 1997: 189)

3.3 Foreign Policy Making, Political Behavior and the Global Climate Change

While environmental problems have started to comprise an important part of foreign policy, the importance of foreign policy procedures have began to play an important role in shaping international environmental policies, establishing the related institutions and in sharing the global responsibility towards these problems. At this juncture, foreign policy aims to protect a country's own environmental values towards global threats and, at the same time, to define the conditions of that country's involvement in international cooperation to fight global problems (Mazlum, 2006: 293). Under these circumstances, the political behavior of a country concerning an environmental problem is part of the overall foreign policy of that country.

3.3.1 Environmental Foreign Policy and Global Climate Change

The state decisions and actions determine the success of international regimes, trade-offs between economic and environmental values and how environmental threats are managed. Within this perspective, to be able to understand and explain international environmental politics, the study of foreign policy is necessary[56] (Barkdull & Harris, 2002: 64).

Foreign policy is generally studied under three types or levels of theories: 1.Systemic: Foreign policy is the outcome of the role, identity or interests given to the state by systemic factors as opposed to domestic sources. The state is assumed to be a rational and unitary actor. 2. Societal: Interest group or class interactions produce political compromises or bargains which the state implements. 3. State-centric: This includes institutional arrangements like bureaucratic politics or organizational process approaches (Barkdull & Harris, 2002: 67-68). In fact, at all levels, environmental foreign policy should be understood

[56]For example, to be able to understand the Turkish position in the climate change issues, it should be asked why a given state adopts a particular policy or orientation on international environmental concerns.

as "the outcome of bargaining and compromise towards a common solution in regard to a given problem" (Barkdull & Harris, 2002:68). The relationship between national interest, environment and foreign policy concerns the possibility of conflict in the face of environmental pressures. Recent studies have concluded that population pressure especially in low-technology countries with rapid population growth; can lead to war or violent conflicts. Water is another important area of conflict especially if the control of a significant part of the water of that area is governed by a single state. Many authors have begun to emphasize the emerging national interest in environmental protection. For example, according to Springer, complying with international environmental law has become a US national interest (Springer, 1988 in Barkdull & Harris, 2002: 72).

Under the interest-group approach[57], environmental foreign policy can be seen like domestic politics which is the product of interest group bargaining. To be able to explain a certain environmental foreign policy, therefore, the participating groups, their relative influence as well as their strategies and tactics should be analyzed (Barkdull & Harris, 2002: 66). Besides, the interest-based explanation of international environmental policy takes into consideration the disparities between the costs of those countries who are taking mitigation measures and the expected benefits (Sprinz, 2001: 274). On the other hand, regime type, legislative rules, in short, the institutions of a state also shape and determine policy outcomes (Barkdull & Harris, 2002: 66).

According to the interest-based explanations, a country's ecological vulnerability and the related abatement costs provides information about its government policies. Applied to the climate change issue, when countries' ecological vulnerability to climate change is high and when their abatement costs are low, they will act as 'pushers' for emissions reductions (Sprinz & Weis, 2001: 69). On the other hand, the ones with high abatement costs and low vulnerability will act as 'draggers'. If the rating of a country in both costs is high, then that country will face an intermediate cost-benefit ratio. The other way, if a country has ratings of both low, then it will act as a 'bystander' (Sprinz & Weis, 2001: 69). However, since this approach does not take into account the influence of other important factors in policy

[57] Interest-based theory at the systemic level, assumes that rational actors will cooperate to achieve joint gains and seek absolute rather than relative gains. Interests are not understood as the outcome of domestic politics. It is assumed that states are unitary and rational actors, therefore it employs game theory and economic models to explain foreign policy (Barkdull & Harris, 2002: 71).

formation, it can only be helpful as an initial understanding of the possible positions that can be taken by governments during international negotiations[58].

A study by Scheider and Cederman has shown that if the pushers perceive the dragger country to be strong, then they may accept a weak treaty proposed by the strong draggers. This is what has happened during the FCCC negotiations. The US, as a result of its strong domestic pressures, has acted as a dragger in favor of a weak agreement (Sprinz & Weis, 2001: 72).

The US, as being the world's largest producer of oil, coal, and gas as well as being a net importer of energy is very sensitive to the issues concerning energy. At the same time, as a country, the US is seriously vulnerable to the negative impacts of climate change. The environmental NGOs are well organized under the Climate Action Network (CAN). Although the US has been the single largest contributor of the climate science since the 50s, the scientists and the policy makers worry about different things. As the two-level metaphor indicates, the US has been squeezed between the pressures of the international climate regime and its unique domestic political processes. Therefore, even though the environmental NGOs are well organized, their influence on the government has been counterbalanced by the powerful and well-financed industry interest groups who had interests in avoiding emissions reductions. Therefore, the US can be viewed as a strong dragger who has managed to avoid emission reductions obligations in the FCCC and deep cuts in the Kyoto Protocol (Sprinz & Weis, 2001: 77-79).

On the other hand, the negotiating position of the EU can be analyzed in three levels: the EU within the global context, the EU institutions and their relations with the EU member states, single EU members within the international context. First of all, the EU has polluter interests due to its being the third largest CO2 emitter in the world. However, energy efficiency is very important for the EU because of its dependency on energy imports which constitutes 50% of its total energy consumption. Abatement costs are perceived to be moderate. The European companies have already started working on energy efficient technologies and renewable energies, therefore international regulations in favor of these technologies are to the economic interest of these companies. It is hard for the EU to act as a unitary actor due to the competing and opposing interests among member states, fragmented

[58] The factors influencing the positions of the governments during international negotiations also influence compliance with environmental agreements. The degree of compliance and the evolution of policies depends also on some country specific factors such as the wealth of a country, the domestic institutional structure, the political strength of environmental NGOs vis a vis the major polluting industries (Sprinz & Weis, 2001: 71).

supranational institutions and tensions/competition between member states. Some members support the leadership role of the EU; some do not (Sprinz & Weis, 2001: 80).

The European politicians are used to applying a top-down approach which means that initially the targets are set which seems feasible, then the associated costs are tried to be accepted to a certain extent. Certainly, this was a point which breaks the credibility of EU's intentions. In fact, the real problem is that the EU still does not have a common climate and energy policy (Sprinz & Weis, 2001: 81). The EU, having known this deficiency on such an important topic which it tries to be a global leader on, has announced, in March 2007, the serious preparation of a common climate and energy policy as of 2009. When achieved, this common policy will have positive impacts on the EU's global position as well as on the internal policies (Euractive, 2007b).

Since the EU still does not have a common climate policy, its action as a unitary actor is quite questionable. Any final decision concerning common climate policies requires a unanimous vote by the Council of Ministers. In this respect, the CO2 reduction measures require unanimity within the Council. There are three groups of member countries in the climate change issue. The first group is the "rich and green", the second is the rich but less green, and the third is the "poorer and less green". The less green members have a considerable veto power over climate protection measures (Sprinz & Weis, 2001: 82).

Germany is the largest single emitter of greenhouse gases among the rich and green member states. It has both polluter interests and a reliance on energy imports. It is ecologically less vulnerable compared to other EU countries. Leading business firms have developed solar and wind energy technologies. Therefore, the diffusion of these technologies internationally is to their economic interests. Germany had voluntarily committed itself to a reduction of 25% of its 1990 emissions as of 2005. It has forecasted to achieve this target due to the decline and restructuring of the former East Germany. However, the underestimated costs of reunification together with increased unemployment levels have put doubts on the achievability of this target[59] (Sprinz & Weis, 2001: 83).

[59]The change of government from a conservative-liberal coalition to a social democratic-green government, in 1998, had positive impacts on the climate policy, though, change was slow due to industrial lobbying within the relevant ministries. The environmental NGOs are very influential on the public opinion and the Ministry of Environment, however, they are not as influential on actual policy outcomes due to the weaker position of the Ministry of Environment within the cabinet and the interministerial working group. Therefore, although Germany may act as a push country within the EU and globally, domestic business interests limit its ambitious actions and policies. Germany's dilemma is that while the strong environmental groups can motivate any government for an ambitious climate policy, the well-organized industrial groups are strong enough to resist a sharp rise in costs due to the implementation of climate policies (Sprinz & Weis, 2001: 84-85).

Nevertheless, the rich and green countries are most of the time committed enough to make the EU a pusher country in the global climate regime. However, effective domestic measures are necessary at the EU level to serve as a role-model for the other countries and for leadership. In fact, this kind of an approach seems to be implemented by the EU in the recent years, especially with the latest announcement for its will on a common climate and energy policy based on a new industrial revolution. Thus, while the EU seems to work towards gaining global respect and a leadership position with ambitious climate policy, the US, already an established global leader, perceives climate change only to be one of the many issue areas which is worth of attention (Sprinz & Weis, 2001: 92). This brief discussion highlights the importance of both domestic as well as international factors in affecting the policies of the states.

3.3.1.1 The Two-level metaphor

This has been introduced to the international relations theory by Putnam with the aim of emphasizing the linkages between domestic and international politics (Barkdull & Harris, 2002: 85). According to him, the domestic groups work to optimize their interests at the national level by pressuring the government to take decisions in accordance with their interests. The politicians guarantee power through the coalitions they form with these groups. At the international level, governments try to take such actions as to satisfy these groups while at the same time trying to minimize the probable negative consequences of any foreign development. Putnam underlines that neither of the games can be ignored by the politicians (Sprinz & Weis, 2001: 68). This is the basis of international negotiations.

Regime theory makes the separation between domestic and international politics. Concerning climate change politics, it is impossible to separate the two. Putnam's two-level game emphasizes the significance of the internationalization of domestic politics and the domesticisation of international politics. According to Putnam, it is useless to argue whether domestic politics determine international relations or vice versa. They are interdependent, they affect each other. Putnam perceives the politics of international negotiations to be a two-level game (Putnam, 1988: 427).

> At the national level, domestic groups pursue their interests by pressuring the government to adopt favorable policies, and politicians seek power by constructing coalitions among those groups. At the international level, national governments seek to maximize their own ability to satisfy domestic pressures, while minimizing the adverse consequences of foreign developments. Neither of the two games can be ignored by central decision-makers, so long as their countries remain interdependent, yet sovereign (Putnam, 1988: 434).

The two-level approach, unlike the state-centric theories, takes into account the domestic conflicts in the formation of national interest[60] (Putnam, 2000: 460). In the analysis of global environmental policies, most theories of international relations are rooted in a state-centric paradigm, the state is perceived to be the most powerful unitary actor. As has been stated before, to be able to understand climate change policies thoroughly, it is useful to examine the concept of power. In the climate change politics, power means the ability to assert frames of interpretation and meaning upon problems which includes the selection of policy-relevant knowledge, informing cognitions and giving legitimacy to certain actions. At this point, the state-centric conceptions of power cannot explain the process in detail since it is possible to talk about other powerful actors who have been influential in the formation of climate change politics. Some of these actors might have been part of the process as the result of cross-issue influence[61] (Newell, 2000: 35-37).

3.3.1.2 Rational Choice Theory

The other impertinent debate concerning the theories of international relations has been between the rationalists and the constructivists. The rational choice model, developed within the neoliberal institutional theory by Keohane and others, helps to explain why the institutions are important in international society. Rational choice institutionalism tries to explain collective choices by rational actors. It sees the outcomes as the product of the interaction between actor preferences and institutional rules. Accordingly, actors choose institutions on a rational basis and perceive the rules to facilitate the pursuit of their goals. However, rational-choice only focuses on "how states achieve predefined ends and not how ends themselves are redefined" (Paterson, 1996: 131). On the other hand, the reflectivist (constructivist) school has a more convincing explanation. This school perceives states "as playing roles and trying, intersubjectively, to develop norms and a sense of what their interests are in relation to global warming" (Paterson, 1996: 131). Simply, the reflectivist school perceives the states to be role players which are reflexive about their goals.

[60] There is a large literature on the relationship between domestic and international affairs. James Rosenau was the first scholar to draw attention to this subject through "linkage politics" (Putnam, 1988: 430). The bureaucratic politics school of thought has also studied the domestic-international interaction.

[61] Cross-issue influence is the direct and tacit power of organized industries in areas other than environment. Their presence and power have restricted the negotiating space in relation to climate change. In the case of climate change, these may be those industries of energy, transportation and agriculture (Newell, 2000: 35-37).

Keohane argues that rational-choice institutionalism "insist that institutions must reflect bargaining equilibria of games in which actors seek to pursue their own interests as they define them" (Keohane, 2001: 4). However, beliefs are necessary to understand these games. Apart from understanding interstate negotiations, understanding how state positions are taken on climate change politics is also very important. Most of the time "state representatives try to develop norms to guide their action in relation to global warming, reflecting their sense of belonging to a system in which they have some rudimentary responsibilities to the other members of that system" (Paterson, 1996: 179). Therefore, state interests are the result of both domestic pressures and international processes and structures.

According to Paterson, the rational choice version of regime theory is empirically implausible. When applied to the climate change negotiations, it is perceived that the states do not behave rationally as has been assumed by the rational choice theorists. States, most of the time, have not developed clear preferences about climate change issues. Their preferences will be the result of the collective search of action as well as the intersubjective perceptions of the new norms established as a result. In the face of the preferences in other fields which states have made, these new norms will need some time to accommodate themselves (Paterson, 2000: 15).

3.3.1.3 Political economy approach

While the EU strongly supports the Kyoto Protocol, the US has withdrawn. The behavior of the two major powers to a common problem has turned out to be quite different from each other. On the other hand, a small country like Denmark supports the Kyoto Protocol. At this juncture, international political economy approach can help to explain this controversy at the state level.

From the US perceptive, at the beginning, the US had supported the establishment of global CO_2 trade, because that system of CO_2 trade had already been implemented and worked in some of the US states until that time. In addition to this, buying cheap CO_2 permits from the Eastern European countries would be creating important gains from trade for both parties. However, the restriction on the use of hot air[62] has led many countries to lose their special rewards to be gained as a result of negotiation, hence decreased the willingness of many countries to participate[63] (Svendson, 2003: 148).

[62] Hot air means that the granted quota of permits is higher than the actual emissions.
[63] The Kyoto Protocol was negotiated by the US on the prospect of the availability of free trade, in other words, on the basis of free access to hot air (Svendson, 2003, 140). However, in the Hague, EU pushed for the inclusion

In addition to this, there was a disagreement with regard to the involvement of the developing world to take quantified responsibilities. While the US was insisting that the developing world should also have commitments, the other countries were accepting that the threat which was being faced today was the result of the previous actions of the industrialized world. These countries were accepting that only the industrialized countries should assume quantified emissions restrictions[64].

The international political economy approach helps to explain all these economic as well as political pressures on states during the negotiations. According to this approach, countries have the incentive to agree when they perceive net gains from agreeing or participation. Under the circumstances that there are no gains, then, there is no agreement. The economic calculations of the US during the negotiations, discussed above, are in line with this theoretical assumption[65] (Svendson, 2003: 147).

Paterson describes the transformation in the world political economy which took place in the beginning of the 1980s giving way to the emergence of climate change politics. During this period, it became possible to bring environmental questions to the political agenda. He states that the processes of globalization together with the move towards neoliberalism have created the back scene of the climate change negotiations. Climate change politics emerged during the short-lived economic boom of the mid-80s. However, the emergence of

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of the 'supplementarity principle' within the Kyoto Protocol, which calls that countries should achieve at least 50% of their reduction commitments nationally. The reason behind this push was to avoid those circumstances where countries try to fulfill their reduction commitments only through the trade of hot air which would result in no changes at all at the domestic level. This restriction on trade has substantially increased compliance costs for the US. To be able to deal with these costs, the US supported the inclusion of carbon sinks in forests and agriculture. However, this has been a controversial issue because plants can be considered as carbon sinks, but the science of estimating the amount of carbon, which has been removed from the atmosphere by the help of these plants, remains to be quite uncertain. In addition to these, the US has insisted on incorporating all the land-use activities to the Protocol. All these claims of the US were formulated to eliminate most of its need to reduce emissions (Svendson, 2003 ,142-144).

[64] With the entering into force of the Kyoto Protocol, the companies in the developed countries will be facing extra costs due to the reduction commitments of their countries. This situation will encourage firms to redirect their investments to those developing countries who are not members of the Kyoto Protocol, in a way "exporting" or "leaking" CO2. This carbon leakage is one of the reasons why the US insisted on the larger developing countries, like China and India, to participate in the Kyoto Protocol as well. In fact, the problem of carbon leakage has gained importance due to globalization; now that many multinational companies already operate in foreign countries. However, in the context of climate change, carbon leakage would have the potential of distorting global competition, since the developing countries, outside the Kyoto framework, would become more attractive for those multinationals who would be interested in reducing their environmental costs. Under these circumstances, US would be losing its competitiveness vis a vis China or India (Svendson, 2003: 146).

[65] In addition to the economic calculations, the political ideologies were also important during the negotiations. For example, it can be stated that social-democratic and left-wing governments are more supportive of environmental regulation compared to the liberal governments (Svendson, 2003: 147).

neoliberalism during that period restricted the types of policies which could have been developed. Hence, the power of capital constrained the development of policy options that could be formulated[66] (Paterson, 1996: 162).

In a country, interest groups pursue their own private goals. Under some circumstances, they might support views which may conflict with the overall goals of that society. If a proposal is to the advantage of these groups, then that proposal is supported, however, if not, it may be blocked. In this sense, interest groups[67] can affect policy outcomes in a country (Svendsen, 2003: 1). In addition to this, Antony Downs, from the public choice school, has introduced the "self-interest axiom" implying that the direction of political behavior is towards selfish ends. According to him, in their office, the politicians behave in a way to attain income, prestige and power (Svendson, 2003: 7).

Tullock, another scholar from the public choice school, has introduced the concept of 'rent-seeking', meaning "the use of resources in lobbying and other activities directed at securing protective legislation" (Svendson, 2003: 7). By intervening in the market, governments can create economic rent for those firms who have lobbied for that end. According to the views of this school, the public sector is a revenue maximizer which seeks to extract from the economy the most as it can in the form of public revenues (Svendson, 2003: 96).

North, the most prominent representative of modern institutional economics, supports the view that institutions are important for policy outcomes. The institutionalist economists[68] assume that economic agents do not have full information which is in contrast with the neoclassical economic theory. To achieve successful exchange of goods and services, therefore, both formal and informal institutions are necessary to construct the rules of the game. According to this school of thought, institutions can be defined as "persistent and

[66] Paterson describes the emergence of neoliberalism as to "fulfill the basic conditions of the capitalist reproduction" (Paterson, 1996: 168). Its effect on climate change politics is the narrowing of policy options as well as the decreasing importance of the environmental problems. Instead, the discussions of environmental problems had been transformed into 'ecological modernization' and 'sustainable development' which reflected the obsession of economic growth. As a result of neoliberalism, environmental economics has been governed by the market-based solutions rather than taxes. Within the framework of international political economy, the possibilities of states' economic intervention have been changed as a result of globalization. Generally, economic concerns reflecting states' dependence on capital accumulation, have dominated the policy debates on climate change (Paterson, 1996: 167-170).

[67] Interest groups are organizations outside the formal institutions seeking to influence decision-making (Svendson, 2003: 66).

[68] The institutionalist economists give importance to the institutional circumstances since it facilitates lobbyism and rent-seeking among organized interest groups, hence the policy outcome. If the institution is more

connected sets of rules (formal and informal) that prescribe behavioral roles, constrain states and shape expectations" (Svendson, 2003: 15).

To be able to provide collective goods[69] for the whole society and to increase economic growth, institutional quality is very important. This can be explained through the concept of corruption. Corruption[70] can simply be defined as intentional non-compliance or breaking of the rules. Political corruption is the "abuse of public authority for private profit" (Svendson, 2003: 18). Under these circumstances, the best way to cope with economic decline, corruption and the accumulation of interest groups in a society is the introduction of free trade. When there are government restrictions, the system is manipulated easily with lobbying of the interest groups and other forms of corruption increase (Svendson, 2003: 27).

The public-choice movement led by the works of Arrow, Buchanan, Tullock and Olson, try to explain collective choices or macro behavior through examining the character of the institutional arrangements. However, there are also scholars like Susan Strange who does not give that much weight to the significance of institutions at the international level as being determinants of collective outcome. For Strange, to be able to see who gains what at the international level, not the regime which emerges on the surface but the bargains underneath which the regime is based on should be examined (Young, 1989: 207).

The perspectives on economic growth and capitalism as well as the limits-to-growth argument might be useful to support or criticize the political economy approach.

a). Economic Growth and Capitalism

The states and international institutions are operating in a system which is linked by the imperative of economic growth. Economic growth is environmentally problematic, because depletion of resources and other ecological problems are a consequence of growth (Paterson, 2000: 31). Walker emphasizes that:

> The pressures of economic systems are such that, even in the unlikely event of nations wishing to stay out of the scramble for growth, they cannot do so; the coercive reality of survival and the interdependence of all nations ensure the continuation of an environmentally destructive system (Walker, 1989 in Paterson, 2000: 31).

Hempel provides another argument concerning environmental destruction:

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centralized, then lobbying would be easier, since a limited number of institutions are to be visited. On the other hand, if the power is shared by a number of institutions, then lobbying would be harder (Svendson, 2003: 17).

[69] Collective action is achieved with the participation of a two or more individuals or parties forming a group who aim to achieve a common goal. Therefore, the achievement of any common goal in an area produces a common good for the members of that group (Svendson, 2003: 11).

[70] The acceptance of money and other presents for the finalization of contracts, the diversion of public resources for private use, and some other illegal activities like intervening in the judicial procedures can be examples of corruption (Svendson, 2003: 18).

> Rather than attributing environmental destruction to the actions of a relatively small number of thoughtless and careless individuals, or to some passing phase of industrial recklessness that accompanies an otherwise benign evolutionary process of economic development, the destruction described here is attributed to driving forces that are pervasive, persistent and deeply ingrained in our values, lifestyles and institutions (Hempel, 1996, in Paterson, 2000: 32).

According to Paterson, the states and the state system had led to environmental degradation as a result of their internal operations. The traditional goals of the modern state; like defending borders and promoting industrial development, are in conflict with environmental goals. Under these circumstances, it seems hard for environmental protection to become one of the primary objectives of a state since it conflicts with other vital goals. Hence, Paterson concludes that the system needs to be transformed (Paterson, 2000: 45).

Capitalism is regarded as ecologically damaging in this framework. Paterson explains this relationship as follows: Due to the competitive nature of capitalism, in the capitalist systems, growth is required for survival. Growth would mean greater productivity as a result of new investments, which would lead to more production and consumption. On the other hand, if the system cannot grow, it would enter a recession in which the industrial firms would run out of investments, thus, growth would turn otherwise. Therefore, a state's fundamental purpose is to provide the conditions under which economic growth can take place. However, within this process, those owning the means of production gain powerful positions and have veto power related to state policies. When environmental policies get into conflict with the interests of these firms, they receive opposition from these powerful groups. As Paterson explains: "The growth dynamic of capitalism provides a powerful constraint against responding effectively to environmental change" (Paterson, 2000: 46).

b). The limits-to-growth argument

The primary goal of firms in capitalist systems is profit-maximization. All other objectives like ecological ones become subordinated to this goal. During the accumulation process, global differences in income increase as a result of increasing exploitation of the firms. The poorer or less developed regions, with the aim of growth, do not care about the environmental issues at all. As a result, even in the developing world, capitalism leads to environmental degradation or change[71] (Paterson, 2000: 47-50).

c). Historical Materialism

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[71]To a certain extent, this is also true for Turkey. Turkey had perceived its growth to be in danger in the face of probable climate change policies, therefore it had not taken the necessary initiatives to become an active part of the regime.

Another approach to explain the patterns of international cooperation could be historical materialism. This school of thought emphasizes the role of the most powerful actors within the capitalist world economy. According to them, the rich North imposes its preferences on the poor South. In other words, it is the capital[72] which determines international rules of the game. When climate change is concerned, energy industry is part of the capital which will be affected the most. This is the result of the fact that almost 90% of the world's commercial energy is produced from fossil fuels, which results in excess CO_2 and leads to global warming. It has been estimated that the reason of almost 60% of the anthropogenic global warming is the combustion of fossil fuels (Rowlands, 2001b: 51). Therefore, reductions in the production and consumption of fossil fuels take the center stage in the efforts to mitigate climate change. Consequently, the interests of the fossil-fuel related companies get hurt. These companies are important actors in the world economy; they are among the largest economic entities of the world. In accordance with their position, their reaction to the climate change issue has been like the historical materialists would have guessed. For example, the Global Climate Coalition[73] has not given value to the international scientific information concerning climate change, and in contrast worked to prove the high economic costs of emissions reductions just like some states who argued that emissions reductions would threaten their economic well-being. The differences between the energy resources of countries as well as the structure and the culture of their energy industries turn out to be an important factor[74] (Rowlands, 2001b: 52-53).

The basic assumption of the historical materialism is that "the process of capital accumulation necessarily reproduces and intensifies inequalities" (Paterson, 1996: 171). In short, capitalism exploits and intensifies global inequalities. In this respect, the North-South conflict has taken a central place in climate change politics since the developing countries are in a dependent position. The developing countries faced some problems during the negotiations. One of these problems was stemming from the weakness of the state in many developing countries. This weakness, both towards the external forces and the domestic ones, has limited the political, financial and administrative capacities of these states to implement policies effectively and make the necessary investments. The second problem concerned the debt crisis that many developing countries were facing that limited their capacities to act. As

[72] Presently, capital refers to trans-national corporations (TNCs).
[73] Global Climate Coalition is a grouping of primary US industry interests.
[74] For example, for the US, having large energy resources and an energy culture based on cheap available energy, taking action on climate change is a very problematic issue. In the same respect, Australia, who has large coal mines, find it difficult to take action on decreasing the use of coal.

a result, during the negotiations, the developing countries knew well that it would not be possible for them to "alter their emission paths without external assistance" (Paterson, 1996: 172).

The problems related to debts had very significant results[75]. As Paterson has described:

> ...the levels of indebtedness clearly inhibit to a very great extent, what is possible in developing countries in terms of investment in energy efficiency, alternative energy sources, and so on, which could foster less carbon-intensive development. These constraints have been exacerbated by the response from the Northern dominated IMF, whose structural adjustment programmes have stressed currency devaluations, limiting imports, and curbs on public expenditure. These objectives, in particular the last one, are contradictory to the aim of introducing climate policies in those countries[76] (Paterson, 2000: 174).

Actually, in the present climate change negotiations, the North-South issue has taken a new shape. The South has successfully eliminated the efforts of the North to get them involved in the climate regime with binding legal commitments. Today, the South is not an active unit on the climate change issue although the US still continues to demand that the major developing countries should also take part in sharing legally binding targets for emissions reductions together with the North. From this perspective, historical materialism fails short of explaining the climate change negotiations. In addition to this, differences within the energy industry have led to different strategies on climate change. While the oil industry faces a challenge, natural gas and renewable energies face opportunities to further develop. Even within the oil industry, there are different reactions. Some big companies such as BP/Amoco, Royal/Dutch Shell as well as Ford Motor Company have left the Global Climate Coalition is a clear evidence of this (Rowlands, 2001b: 53). Therefore, it is true that industrial interests have played an important role throughout the negotiations. However, their influence has not been reflected immediately on the agreements. Even if the TNCs of the US have been successful in the US withdrawal from the Kyoto process, they have not been able to stop the overall process.

[75] The above descriptions of the problems related to indebtedness recalls the circumstances surrounding Turkey during the years when climate negotiations had taken place. Facing the same problems with the developing world, Turkey had not been able to present its interests effectively in the negotiations. Its mixed identity, whether Turkey was a developing or a developed country, has led the industrialized countries to have expectations from Turkey which it was not able to comply with.

[76] However, most of the developing countries have used the climate change platform to change this unequal balance between the North and the South.

3.3.1.4 The Global Climate Regime and International Trade

From an environmental perspective, resources are the inputs of an economy and the environmental waste is the by-product of economic output. This is the most basic relationship between trade and environment. Since an international trade organization (WTO) already exists there with rules and procedures in force, the signing of new international agreements brings the problem of their compatibility with the existing international agreements. The new environmental agreement might have new measures which might implicitly affect trade. Taking this into consideration, the FCCC has a "GATT-compatible clause" (UNFCCC 1992, Article 3 (5)). This clause states that climate change mitigation efforts should abide by trade principles like the nondiscrimination principle. This implies that there should not be any restrictions to trade stemming from the FCCC. However, disputes like environmental cases with trade dimensions may arise and brought to the attention of the WTO since the trade regime has a powerful dispute-settlement mechanism further strengthened by the Uruguay Round[77]. In addition to this, most of the industrial and agricultural products under the trade regime are affected by the Kyoto goals of reducing emissions from fossil fuels and methane (Luterbacher and Norrlöf, 2001: 280). This increases the possible clashes between the two regimes as well as making them interdependent. Luterbacher and Norrlöf highlight the importance of environmental law:

> ...there is a greater tendency of the former (referring to environmental law) to regulate economic activity, and for the latter body of law to regulate government trade policy in a greater number of issue areas, inevitably also affecting the environment (Luterbacher and Norrlöf, 2001: 280).

At the consumption level, there are a few issues which might lead to conflicts between trade and environmental rules. The states are free to set their own rules as long as they respect the principle of nondiscrimination. Examples include gasoline composition norms and the pytho-sanitary measures. At the production level, however, there are more areas where the environmental and trade regimes might clash. The important point is the identical national treatment of like-products. This means that the states cannot discriminate against those like products even if they have been produced with an unfavorable environmental impact. On the other hand, the so-called safeguards or exceptions clause (Article XX) of the

[77] Within the trade regime, there is a Committee on Trade and Environment (CTE) which has been established in the Marrakesh Agreement in 1994. An earlier version of such a committee was already established in 1971 with the name; the Group on Environmental Measures and International Trade. However, the committee has limited power, it can only make recommendations (Luterbacher and Norrlöf, 2001: 282).

WTO, emphasize the environmental concerns as possible guidelines for trade policies (Luterbacher and Norrlöf, 2001: 286). Particular environmental standards can be applied to other countries only when environmental problems take place regardless of the production location and thus needs concerted action. Therefore, the trade principles of the WTO assert that countries are mostly free to establish their own environmental and safety standards with the support of sufficient scientific evidence; however, they cannot extend the application of these national standards abroad through trade restrictions except under very specific circumstances (Luterbacher and Norrlöf, 2001: 286).

The aim of the WTO is to enforce free trade principles and to fight protectionism. There is possibility that environmental regimes might contradict with these goals in certain circumstances if they seem to be promoting projectionist interests. Such kind of projectionist attitudes have already been demonstrated by some delegates that those countries who are strongly supporting GHG reductions should be allowed to protect themselves towards the exports of those countries who are not supporters of such measures. It is possible to say that the trade regime will continue to develop in the years to come. This development will again be shaped by the trade policies of those actors with superior market power on the international trade scene like the US, the EU and Japan. Therefore, the policy preferences of these actors will have important implications concerning the relation between trade and environment and the development of the two policies in the future. Without preparations, the clash between the two regimes seems unavoidable. The use of environmental arguments to promote trade interests and vice versa, the use of trade restrictions to promote environmental policies should be expected in the international arena. In other words, some countries may use trade sanctions to punish the cheaters and free-riders. To overcome such problems, new institutions can be created to resolve such conflicts, roles of the international committees can be strengthened, the roles of the traditional institutions can be redefined and a common WTO-FCCC working group can be established with the aim of reconciling the two regimes (Luterbacher and Norrlöf, 2001: 294). At this juncture, the design of the future climate regime gains importance due to effectiveness. This design should include aspects of fairness and equity, problems related to the interpretation of scientific evidence on climate change, as well as questions of institutional and instrumental design[78] (Luterbacher and Sprinz, 2001: 299).

[78] Since the scopes of the former environmental agreements were much narrower with respect to Kyoto, the possibilities of clashing with other regimes have been lower. However, the coverage area of the climate change regime is so broad that it is almost inevitable that such clashes will occur between other regimes. Even with the Montreal Protocol, there is a contradiction since the particular refrigerants that are allowed to be used in the

3.3.2 Environment and Political Behavior

The role of environment, as an important factor shaping political behavior, both with respect to geography (physical milieu) and to culture (social milieu), has attracted the attention of policymakers starting from the times of Aristotle. The study of international relations, until the end of World War II, has mostly been governed by geographical explanations like a state being handicapped due to its geographic location or a state having a geo-strategic location affecting its policies. With the development of nuclear weapons, the role of geography has diminished. Post-industrial societies began to give importance to access to information-based technologies and intellectual properties rather than the physical control of their territory and national resources (Dougherty & Pfaltzgraff, 1996: 144).

It is possible to talk about political geography as the relationship between politics and geography which is the study to understand why people adapt to and modify the environment they live in. On the other hand, geopolitics examines the impact of geography on political power. It is also possible to talk about geo-economics which concerns the economic decisions with regard to production. Presently, the decisions of where to produce are not limited within the frontiers of a state, but with regard to the availability of the needed labor and hospitality to investment (Dougherty & Pfaltzgraff, 1996: 148).

With the emergence of the climate change threat, environmental factors such as geographical location and natural resources regained importance[79]. Presently, the geographical location of a country on the earth gives important implications as to the future problems and opportunities that country will face due to climate change. Especially, if the country has rich natural resources of water, for example, it might have to deal with the problems of migration and even border disputes in the future due to climate change. The climate change issue has added a new dimension to the classical security threats of the last

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Montreal Protocol are, in fact, part of the six GHGs targeted by the Kyoto Protocol (Luterbacher and Norrlöf, 2001: 287).

[79] The importance of environing factors have been emphasized both by the realist/neorealists and the idealist/neoliberal institutionalists. For both of them, environment encompasses the products of human culture as well as the physical features of the earth. For the realists/neorealists, environmental circumstances like geographical location of a state, largely affects political behavior. The idealist/neoliberal institutitonalists also perceive environmental factors to be very important. On the other hand, they rely on international organizations to "alter human behavior by changing the international political environment" (Dougherty & Pfaltzgraff, 1996: 148-149). Environmental factors are also given importance by the systems theory. Systems can be open or closed. Open systems are dependent for their survival on the inputs from and outputs to their environment. On the contrary, closed systems do not need inputs from the external environment. Certainly, the policies of the two systems would be quite different from each other (Dougherty & Pfaltzgraff, 1996: 148-149).

couple of decades (like wars, invasions, attacks...) such that the weapons of those years will not be able to deal with this new threat.

3.3.2.1. Relationship between technology and environment

With the increasing pace of technological developments, the political importance of geography has decreased especially after the Cold War. Presently, weapons of mass destruction can be launched from any point on the earth to strike any aimed target. Those states having these weapons have the power to control any place on earth having strategic importance without physical movement. On the contrary, in today's world, as Dougherty and Pfaltzgraff argue "the relationship between geography and power is found in the ability to move goods, services and information most efficiently and rapidly from one point to another" (Dougherty and Pfaltzgraff , 1996: 151). Therefore environmental politics rests on the renewed link between the geography and power.

> Environment not only limits human conduct, but also provides opportunities. Of particular importance are climatic and geographical factors. Uneven distribution of resources, as well as differences in geographical and climatic endowments, shapes the potential power of a state. The size of the country influences the availability of the indigenous natural resources, and the climate affects the mobilization of human resources necessary for exploiting those natural resources. Variations in those factors may have crucially important implications for the structure of political systems, even influencing their capacity for survival under stress[80] (Dougherty & Pfaltzgraff, 1996: 151).

As Dougherty & Pfaltzgraff points out above, spatial features determine state capacity to act. However technology and research can also shape the state of environment in a given territory which in turn shapes the power of a state.

3.3.2.2. The milieu relationship

Harold and Margaret Sprout emphasized the importance of geography on political behavior under the assumption that uneven distribution of human and inhuman resources most of the time affects human activity. The Sprouts rejected the unidirectional geopolitical theories. They viewed the environment (milieu) as a multidimensional system. Within this system, how the political leaders perceived the environmental conditions as well as the actual

[80] According to Ratzel, favorable climatic conditions can lead to the development of superior civilizations (like Europe). For him, the struggle of humans was for a favorable living space. This idea of a living space has taken the shape of "lebensraum" in the thoughts of Haushofer and Hitler as a "geopolitical rationalization for the military aggression" in the WW2 (Dougherty & Pfaltzgraff, 1996:158).

conditions themselves (psycho milieu) were important. Their research covered the interrelationship of geography, demography, technology and resources and emphasized the importance of perceptual variables and the quantitative factors like population and territorial size. Within this framework, the milieu can affect human activities in two ways. First, it can affect human decisions under the circumstance that humans perceive factors related to the milieu that is through the psycho milieu. Second, humans might perceive these factors of the environment as different from their actual realities. This is the operational milieu which might lead to disastrous outcomes (Dougherty & Pfaltzgraff, 1996: 159).

The concept of cognitive behaviorism is a very important concept for the Sprouts. The assumption of this concept is that humans respond to the milieu through perception and no other way. Therefore, false ideas might easily lead to false decisions and actions[81]. According to the Sprouts, the political decisions are the result of the perceptions of political leaders. However, there is an operational milieu which exists even if it is not perceived by the political leaders. In that sense, for the Sprouts, policymakers are not dictated or compelled in their choices by the milieu. They can choose any policy in line with their own perceptions; however, the achievement of their policies is limited by the operational milieu that is the situation which actually exists[82] (Dougherty & Pfaltzgraff, 1996: 160).

According to the Sprouts, technology and social change affect environmental relationships. Technology has not been able to change the physical layout of the earth; however, it has brought new dimensions to the international milieu (Dougherty & Pfaltzgraff, 1996: 161).

3.3.2.3 Environmental Values and Global Climate Change

Martha Finnemore has worked through a sociological approach to international relations. Her research showed that "ideas and values generated at the domestic level can lead to the creation of international organizations and institutions" (Barkdull & Harris, 2002: 739).

[81] As in climate change issue, failure to perceive the importance of climate change might refrain countries from taking action today which might lead to disastrous outcomes in the future.

[82] With respect to the climate change issue, presently, the world states are trying to come up with a collective action to stop climate change at a certain level in line with their perceptions of the threat. However, uncertainty continues to exist concerning the operational milieu. The actual situation might be different from today's perceptions, that the problem might be much more serious in fact or the problem might not be that significant. This is something which the world can only be able to assess by either a scientific breakthrough or by actual realization as the years go by.

For her, international structure is "meaning and social value" rather than power[83], she has emphasized that "states are socialized to want certain things by the international society in which they and the people in them live" (Barkdull & Harris, 2002: 73). For example, presently, almost all countries in the world have environmental ministries, regardless of the level of development and the concern for environment. Certainly, international environmental negotiations have led governments to perceive such a ministry as part of the definition of a state. Therefore, domestic and international policies have a dialectical relationship (Barkdull & Harris, 2002: 73).

The role of ideas is, also, an important part of the study of environmental foreign policy. Although not a social scientist, Al Gore, former US Vice President, argues that "global environmental protection can become a guiding ideal just as did civil rights, the anti-slavery movement..." (Gore in Barkdull & Harris, 2002: 74). Foreign policy choices are affected by the ideas operating at the global level. These systemic ideas can shape state preferences and constitute state identity. As a result, preferences are chosen and foreign policy is formulated (Barkdull & Harris, 2002: 74).

Most of the policymakers are influenced in their decisions by the interest groups, since these groups provide the policymakers with the votes, the money and the publicity they need. To attain these, the policymakers support such policies which gain the approval of these groups. It can be stated that environmental policy is the result of pressures of the environmental groups and the opposing business groups (Barkdull & Harris, 2002: 77).

A different approach emphasizes the importance of the bureaucratic actors in policy outcomes. Foreign policy is the outcome of power struggles within the state agencies, ministries and other constituencies. For example, the military might influence foreign policy by attracting attention to the environmental security threats (Barkdull & Harris, 2002: 80). Thus Barkdull and Harris concludes that:

> To be sure, no one theoretical approach will give a complete picture. The real world is too complex for that. But each approach, in its own way, can bring us closer to reality, and certainly can enhance our understanding of how foreign policy on the environment is made (Barkdull & Harris, 2002: 84).

[83] According to Waltz, a neorealist, power defines the structure of the system. Wendt has challenged this proposition with his concructivist views. Like the neorealists, Wendt supports a theory of international politics to be structural and systemic. According to Wendt, not the material capabilities and interests, but the ideas provide the main structural variable. The definitions of states about themselves as well as 'others' and intersubjective understandings reflect the structure of ecological ideas and policies (Barkdull & Harris, 2002: 73).

The basic assumption of these approaches is that the understanding of the world is not objectively derived but rather is the result of socially constructed concepts: the world is in the eye of the beholder. For Alexander Wendt, constructivism, which is a structural theory, assumes that "states are principle units of analysis, but that the key structures are socially constructed" (Dougherty & Pfaltzgraff, 1996: 162). People constituting a group or a unit are in an interactive process in which the individual and the collective mind continuously construct the reality as a base. The reflectivist part of this approach assumes that deliberative processes lead to the emergence of institutions which as a result shape the social milieu. These initiatives reflect values, norms and practices which are different from culture to culture and they change over time. The constructivist-reflectivist theory studies how these changes occur and how they are reflected in institutional change (Dougherty & Pfaltzgraff, 1996: 162).

Dougherty & Pfaltzgraff has drawn attention to the significance of the learning process which can be achieved through the existing institutional system over time:

> To the constructivist-reflectivist, regimes and other institutions are more than the aggregate of rules and norms. Arising out of shared need, knowledge and interest, as suggested in the constructivist-reflectivist literature, existing institutional arrangements themselves may contribute to a learning process that enhances the prospects for convergent state policies. Stated differently, regimes, as well as institutions having greater authority and structure than regimes, may enhance cognitive evolution (Dougherty & Pfaltzgraff, 1996: 162).

According to Emmanuel Adler, states and the actors within that state are affected by their respective interpretations of the world resulting from socially constructed concepts. Just like scientific progress through paradigmatic development; as knowledge evolves, one construct replaces the other, social processes take place through regimes and institutions. According to Dougherty & Pfaltzgraff, Adler calls the changes that take place in shared beliefs, acceptable social behavior and values; cognitive evolution[84] (Dougherty & Pfaltzgraff.;1996). Since people learn ideas, beliefs and behavior from other people, collective learning is the outcome of the transmission of the products of cognitive experiences of groups between each other. As Dougherty & Pfaltzgraff have described:

> Learning, in this sense, is defined as the ability of policymakers to adopt new interpretations of reality- to create a novel intersubjective consensus- that are introduced into the political

[84]Cognitive evolution has three dimensions: 1). Innovation: The creation of new values and expectations, 2). Selection: The extent to which new values and expectations become embedded in the minds of the group, 3). Diffusion: The degree to which new values and expectations spread from one group to another. In the selection process, the states have an important role. In the diffusion phase, regimes and other institutional structures help cognitive evolution to advance at the international level. Under these circumstances, regimes and institutions reflect the intersubjective consensus which shapes the global social milieu (Dougherty & Pfaltzgraff, 1996: 163).

> system first at the national level and subsequently at the international level.....the environment does not instruct policymakers or determine their options any more than scientific knowledge itself is the basis for international behavior (Dougherty & Pfaltzgraff, 1996: 163).

Just like the Sprouts, the proponents of cognitive evolution do not perceive the environment to dictate or compel the policymakers in certain issues; rather it is the perceptions of these policymakers which they have constructed as the result of the dissemination of scientific information through the transmission of new information, values, norms and beliefs. In this process of cognitive evolution, epistemic communities play a major role. Epistemic communities are "elites with a shared understanding of a particular subject, who develop a strategy for achieving their goals" (Dougherty & Pfaltzgraff, 1996: 163).

The evolution of the climate change issue has been just like the way cognitive evolution and constructivist-reflectivist approaches propose. During the 1970, attention was drawn to environmental problems as a result of the new scientific information. People began to talk about environmental problems, their possible effects on human health as well as the future of natural resources. In a way, with the introduction of new environmental problems, people began to construct new values, norms and beliefs. Soon, these new values were reflected in the establishment of some institutions sharing the same values. With the Keeling Curve of 1960, climate change was also introduced as a problematic issue. Especially, with the establishment of the IPCC in 1989, the process of institutionalization started which culminated in the signing of the Kyoto Protocol in 1997. During this process, the IPCC has perfectly acted as an epistemic community in providing and disseminating the related new scientific information which shortly after led to the establishment of the UNFCCC. As new information arrived in reports; norms, values and beliefs were transformed leading to further decisions. IPCC, as an epistemic community, still serves an important role in the dynamic climate regime. Its 2007 report is expected to fasten the preparations for post-2012 arrangements.

The present climate regime can be seen as the outcome of cognitive evolution both at the national and international levels. It will continue to develop as the result of continuous learning process experienced at the institutional level through the meetings of the COP/MOP. Cognitive evolution will continue to shape the climate regime and the related climate institutions as new information is received, socially constructed and transmitted among the societies to enhance intersubjective consensus which shapes the global social milieu.

3.4 The Effects of Domestic and Geopolitical Interests on the Future of International Cooperation

The outcome of international negotiations depends on the interplay of inequalities in power and national positions (Grundig *et al*., 2001: 155). The bargaining positions of the states can also be related to the configuration of their domestic and geopolitical interests. In parallel with this, the position of the US at Kyoto as well as at Buenos Aires can be explained through the heavy dependence of its industry and consumers on fossil fuel. The domestic fuel lobbies have been very effective in the bargaining position of the US. In addition to this domestic concern, the US had been sensitive to the possibility of destabilization of global balance in some important regions of the world; like the Middle East, in the face of a development that would be to the disadvantage of the fossil fuel-based economy. On the other hand, the position of the EU had been influenced by the domestic green lobby, especially after the 1998 German elections. The OPEC countries had also reacted as a result of their domestic economic interests and opposed to progress on the Kyoto process. Japan already had a relatively more energy efficient economy dependent on nuclear power which had developed as a reaction to the oil crisis of the 1970s (Grundig *et al*., 2001: 168).

International negotiations are governed by strategic rationality. Grundig *et al.* explains this strategic rationality as follows:

> States' ability to get what they want is constrained by the willingness of other countries to go along and by the potential enforceability of the deal struck. A state's bargaining position must take account of the interests of other states, setting up the sort of mutual interdependence that game theory concerns itself with (Grundig *et al*., 2001: 168).

Certainly, the importance of the institutional structures in influencing the outcomes of strategic interactions is worth noting (Grundig *et al*., 2001: 178). In the international environmental negotiations, national governments represented their countries. However, they have not been free in the formulation of their policies. Perceiving the challenges posed by legal agreements, domestic groups put pressure on the governments (Sprinz & Weis, 2001: 67). Just as domestic interests are very important in policy making, external environment is also very influential. The form and the stringency of external pressure depend on the existing rules as well as external actors' use of these rules. Luterbacher defines external pressure as follows:

> ... external pressure can be envisioned as a process of eliminating domestic options that fall outside the range of feasible outcomes at the international level. In other words, it is important to determine a kind of external "win set" that is, a set of domestic options that can

> accommodate external developments and thus be viable. If external pressure reduces the range of viable options domestic actors can choose, it still leaves open a significant range of choices. Accordingly, the analysis should focus on bargaining at the national level inside the externally restricted space (Luterbacher, 2001: 184).

The notions of justice or equity are also important factors in the formulation of global climate change regime. Distributive issues are very important to settle during negotiations. There are already the costs of potential climate change itself. The decision of who will bear how much of these cost is a very difficult question at the global level (Wiegandt, 2001: 127).

As Wiegandt has explained:

> …distributive aspects begin to matter: negative aspects of some climate trends (global warming and its related effects) mean that climate is no longer a pure public good but now includes some rivalry because the use by some regions or groups diminishes the benefits others can extract from it. (Wiegandt, 2001:132)

Accordingly, the allocation problems concern the distribution of rights to emit or limits to emissions. The aim of the climate change regime is to eliminate the antropogenic effects on atmospheric processes. At this juncture, perceptions of justice becomes very important not to further increase the differences of wealth already present among the countries of the world (Wiegandt, 2001: 147).

3.5 Concluding Remarks

The last decades of the 20th century have witnessed the emergence of many environmental problems. Most of these problems are common to all the world states. These are the global commons problems which belong to all humans and their impacts are global rather than regional. The fight against climate change requires the protection of the atmosphere which is a collective good that every nation and individual has access to. Managing and governing its protection, therefore, requires international cooperation. Over the last couple of years, international cooperation has been achieved to a certain extent. Today, efforts are continuing to enhance this cooperation.

The absolute necessity for the countries of the world to cooperate for a collective global good at this scale has been witnessed together with the surge of environmental problems in the 70s. However, none of them have been as complex as the climate change issue. Therefore, international cooperation on climate change, which has been achieved over the last two decades, has been an important event in world politics. To be able to explain this development, the theoretical framework of such cooperation is very important.

Certainly, it is not possible to explain such a detailed and rather new process with a single theory. Climate change is an issue which requires a multidisciplinary study affecting the decision making structures of many policy areas. In addition to this, achieving international cooperation on such an issue requires the involvement of all the world states. Besides, NGOs, interest groups, consumer groups as well as business groups are also involved in climate change politics. Under these circumstances, the employment of various theories is required to be able to understand the different dimensions of climate politics.

As a starting tool, the epistemic community theory helps to explain how the climate change issue has come to the world scene and managed to take place on the political agendas of the states, leading to international cooperation. While trying to understand international cooperation under scientific uncertainty and free-riding possibilities, particularly in the early years of the regime formation, the Prisoners' Dilemma Model of the Game Theory helps to understand how states have chosen to cooperate to overcome this challenge.

Certainly, neoliberal institutionalism appears to be more successful in explaining international cooperation and especially regime formation and establishment of international institutions as being the means of this cooperation. Climate change has been an important tool for the neoliberal institutionalists to show how international cooperation can be achieved towards a collective good. Evidently international cooperation has been achieved through the formation of the climate change regime. In this process, the importance of international institutions as agents of international cooperation is worth noting. This process is successfully explained by the regime theory. At the international level, the neoliberal institutionalist perspectives have explained international cooperation through the regimes which are governed by states. Although states are still the leading actors in the climate change politics, presently, there are increasing numbers of transnational actors in the climate change politics that operate at the international level. Therefore, international regimes have started to move towards global governance. As a result of the integrated world markets as well as the increasing NGO activities, it has become possible to describe a global civil society whose function is to mediate between states and citizens. Through global civil society, new norms and values are disseminated to the world. Therefore for most of the neoliberal institutionalists, global civil society is also an important institution in the context of international cooperation.

At the domestic level, countries are generally torn between their domestic capabilities and the expectations of the other countries in the international arena. Putnam's Two-Level Metaphor explains this dilemma very successfully. The politics of international negotiations is

a two level game, that is; they are interrelated, and they affect each other. The Two-Level Metaphor takes into account both the domestic conflicts in the formation of national interest as well as international responsibilities.

In spite of the fact that neoliberal institutionalism and regime theory are able to explain international cooperation and climate change regime successfully, they are not capable of explaining the policies at the domestic level, specifically; why states have acted the way they have done in climate change negotiations. At this juncture, the political economy approach is very helpful to understand the responses and reactions of states which have also helped shaping the climate change regime over the years. The economic growth model under capitalism and limits-to-growth argument help to explain the dynamic forces that have constrained state responses to the climate change issue and, hence, helped to shape the climate change regime.

The milieu relationship developed by the Sprouts, help to understand the different perceptions of the states concerning climate change which at the end affect their policies. In parallel with this, the concept of cognitive behaviorism underlines that the political decisions are the result of the perceptions of the political leaders. However, their choices are restricted by the actual situation which exists both at the domestic and international arena. The roles of ideas and beliefs as well as values need to be emphasized when an issue like climate change is being analyzed. Ideas, beliefs and values shape preferences and decisions, consequently; policies. Starting from the 70s, when new scientific information drew attention to climate change, people had begun to talk about the reasons, impacts and solutions to climate change. During this process, new ideas, beliefs and values have been constructed which have given way to the evolution of the climate change regime. In the 70s, climate change was a new topic, today; there is a vast literature on the subject. What has happened within this period is cognitive evolution which has formed the basis of the climate change regime. Therefore, constructivism has special importance in understanding the climate change politics of the present. The ongoing climate change regime is the outcome of cognitive evolution both at the national and international levels. Together with new scientific information, cognitive evolution will continue in the coming years, reshaping the climate regime.

Climate change is still a new subject. Most of the classical theories fall short of explaining the dynamics of this new issue. With further scientific information as well as actual experiences of a series of events expected to take place in the coming years as a result of climate change, it seems that the search for new theories for understanding this complex issue will continue in parallel with new developments. At present, a thorough analysis of

major actors' preferences and their policy priorities can nevertheless demonstrate how domestic and international dimensions of the climate change policy are getting increasingly interrelated.

IV. THE CLIMATE CHANGE POLICIES OF MAJOR ACTORS

The present global climate regime has been the outcome of international cooperation achieved in the last two decades. During this time period, various countries have pursued different policies resulting from different perceptions of the environment as well as national circumstances concerning the climate change issue. As a matter of fact, these policies have shaped the present regime. They still continue to be the important implicators of the post-2012 regime. Therefore, in an effort to understand the evolution and development of the present climate regime and to foresee the possible future developments, the examination of the climate change policies of some of the major actors who have been the most influential in the formation and development of the present climate regime becomes crucial. Among these actors, the policies of the US and the EU have been very important for the formation of the present climate regime. However, the policies of Russia, Japan, China, India and Australia have also been important. Today, the possible future policies of these actors are still very significant concerning the post-2012 regime.

4.1 The Climate Change Policy of the United States

The US plays an important role in international environmental cooperation as the world's major polluter and biggest economic power. Therefore, the climate change policies of the US have been very important in the formation of the present climate regime and will continue their importance in the formulation of the post-2012 climate regime.

4.1.1 A Non-Policy Approach

Loren Lutzenhiser, a prominent world expert in energy policy and energy system structures, summarizes global climate change policy of the United States during COP6 and COP7 as a non-policy. This statement reveals the complex interrelationship 'between the political process and policy actions and outcomes' underlying its institutional pluralism (Kraft, 2002:63). Since the major greenhouse gas is carbon dioxide and its amount is primarily due to the burning of fossil fuels, this relationship points the policy focus directly toward energy sector. With its population being 4% of total world population, the US is responsible for 25% of global greenhouse gas emissions and over 36% of emissions from

industrialized countries (Elliott, 2004: 302). Additionally, the emissions have continued to rise over the years. In 2001, its annual emissions were about 15% higher than they were in 1990. Hence, Lutzenhiser underlines three approaches put forward by the Clinton Administration to achieve carbon reduction targets: 1.global emissions trading: which was an untested risky policy with high probability of failure. 2. Electric utility deregulation; which was already being promoted on other grounds. 3. Energy research and development in partnership with the private sector; which was a challenging road whose results could be achieved in the long run. All of these proposals seemed to have a low chance of success in creating a coherent climate change policy (Lutzenhiser, 2001: 513).

Due to its pluralistic state structure, interest groups, presidency, federal administration and representatives of various other sectoral interests act together in shaping the US environmental policy and its international position. Geopolitical interests and competitive advantage are the two key factors which influence its environmental foreign policy. Among all the actors, attitude of the presidency reflects these two key factors and (mostly) conflicting interests of the actors. Presidential positions on different environmental issues also highlight the disagreement with other international actors. The Clinton and Bush Presidencies are particularly important with regard to the disagreements between the EU and the US on the working of the international climate regime.

4.1.1.1 The US's Perception of the Kyoto Protocol during the Clinton Administration

Right after the adoption of the Kyoto Protocol in December 1997, the Republican Congressional leaders declared the Protocol to be 'dead on arrival' in the US Senate due to its failure to set binding emissions targets for China, India and other developing countries which was to the disadvantage of the US. In response, the Clinton Administration preferred not to defend the basic premise of the Protocol that it was the industrialized countries that were responsible for today's increased GHG emissions with their fossil-fuel based economic growth in the 20th century, therefore they should be the ones to act first to decrease their emissions. The large rapidly industrializing countries like China and India as well as other smaller developing countries were also exempted from the Kyoto Agreement due to their historically small contributions to the total volume of greenhouse gases in the atmosphere. However, the rate that these countries produced carbon dioxide was increasing rapidly. It was estimated that their contribution to the increase in these gases by 2010 would be 40% of the

total world emissions at that time. Therefore, the nonparticipation of these countries to the Kyoto Protocol was a major source of opposition for the business lobbies in the US (Lutzenhiser, 2001: 512). So the Clinton Administration did not start a serious legislative proposal to begin the process after 1997. Although, with this Protocol, the US agreed to a target of reducing its 1990 emissions by 7% in the period of 2008-2012, President Clinton never sent it to the Senate (Elliott, 2004: 302). In fact, the Clinton White House had to work with a House and a Senate which was both controlled by Republicans allied with the oil, coal, utility and automobile industries. Certainly, this has made it very difficult to reduce carbon dioxide on a domestic scale. What is more, throughout 1998, scandals absorbed much of White House's energy. Actually, global warming policy was associated with Al Gore because of his 1992 book called 'Earth in the Balance'. Nevertheless, at that time, many in the White House perceived global warming to be an issue which should best be kept off the political stage (Wirth, 2002: 73).

4.1.2 The US Withdrawal from the Kyoto Protocol

The US withdrawal from the Kyoto Protocol marks the beginning of a new era in the global climate talks which has ended up with EU leadership on the issue. This withdrawal also indicated that environment has become an influential actor in transatlantic relations and there were big disagreements on the future of Kyoto Protocol on the both sides. The US attitude towards the Kyoto Protocol also put the Kyoto Protocol's environmental effectiveness into question since the Protocol's entry into forced was delayed.

4.1.2.1 The US's Perception of the Kyoto Protocol during the Bush Administration

George W. Bush, a former Texas oilman, had pledged to regulate and reduce carbon dioxide emissions from power plants during his presidential campaign although he was known to be suspicious of the Protocol. However, on March 13, 2001 on a letter he had sent to some senators, Bush argued:

> As you know, I oppose the Kyoto Protocol because it exempts 80 percent of the world, including major population centers such as China and India, from compliance, and would cause serious harm to the US economy. The Senate's vote, 95-0, shows that there is a clear consensus that the Kyoto Protocol is an unfair and ineffective means of addressing global climate change concerns (Bush, 2001).

In fact, this was perceived by many experts as a statement which was made to cover up the big benefactors of this policy reversal; namely, the US oil and coal industries which have powerful lobbies with the administration and conservative Republican lawmakers. Actually, apart from the President being a former Texas oilman, Vice President Richard Cheney was also a former oilman. Attorney General John Ashcroft has led the charge against the Kyoto Protocol in the Senate and the Secretary of Energy Spencer Abraham has fought to protect the Detroit auto-makers from stricter fuel-efficiency standards when he was a Michigan Senator. (Bomberg, 2001: 117).

On March 23, 2001, the White House received a letter from the EU emphasizing that " a global strategy to tackle climate change was an integral part of relations with the US" (Dessai *et al.*, 2003: 187). The EU took the situation so seriously that on March 23, 2001, the Reuters announced 'EU tells Bush Climate is Key to Europe/US Ties'. In the following days and months, a series of transatlantic letters and diplomatic endeavors followed each other to keep the Kyoto Protocol alive. Climate change turned out to be an officially disputed area of transatlantic foreign policy. Finally, the EU environment ministers announced that the EU would pursue the ratification of the Protocol with or without the US.

In May 2001, the President announced the details of the new US energy plan which would undoubtedly increase its GHG emissions. The environmental groups as well as the European ministers criticized the new plan for promoting the use of oil and coal. On 11 June, 2001, Bush announced how the development of "an effective and science-based approach to addressing the important issues of global climate change" is important for the US, Bush insisted that "the Kyoto Protocol was fatally flawed in fundamental ways" (Dessai *et al.*, 2003: 189). He reinforced collaboration within the UN framework. According to him, the Protocol was unrealistic since it did not include the binding responsibilities of emissions reductions for the developing countries, failed to address two major pollutants, namely; black soot and tropospheric ozone, and that the targets were unattainable. Nevertheless, his announcement included the US's responsibility and commitment to a leadership role on this issue (Dessai *et al.*, 2003: 189).

4.1.2.2 COP6bis without the US

Despite the efforts of the EU and the Japanese, the Bonn Climate talks started on July, 16, 2001 without the US. It was clear that with the US withdrawal, any deal reached would have to accommodate the interests of the other Umbrella Group members, especially Japan,

Russia, Canada and Australia. On the other side, the US announced that it would not make any move to block any attempts of the Europeans to negotiate with the Japanese and others on an agreement which included mandatory targets (Dessai *et al.*, 2003: 190).

In the same year, the UN sponsored IPCC involving over 200 scientists in the US and abroad, announced and demonstrated with further scientific certainty that human contributions to atmospheric greenhouse gas concentrations were accelerating global warming. Some of the conservative White House groups argued that the IPCC reports were not reflecting the views of the mainstream US scientists. Therefore the National Academy of Sciences was requested to prepare a quick review in May 2001. However, the Academy reaffirmed the mainstream scientific conclusion and warned that "national policy decisions made now and in the future will influence the extent of any damage suffered by vulnerable human populations and ecosystems later in the century" (Wirth, 2002: 75).

Between the Bonn and Marrakesh conferences, the events of September 11, 2001 had been very critical. The United States has not been able to prepare its proposal for the Marrakesh conference. It is interesting to think of what would happen to the climate talks if these events have not happened at that critical time. Optimists argue that there would be enhanced cooperation and a stronger commitment to multilateralism. On the other hand, realists believe that environmental issues would be off the agenda in favor of military issues again leading to the US unilateralism in environment and development. In fact, the US's war on terror has close relation with oil, secure supplies of oil is vital for the US and oil is linked to climate change regime since 25% of GHG emissions accounts from oil consumption. (Dessai *et al.*, 2003: 193). Nevertheless, the Kyoto Protocol is the first step towards a gradual decrease in Parties' dependence on fossil fuels by decarbonizing their economies.

Eileen Claussen, President of the Pew Center on Climate Change, has emphasized on four points that should be placed at the top of the US agenda in the coming years. The first was to depoliticize and depolarize this issue in Washington. Second was to design a straightforward system that will legally name the contributions of those companies who take early action to reduce greenhouse gas emissions. Third was to make some serious planning concerning how the emissions will be reduced over the long run. Fourth was to continue to working abroad to make the Kyoto Protocol an instrument that is worthy of US ratification meaning a real global solution for a clear global threat (Claussen, 2001: 1381).

4.1.2.3 Outcomes Of The US Rejection

At first, the US's rejection of the Kyoto Protocol seemed to threaten ten years of global negotiations. In fact, it has given way to some paradoxes. The first paradox is that the US had rejected its own initiative. Most part of the Kyoto Protocol had been structured by the US proposals which were the result of the concessions made by other countries to secure US participation. According to Grubb, Bush has not rejected the issue itself or the rest of the world but he has rejected Clinton's treaty. Second, the Protocol came into life when the US had declared it to be dead with the EU leadership (Grubb, 2004: 23-24). However without the US and Australian participation, about two third of global GHG emissions are not covered by the Protocol (Claussen and Diringer, 2007). Third, this rejection by Bush has increased the profile of the climate change issue and led to stronger domestic action in the US. Thereby, this issue was transferred to the level of individual states. Fourth, with the rejection, Kyoto's place in the global arena has been strengthened since Bush has not been able to propose an alternative system as he had promised when rejecting. Fifth, the absence of US has made implementation cheaper for the other countries since the most notable demand in the international trading system is out (Grubb, 2004: 23-24).

4.1.3 The Domestic Politics of Global Climate Change in the United States

Due to harsh domestic and international criticisms rose against his rejection of the Kyoto Protocol, Bush and his administration tried to renew their image emphasizing their forward looking view on climate change. And in 2002 Bush administration declared its own climate change policy (Schreurs, 2004: 219-220).

The Bush climate change plan contains the first domestic emission reduction goal. This plan is a non-binding pledge to obtain 18% improvement in carbon emissions per unit of gross national output by 2012. In fact, in a business-as-usual scenario, the expected carbon improvement over the same period is 14%. Therefore, the target of the plan is away from being ambitious but nevertheless better than nothing. Good news is that the Bush administration has increased funding for climate science and for clean technology research and development, thus the United States continues to lead international climate science and clean energy research. Apart from these, the US has started requiring mandatory reporting of carbon emissions which is an important element of emissions reduction effort. In fact, the state and local levels are more active in this regard. The Northeast part of the US, involving

states like Massachusetts, Connecticut, New Jersey and New York, are designing their own regional emissions program. For example, New York has proposed to return to 1990 emission levels by 2010 and to 10% below1990 levels by 2020. On the other side, California which has the potential to lead the whole US auto industry since 10% of the cars are sold in this market is planning a requirement for the automakers to cut tailpipe emissions of carbon dioxide by 29.2% by 2015. Since all cars will try to meet this standard, the outcome will be impressive. California is also planning to impose its own cap on power plant emissions. The Northeastern US states together with California are the world's sixth largest carbon dioxide emitter, larger than Germany. Even though a national action is not happening in the US, what is happening in the Northeastern side is on an environmentally important scale. At the federal level, two Senators; Senator John McCain and Senator Joseph Lieberman have already come together to support mandatory carbon emission caps for the US (Purvis, 2004: 171).

Significant developments are taking place in the legal system as well. Many governments are initiating lawsuits against power companies regarding their carbon emissions. Carbon regulation in the US is now perceived as a business risk which needs to be disclosed to investors. These are putting pressure on the US companies to develop climate friendly policies. In addition to these, thirteen US states have officially adopted a renewable energy standard. They have pledged to meet a particular percentage of their electricity generation from renewable energy. On the business side, the multinational companies know that they will be subject to climate regulation in other countries. Companies are concerned about the possible sanctions that other countries might impose since the US products are not subject to climate regulation. According to polls, the American public gives almost the same importance to climate protection as the European public. All together, these forces create pressure for stronger US action (Purvis, 2004: 172).

Climate change was not an issue itself in the presidential elections. Rather it was the energy policy which was emphasized by both candidates. The approach of Bush was a supply-side approach to energy; additional exploration for fossil-fuels, pipeline projects and other steps to guarantee that an abundant supply of fossil-fuels reaches the market safely. On the other hand, John Kerry announced his support for mandatory federal environmental standards in the energy area. Although the public was asking for stronger climate action and was not supporting the approach of Bush, climate turned out to be a very low priority during the elections campaign (Purvis, 2004: 174).

4.1.4 The International Re-engagement of the US

The greatest lesson of the Kyoto process is that the US should start at home by establishing its own domestic policies. Domestic action should precede any international treaty. Especially concerning environmental treaties, it is the US way to act first at home and then to build on that approach at the international level. The Montreal Protocol on ozone-depleting substances was based partly on US domestic laws. The US industry at that time did not view the treaty as a threat since it was already a national regulation.

Another important lesson of the Kyoto Protocol is that the United Nations is not the ideal forum for the US. Especially concerning environmental matters, the Congress is very skeptical about the decisions. Apart from this, the US is fairly slow in approving treaties. Therefore, a non-UN and a non-treaty based approach would be the easiest way of engaging the US in climate protection. But, nevertheless, the US should soften its demands on developing countries. It should balance that its domestic controls are not in a position to curb the competitiveness of its firms in the global arena. Purvis argues that the US would prefer to ratify an agreement with Europe, Canada and others on emissions trading or even a bilateral agreement on energy technology with China rather than to convince the US Congress to support a new Kyoto-style treaty. It should not be forgotten that any new effort requires the support of 66% of the Senate and a majority in the House of Representatives (Purvis, 2004: 175).

Purvis, furthermore, recommends a bottom-up approach for the US (Purvis, 2004). Action should be taken step by step on what has been done in the US. By this way, the support of the Congress might be easier to get. As had happened in the World Trade Organization (WTO), a small group of countries started with a small number of simple rules. The system became more complex and larger as the years passed by (Purvis, 2004: 175). Rules were created over time and the organization turned out to be an important one. This model, with the US taking its place, would be useful in the climate cooperation as well. Therefore, to start off, the international community must force the US to adopt mandatory domestic emission laws rather than expecting it to come back to the table or the Kyoto process. It is true that Kyoto process was very important and had many positive outcomes. However, the real deal is to get more emission reductions. According to Purvis, if this is going to be achieved by cooperating with the US, then it should be through non-Kyoto approaches (Purvis, 2004: 175).

Although the Bush Administration had departed from the Kyoto process, it has continued its fight on its own ways. Apart from the domestic efforts taken by the states, the Administration has invested $20 billion in climate change science and new energy technologies starting from 2001 up until 2006. In addition to this, many efforts have been made for multilateral cooperation. Examples are the International Partnership for the Hydrogen Economy, the Carbon Sequestration Forum, the Gen IV Nuclear Partnership, the International Thermonuclear Experimental Reactor and the Methane to Markets Partnership. The Energy Policy Act of 2005 has provided $11 billion for wind, geothermal and solar power, clean vehicles, clean coal technology, emissions-free nuclear power and renewable bio-fuels. Since the US, China and India are likely to depend still on coal as a source of energy, the development of these kinds of technologies is vital for reducing emissions. In fact, the Bush Administration can still do more and assume leadership in climate change talks by coming up with an alternative to the Kyoto Protocol. George W. Bush might be able to upgrade his position in the eyes of the American public by using his final years to work on energy and climate change issues considering the enormous long-term consequences of these issues for the prosperity and well-being of the Americans (Saunders & Turekian, 2006: 80-82).

The Bush Administration has shown this kind of a leadership for another global issue; pandemic influenza. The two cases have things in common. In both cases, science cannot give 100% guarantees. Nevertheless, Bush has listened to the scientists and worked internationally to encourage world leaders to take serious action by trying to convince them that the risk was too high not to take preemptive action. Like in this issue, many governments are looking up to the leadership of the US to follow suit (Saunders & Turekian, 2006: 83).

As the British Prime Minister Tony Blair has emphasized in his speech he gas given during the World Economic Forum in March 2005, isolationism is no longer an option:

> We may disagree about the nature of the dilemmas and how to resolve them, but no nation, however powerful, seriously believes today that these situations can be resolved alone. Interdependence is no longer disputed (Blair, 2005).

4.1.5 The US-Asia Environmental Relations

The US-Asia relations have been driven by two major policy concerns. The first one is guided by the encouragement of regional security arrangements, especially in parallel with the support for the war on terrorism. The second one is guided by economic interests who have been emphasized with the US role in APEC for the support of market-oriented economic

reform and trade liberalization. The environmental degradation[85] in Asia-Pacific region, resulting from the changing political economy and modes of production, "presents a serious ecological, economic and human security challenge for the peoples and countries of the region" (Elliott, 2004: 292). Private gains have been achieved at the expense of public goods. Some of the environmental threats that this region might face in the coming years are refugees, competition for shared water resources, transboundary air pollution, illegal logging, species smuggling, competition for energy resources, pollution of marine environments, illegal fishing; all of which might easily lead to intra and inter-state tension or instability in the region. Therefore, this struggle over the use of land, water and other natural resources in the region seriously threatens the US security and trade interests. Presently, the US environmental policy is guided by this narrow understanding that the environmental problems might threaten the political and economic interests of the US. Hence, the aim of the US environmental aid is to stop major environmental problems before they create serious threats to US interests. This is most of the time achieved on a bilateral basis (Elliot, 2004: 298).

The Asia-Pacific Partnership on Clean Development and Climate is the initiative of the US and includes the US, Australia, China, India, Korea and Japan who are some of the largest economies of the world as well as the largest GHG emitters. This partnership tries to focus on encouraging public and private investment in energy efficiency technologies. It does not aim to undermine the Kyoto Protocol, rather, it complements it. The inclusion of at least the EU and Japan would increase the overall efforts (Saunders & Turekian, 2006: 84).

4.1.6 Technology-led International Approach and the US

Although, the Kyoto process had been very important in emphasizing the importance of the climate change issue ten years ago by bringing together the majority of the world to take unified action, it is possible to say presently that its contribution to the fight against climate change can only be substantial. For the US economy, the target and timetable model of Kyoto was proposed to be unacceptable; leading to big economic costs without affecting climate change. However, the positions of, for example Germany, Britain and Russia were quite different at those years. Germany and Britain actually benefited from the consequences of unrelated policy decisions to reach their Kyoto targets. For Germany, it was reunification which led to the shut down of dirty plants in the former East Germany. In the United

[85] Deforestation, desertification, land degradation and loss of arable land are the key features of environmental degradation in Asia.

Kingdom (UK), it was the privatization of the coal sector by the Thatcher Administration. Just like Germany and the UK, Russia did not have to make any sacrifices to reach its Kyoto target. In contrast, some of the parties to the Kyoto Protocol will be forced to buy surplus emission credits from Russia to be able to reach their own Kyoto targets. According to the US administration, for effective results, low or zero-emission energy technologies are necessary like clean coal, fuel cells, a next-generation nuclear reactor and fusion power (Saunders & Turekian, 2006: 79).

The current position of the United States on the climate change issue is to focus on technology programs and to extend these on a global scale through bilateral technology cooperation agreements. Grubb has, for instance, put forward four reasons why technology cooperation in itself cannot be enough for effective global action (Grubb, 2004: 29). The first reason is that governments are not good at technology development and the main actors in this field are the governments. The second one is the international coordination problems. Additionally, countries would not be willing to share their valuable technological expertise. The third reason concerns the large number and complexity of emission sources that lead to climate change. The wide range of new technologies needed to deal with them creates a complex negotiation. Lastly, the technology-led approaches are most of the time inconsistent with market economics. Due to these reasons Grubb points that:

> To be credible, therefore, technology development and cooperation needs to be built in as part of a strategy that also builds markets for low-carbon technologies and provides incentives for emitters of all sorts to adopt them and to use energy more efficiently. ... . The most obvious, generic way of providing incentives for cleaner technologies is through some form of carbon constraint or pricing strategy (Grubb, 2004: 29).

It is more closer to reality more than ever in the past that momentum is being built in the US for the establishment of mandatory measures to reduce GHGs covering the whole US. The individual states like California have already led the way for this end. Foreseeing that carbon restraints are inevitable, the business world has started to call for a uniform national approach with the fear of different rules in different states. Impressively, ten major companies such as General Electric, Dupont and Alcoa, have come together with four non-profit organizations recently and joined in the US Climate Action Partnership with the aim of pushing for the establishment of mandatory emissions. These actions are also being supported by various bills at the Congress (Claussen & Diringer, 2007:1).

The establishment of mandatory emissions on a national scale is expected to take place no later than 2010. This might have huge impacts on the global climate politics and the climate regime. When the US gets prepared for action at home, then it will also be able to

commit at the global level. With the fear of losing competitive advantage vis a vis those countries, the US is then expected to push for strengthening the global climate effort (Claussen & Diringer, 2007:1). Under these circumstances, the US would also be supporting the broadening and deepening of participation in the global climate regime together with the EU which would create a strong pressure for the major developing countries to join the effort in the near future.

4.2 Climate Change Policies of Russia

The priorities of the Russian society are different from those of the Western countries. The low ranking given to environmental issues is an example to this. Consequently, the votes of the political parties who support environmental issues are very low. Despite the Chernobyl nuclear power plant disaster of the late 1980s, the importance of environmental problems has been overshadowed by the problems of poverty and economic growth (Kotov, 2004: 161).

Until ratification, the Russian officials have declared the Kyoto Protocol to be "discriminatory in character and unacceptable for Russia" (Kotov, 2004: 157). However, the deal made between the European Community and Russia has changed the situation. The EU was going to support Russia's entry to the World Trade Organization (WTO) and Russia would ratify the Kyoto Protocol in return. Russia's negotiating power was the result of the fact that the Kyoto Protocol's entry into force had become dependent on Russia's ratification (Kotov, 2004:157). Since the US has withdrawn from the Kyoto Protocol, Russian participation became vital for the Kyoto Protocol's entry into force due to the requirement of bringing together the '55% of the emissions of the industrialized world' (Korppoo & Moe, 2007: 2).

At this juncture, both Russia and the EU had specific interests and they have been both able to achieve them. These interests were not only resulting from climate policies but also from economic, social, energy and foreign policies as well. Therefore ratification has become the key to a package deal representing various national interests. As Kotov has directly put it:

> The specific balance of various interests seems to have been realized in an optimal manner within the WTO/Kyoto Protocol ratification deal (Kotov, 2004: 162).

For Russia, the economic gains from being a Party to the Protocol were clear. Being a member of the WTO was also important for Russian energy since it needed foreign investment. On the other side, EU was interested in investing in Russian energy and it wanted

the Kyoto credit trading to be applicable. So on the economic grounds, the two subjects were linked to each other (Grubb, 2004: 27). On the political grounds, the ratification of the Kyoto Protocol was very important for the EU, since EU had been leading this process at the international level without the participation of the US. Under these circumstances, the EU would not be willing to risk the success of the process which it had taken the leadership of at the global level.

Despite the crucial role Russia played in the entry into force of the Kyoto Protocol, climate change is not a high profile issue on its national agenda. Even among the most prominent scientists, climate change is considered "as a system for wealth redistribution" (Korppoo & Moe, 2007:2).

Under the Kyoto Protocol, Russia is committed to maintaining its emissions on the 1990 levels. However, Russia has emission surplus since the Russian economy has experienced great ups and downs in the last decade. Therefore, it can engage in emissions trading and can have great benefits from it due to the availability of hot air. Moreover, Russia has a great potential to benefit from the JI projects as well. Nevertheless, the Kyoto mechanisms are being regarded as "insignificant" and its rules to be "too bureaucratic" (Korppoo & Moe, 2007:3). The nature of the JI projects brings direct benefits to the private sector which seems unattractive for the Russian Government. This situation also explains why Russia is not keen on hosting JI projects (Korppoo & Moe, 2007:3). All in all, Russia is still an important actor in the current climate regime and will be a major actor in the post-Kyoto climate regime. Although, there is not great interest in public with regard to Russia's position in the future regime, a growing number of private sector actors are getting active in JI projects. In addition to this, there is an initiative on future voluntary targets in COP12 proposed by the Russian Federal Service for Hydrometeorology and Environmental Monitoring-Roshydromet (Korppoo & Moe, 2007:7). This is especially important due to the fact that Russia, instead of selling AAUs, at the end of the first commitment period of Kyoto Protocol, would buy emissions if the economic growth keeps continuing at the current level (Korppoo & Moe, 2007: 8).

4.3 Climate Change Policies of Japan

Japan has been the country where the Kyoto Protocol has been adopted. From this perspective both Japan has been an important country in the negotiation process and the

Kyoto Protocol has been an important factor in the development of Japan's internal and external politics.

Yasuko Kameyama, a Senior Researcher in the National Institute for Environmental Studies, Japan, argues that "the Kyoto Protocol has been very effective in moving Japanese policies forward in several different ways" (Kameyama, 2004: 71). First of all, it was very important for Japan to finalize the Protocol without a fault. This required that Japan would have to persuade the United States to adopt the Protocol and accordingly cooperate with the other countries to accept the wishes of the US. The successful finalization of this Protocol would strengthen Japan's status in the Asian region as a leader. The participation of the US was very important for Japan since the weight of the US was undeniable in the multilateral negotiations, the US involvement was very important for the Japanese industry who wanted to protect its international competitiveness (Kameyama, 2004: 72).

Right after the adoption of the Kyoto Protocol, the Japanese government set up the Global Warming Prevention Headquarters consisting of ministries. In 1998, the Headquarters issued its *Guideline of Measures to Prevent Global Warming* which clearly set the rules and responsibilities for various sectors to reach the emission reduction commitment. In the same year, the Law Concerning the Promotion of the Measures to Cope with Global Warming was established to help the implementation. In addition to this, the Law Concerning the Rational Use of Energy has also been revised to improve the efficiency of the energy sector (Kameyama, 2004: 73).

Since the end of the Second World War, maintaining good relations with the US has been an important part of Japanese foreign policy. As Kameyama (2004) has pointed out, the safest way of securing prosperity in Japan was through keeping good relations with the US. Therefore, when the US withdrew from the negotiations, the internal debate began in Japan on whether or not to follow the US. In fact, after the withdrawal of the largest emitter, the Japanese industry has called the Protocol a failure. From this perspective, the ratification of the Protocol by Japan without the US has created a new dimension in the Japanese foreign policy (Kameyama, 2004: 76).

Actually, Japan was in a hope that the US might reenter the negotiations if the treaty was shaped in accordance with its demands, therefore, has pushed for convincing the others. However, without the US, the EU was in need of Japan, therefore, the EU has almost accepted all the demands of the Japanese for the sake of saving the Protocol during the finalization of COP7, in 2001, at Marrakesh (Schreurs, 2004: 218).

Since the Kyoto Protocol is the only international legal text about the climate change issue as well as being the only multilateral agreement ever adopted in Japan, its successful implementation and future is very important for Japan. Although there are many different stakes at hand in the Japanese industry and ministries as to how to reach to emissions reduction target, the Japanese government tries to merge all the related interests in an optimal way and tries to prepare for the second round of negotiations (Kameyama, 2004: 71).

Japan has aimed a 6% reduction over its 1990 emission levels in the Kyoto Protocol. However; in 2003, there has been an increase of 36.9% in its emissions. Therefore, Japan has started to take this issue more serious. For example, Japan has adopted a new policy which requires the level of air conditioning to be set at 28 degrees Celsius rather than 26 in line with the abolishment of wearing ties in government offices between the 1st of June and the 30th of September 2005. Japan has been able to save $15 million worth of electricity within this period (Cemre, 2006a: 4).

At present, Japan together with some other countries have announced that they were not willing to take on any new commitments under the circumstances that the US and some of the major economies are still out of the global effort (Claussen & Diringer, 2007:2). Therefore, although Japan has accepted to ratify the Kyoto Protocol in the absence of the US, it does not seem to be willing to take on more commitments without it this time. Without the US, deepening and broadening the global climate regime seems to be quite difficult.

4.4 Climate Change Policies of Australia, India and China

During the Kyoto Protocol negotiations, Australian government mainly focused on its national interest and insisted on differentiated targets, emissions trading, flexibility mechanisms and the inclusion of LULUCF activities to be included in the Kyoto Protocol. Whereas many of its concerns took place in the Protocol, Australia refused to sign it due to the similar reasons with the US (Beck, 2006:3). However opting out soon proves to be costly for Australia since punitive taxes on countries which have not signed the Kyoto have started to be pronounced by the EU, particularly by the French Government (Beck, 2006:3). Australia as a developed country and a big energy exporter, is working to develop suitable conditions for itself to be part of the future international climate change regime. The main concern for Australia seems to be taking part in a more efficient global emissions market at the moment. Australia now seeks for improving the global market and for establishing a 'New Kyoto' with other AP countries. Australian Prime Minister John Howard has declared "a

potential fundamental shift in Australia's position on global and domestic climate change policy" on November 2006 (Beck, 2006:2). With this statement, Australia announced its "will in the development of an effective global market structure that takes into account Australia's situation[86]" (Beck, 2006: 2).

China and India, contrary to Australia, are developing countries and Parties to the Kyoto Protocol. However, their fast growing economies increase their contribution to the global GHG emissions. Although, their rate of emissions is smaller relative to the emissions of the industrialized countries, they have the potential of challenging the world wide sustainable development in the future due to their projected economic development. The emissions of China are projected to nearly double by 2025. Besides, the projected annual emissions of the developing countries are expected to exceed that of the developed world between 2013 and 2018 (Pew Center Brief, 2007: 2). This is the reason behind the demands of the developed world for the involvement of the major developing countries within the climate regime by taking commitments as well. Nevertheless, it will take several decades for the cumulative emissions of the developing countries to reach the level of those of the developed world (Pew Center Brief, 2007: 2).

Although the overall emissions from the developing countries keep increasing, their per capita emissions are still lower than the developed countries. The per capita emissions of China are also expected to nearly double by 2025, slightly more than the world average. Even under these circumstances, Chinese per capita emissions will only constitute just one-quarter of those of the US (Pew Center Brief, 2007: 2). This is the reason why China and the other developing countries still perceive combating climate change to be the responsibility of the developed countries.

China as the world's second largest energy consumer depends heavily on coal and consumes almost 34% of the coal used world wide (EU News, 2006). Due to the heavy environmental pollution in cities, China wishes to reduce its coal dependency and diversify its energy supply for energy security (EU News, 2006). Already, some measures are being taken in China to combat climate change such as the introduction of some fuel economy standards as well as some initiatives related to energy intensity and renewable energy goals (Pew Center Brief, 2007: 4). Still China is one of the very important actors from the developing world to shape the future climate regime with its huge population and fast growing economic sectors.

[86] For further information on Australia, see Jotzo, 2005 and 2007.

During COP11, China together with G77 has expressed their concern on the management of GEF funds as well as the GHG emissions of the developed world (ENB, 2005).

India is a large developing country with a huge rural population whose adaptive capacity is very low and has diverse climatic zones which increases its vulnerability to the impacts of climate change (Sathaye *et al*., 2006: 318). India has produced four "nationally coordinated assessments of projections, impacts and mitigation" (Sathaye *et al*., 2006: 323). Ministry of Environment and Forests has coordinated all the efforts in accomplishing this assessment. These efforts in turn created networks of research teams and institutions to work on various dimensions of climate change in India (Sathaye *et al*., 2006: 323). AP6 is a good platform to incorporate both developing and developed countries' interests. AP6 countries all together account for the 50% of the world GHGs (Australian Government, 2006). However, as can be seen, at this platform developed countries put more emphasis on the global emissions market and mitigation measures while developing countries underline their need to adapt to the impacts of global climate change. Certainly, reducing the vulnerability of socio-economic and natural systems to projected impacts of climate change is the main concern for developing countries (Sathaye *et al*., 2006: 316). Recently, adaptation has gained more importance in the climate change policies. Therefore it is inevitable that future climate regime will involve more adaptation related measures and the new regime architecture will depend more and more on reducing the vulnerabilities of developing countries and to a certain extent of developed countries.

As a matter of fact, the emissions of India are expected to increase by 80% until 2025. However, its per capita emissions are expected to rise only reaching half of the world average and equaling only to the one-fourteenth of those in the US. India, like China whose emissions will be more important in the coming years, have already started to take some initiatives with the aim of controlling them such as energy reforms, measures related to renewable energy, rural electrification and vehicle conversion from gasoline to diesel (Pew Center Brief, 2007: 2).

AP6 proves that both developed and developing countries can work together for more effective solutions despite they have different concerns and priorities with regard to climate change. Particularly, the positions of India and China on the one hand, and Australia and the US on the other show that international cooperation is not far from reality, but difficult to achieve. Therefore, the role of the EU in enhancing international cooperation through broader participation especially from developing countries has become more significant since COP7 in Marrakesh.

4.5 Climate Change Policies of the European Union

Depending on the reports showing that the atmospheric methane and CO_2 levels are the highest for the last 650.000 years and that the warmest 10 years on record have occurred after 1990 have led the European Council and the European Parliament take the issue even more serious. Both the Council and the Parliament have confirmed that to limit the rise of average global temperature to a maximum of 2° Celsius compared to pre-industrial levels will be their objective from then onwards (European Commission, 2007). Today, the probable impacts of climate change are clearer than ever. According to studies, in Southern Europe, grain productivity is expected to decrease while in the Northern Europe, it is expected to increase as a result of climate change. Summer heat related mortality and illnesses are expected to increase and the reverse is expected for winters. The increase in heat related deaths without acclimatization is forecasted to be more than the reduction in cold related deaths towards the end of the century (European Commission, 2007).

Under the scenario that no adaptation occurs, the damages due to sea-level rises are expected to be very significant. The cost reduction which could be achieved in the medium term due to adaptation is almost up to 50% and even more than 70% in the long term. Although the costs will again be a considerable amount, these figures show the importance of adaptation measures. In addition to this, a serious increase in extreme whether events like floods is expected (European Commission, 2007). One of the major challenges is expected in the tourism area. The tourism areas in the Mediterranean coast are expected to move up towards the north. However, it is expected that the conditions of autumn and spring will get better in the Mediterranean. Clearly, most of these changes will require serious adaptation projects in the coming years; otherwise the costs of inaction will be great for Europe (European Commission, 2007).

On the other hand, fighting against climate change brings some benefits as well. First of all most of the measures to reduce CO_2 and methane concentrations in the atmosphere, actually improves air quality and hence have very positive effects on human health. Second, most of the measures taken to control the climate change impacts of the energy sector, actually improve energy security of Europe. Third, the introduction of new energy systems into the sector has a very important impact of creating new jobs. The results of a study undertaken by the European Trade Union Confederation has shown just like some previous other studies that the overall impact of climate change policies on employment can be positive. For example, the Biomass Action Plan is estimated to create 250.000 to 300.000

additional jobs in the EU (European Commission, 2007). Wind energy is another sector which is developing quickly. Only in Germany, Denmark and Spain, 120.000 people are working in this sector. In addition to these, the fertility of soil is also expected to increase due to the efforts undertaken to fight climate change, since soil is both an emitter and a major source of carbon in nature (European Commission, 2007).

4.5.1 The leadership in the international negotiations and the EU

Throughout the year 2001, the EU appeared to be the leader of the climate regime, especially after the US President's denouncement of the Kyoto Protocol. However, the Parties still had misperceptions about the position of the EU. The EU itself has gone through an important development when it has accomplished initial discussions within the Union and started to negotiate with the other Parties. Leadership will be very important in the coming years for the successful implementation of the Protocol. Therefore the assumed leadership of the EU has important outcomes for the future of the climate regime[87] (Dessai *et al.*, 2003:198). Nevertheless, perceptions of third parties are also important to assess the international actorness and global leadership role of the EU (İzci, 2007: 237). Thus, partnerships, development cooperation and trade and environment links are important elements for the EU to emphasize its commitment for international cooperation on the global climate change issue and to increase developing country participation in the global climate change regime along with the role it has been playing for the implementation of the Kyoto Protocol[88]. This certainly requires the EU to work on reducing its ecological footprint within and outside the EU by promoting sustainability concerns throughout the world.

All in all, the EU has been and will be the most important player in the climate change negotiations in the years to come. It is generally argued that due to its economic and political weight and its diplomatic experience in cooperation and coalition-building as well as its internal problem-solving capacities, it possesses the necessary features for a leadership role. With the withdrawal of the US from the process, the EU looked-for the participation of two big countries for the entry into force of the Kyoto Protocol, namely Russia and Japan due to

[87] Related to EU's leadership in climate politics, see also Gupta & Ringius, 2001.

[88] Discussions on EU as a normative power, is beyond the scope of this study, however, it is worth noting that sustainable development has become one of the norms of the EU recently (Manners, 2002). Therefore, depending on Vogler's argument that the EU can disseminate norms in different ways, it can be argued that the EU should bring its climate change concerns in line with the sustainable development strategy so that it can achieve its targets successfully and strengthen the global climate change regime. For further information see (İzci, 2007) and (Vogler, 2005b).

the threshold clause in the Article 25 of the Protocol. Without the US, the EU needed Russia, Japan and the economies in transition for the ratification of the Protocol. Both Russia and Japan had interest in successful negotiations. Japan was the host of COP3 and wanted to see the Protocol in force since it would represent one of its biggest diplomatic achievements carrying the name of its old imperial city. On the other hand, Russia had the ability to sell its surplus emissions capacity resulting from the economic breakdown; called 'hot-air' which accounts for 30% of its 1990 emissions (Ott, 2000: 291). According to Ott, climate policy will be like the foreign policy of a country in the coming years:

> Europe has the chance to demonstrate that it has matured from the object of globalization to a driver of policies that ensure the decent survival of humanity in the centuries to come. Climate policy, in short, equals security and peace politics. Water and food shortages, rising sea levels and generally changing patterns of precipitation will lead to mass migration and a considerable increase in low- and high-intensity warfare in many parts of the Southern world. The increasing dependency on oil renders severe shortages in the supply of affordable resources likely from 2030 onwards, leading to renewed struggles over resources and, once again, disadvantages for the developing nations. Climate policy thus equals foreign policy (Ott, 2000: 295).

Although the EU is criticized due to the "complexity, slowness and indecisiveness" of its institutions, it has managed to keep its leadership on global climate change for such a long time under such circumstances when different interests and perceptions of Member States further complicated decision-making (Schreurs & Tiberghien, 2007: 21). Schreurs & Tiberghien explain the reason why the EU has assumed such a strong leadership role in the global climate change negotiations by setting ambitious goals despite the US resistance and together with huge economic costs related to the mitigation measures as follows:

> ...EU leadership in climate change is the result of a dynamic process of competititve multi-level reinforcement among the different EU political poles within a context of decentralized governance. EU leadership has depended upon the actions and commitments of a group of pioneering states and the leadership roles played by the European Parliament and especially, the European Commission. This upward cycle of reinforcing leadership within a quasi-federal system has been triggered by and been dependent upon strong public support and normative commitment (Schreurs & Tiberghien, 2007: 22).

In addition to these, it should be stressed that the institutions, interests and ideas have come together in such a way that it has been possible for the EU to assume this leadership role (Schreurs & Tiberghien, 2007: 25). Concerning the future, if the EU succeeds in meeting its emissions target, this will be a moral victory towards the US. If it cannot achieve to fulfill its target, it will be viewed as a successful agenda setter, but a weak implementer. Nevertheless, the EU will be very influential in policy change on a global level such as energy efficiency improvements, renewable energy development, carbon emissions trading, energy taxes and

joint implementation. If nothing at all, the EU leadership in climate change has led to the development of international cooperation as well as a global climate regime within which policies, measures and joint projects will continue in the years to come (Schreurs & Tiberghien, 2007: 42).

In this respect, the efforts to foresee the future developments on the climate change issue require the assessment of the particular goals and strategies of the major actors in the climate regime; mainly the EU. The examination of the existing policies of the EU could illuminate the possible future developments in the climate regime.

4.5.2 The European climate strategy

Ringius divides the member states of the EU into three groups with respect to their climate policies. The first group is the rich and green countries, namely; Austria, Denmark, Finland, Germany, the Netherlands and Sweden. These countries can respond quickly to the environmental problems. The second group is the rich but less green members, namely; Belgium, Britain, France, Italy and Luxemburg. These countries are more reluctant in environmental protection compared to those in the first group. They fear that the costs of environmental protection might slow down their economies. The third group consists of the least green and poor members, namely; Spain, Portugal, Greece and Ireland. Concerning the EU environmental policy, these countries are the laggards. They have blocked many initiatives like the common carbon tax. The slowing down of economic development as well as the inadequate administrative capacity in the environmental sphere are the main concerns of these countries. To be able to convince them to take part in the EU ETS, extra permit allocations have been assigned to these countries in the EU burden-sharing agreement (Ringius, 1999: 17-18).

According to the Kyoto Protocol signed in 1997, the EU was to cut its GHG emissions 8% below its 1990 level between the first commitment periods of 2008-2012. This target has been differentiated among the different member states in 1998 under the so-called Burden Sharing Agreement. Individual circumstances of each country were analyzed like size of the economy, the opportunities for reductions, emissions per capita and etc. before any assignments were made (Table 4.1). With this agreement, some member states like Spain, Portugal, Ireland and Greece have a lighter burden compared to the richer members. In addition to this, those former accession countries which joined the EU in May 2004 and in

2007 are not part of this Burden Sharing Agreement, however, they also have their own Kyoto targets. (Klepper and Peterson, 2006: 3; Cox & Miro, 2000: 16).

Table 4.1 Kyoto Burden-Sharing targets for EU-15 Countries

Country	Burden-Sharing Target	Country	Burden-Sharing Target
Spain	+15.0%	Austria	-13.0%
Greece	+25.0%	Belgium	-7.5%
Portugal	+27.0%	Netherlands	-6.0%
Ireland	+13.0%	Denmark	-21.0%
Sweden	+4.0%	Italy	-6.5%
France	0%	United Kingdom	-12.5%
Finland	0%	Germany	-21%
Luxembourg	-28.0%		

Source: EEA, 2005:70.

The major tool which was going to be used to reduce CO_2 was the introduction of a common carbon tax. However, the taxing is a fiscal measure and requires unanimity voting. Since this proposal was blocked by the laggards, the Commission launched the proposal of grandfathered emissions trading which required no financial transfers between the members. The emissions trading scheme is not a fiscal measure and, therefore, politically feasible because of the qualified majority rule, it would not be blocked (Svendson, 2003: 98).

The Member States of the European Union utilize broadly three policies aiming at reducing their greenhouse gas emissions:

1. Through the European Emissions Trading Scheme (ETS) the Member States try to reduce the domestic carbon dioxide emissions resulting from energy intensive installations (domestic reductions covered by the ETS).
2. The Member States try to reduce the domestic carbon dioxide emissions in the sectors not covered by the ETS. They also try to reduce the emissions of other greenhouse gases (domestic reductions outside the ETS and GHGs other than carbon dioxide).
3. The Member States try to reduce emissions outside the borders of the Union through the use of Clean Development Mechanism (CDM) and Joint Implementation (JI). (reductions abroad) (Klepper and Peterson, 2006: 2).

Presently, as can be understood from the above policies, the current system in Europe is a hybrid one (Klepper and Peterson, 2006: 2).

Especially after the signing of the Kyoto Protocol, there have been serious efforts in the EU for the formulation of new measures to reduce greenhouse gas emissions. However, the national interests of the member states and the business interests of the lobbying groups most of the time prevented useful action. The fact that other policy areas also get affected from the climate change policies (e.g. transportation which is responsible for more than 20% of EU emissions, energy...) weakened efforts to cut down emissions to a certain extent, but could not prevent the introduction of progressive action.

With the EU Burden Sharing Agreement, the Member States should allocate their national emission budgets between those energy-intensive sectors which are traded in the Emissions Trading System and the other part of their economies are to be regulated by the their own domestic emission standards. Of course, this kind of a hybrid emission regulation leads to excess costs compared to a unique one designed for all segments. Therefore, the EU emission regulation will be needed to be redesigned in the coming years to increase its efficiency (Böhringer *et al*., 2005: 1- 18).

4.5.2.1 The First European Climate Change Programme (ECCP)

One of the major works towards cutting GHG emissions was the First European Climate Change Programme (ECCP). It developed under two phases. In the first phase, the aim was to develop further policies and measures focused on the energy, transport and industry sectors. Working groups were set up in summer 2000 to come up with recommendations for options to reduce GHG emissions in a cost-effective way. In June 2001, depending on the findings of the working groups, the Commission published an ECCP report. In the report, there were 42 possible measures aiming at 664-765 Mt CO_2 equivalent emission reductions with an expected cost of 20€/tonne CO_2 eq. This was almost the double of the amount of required reductions for the EU (Commission of the European Communities, 2000). In October 2001, the Commission came up with three important measures:

1. An Action Plan for the ECCP was prepared which resulted in a Communication from the Commission explaining the priority actions to be implemented in 2002 and 2003[89].
2. The ratification of the Kyoto Protocol has been proposed by the Commission. As a result, in April 2002, a Decision has been issued by the Council leading to the ratification of the Kyoto Protocol on 31 May, 2002.

3. A Directive on GHG Emissions Trading has been proposed by the Council.

In the Stakeholder Conference launching the Second European Climate Change Programme on 24 October2005, the Commissioner Stavros Dimas has described the outcome of the first ECCP as follows:

> The European Climate Change Programme, launched in 2000, set out 42 innovative measures to reduce greenhouse gas emissions. At the time, many of these were seen as very ambitious – but, 5 years later, it is clear that the EU has delivered. Nearly all of the announced measures are now in place (Dimas, 2005a).

The ECCP has also set high targets for increased forestry realizing the high capacity of the forests to sequester carbon. Most of this forestry is aimed to be performed in former agricultural lands which lead to further decreases in GHGs produced as a result of farming (Behan *et al*., 2006: 112). The second phase of the ECCP took place between 2002 and 2003[90]. Its aim has been to support the implementation of the measures taken in the first phase. Especially, it has focused on the promotion of renewables in heating applications (Commission of the European Communities, 2000).

4.5.2.2 The Second European Climate Change Programme

The aim of the Second European Climate Change Programme (ECCP II) is to provide the EU climate change policy with a new policy framework for the post-2012 years. To reach this aim, in the short term, the ECCP II will review the progress which has been achieved so far. The implementation of the EU policies in the Member States will be examined for future guidance and recommendations. One working group will be dealing with this issue (Dimas, 2005a).

In parallel with this aim, the Commission has launched a new study in June 2006, which aims to examine the sectoral emission reduction potentials and economic costs of climate change. This study, which is expected to be finalized in June 2008, aims to identify the least-cost contribution of different sectors and gases to achieve the post-2012 EU25+ (EU25, Romania, Bulgaria, and if possible Croatia and Turkey) quantitative reduction objectives for all greenhouse gases as well as the determination of a package of cost-effective policies and measures for all sectors and gases to meet these objectives (European Commission, 2006)[91].

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[89] See also Wallström, 2002.
[90] See also http://ec.europa.eu/environment/climat/second_phase.htm
[91] See also http://ec.europa.eu/environment/climat/eccp_review.htm

One of the major problem areas is the transport sector. As of 2005, the transport emissions are 20% higher than their 1990 levels and keep rising. A very comprehensive and integrated strategy is needed to curb the emissions from this sector to lower levels. This requires the cooperation of many players like the car manufacturers, oil companies, the public authorities and even the private vehicle owners. So, the second working group will try to solve this problem (European Commission, 2006). Furthermore the third working group will prepare a proposal for the aviation sector to participate in the efforts to fight climate change. Although its share in the GHG emissions is only 3%, due to its rapid growth, it should also support this emissions fight and should be incorporated to the ETS (European Commission, 2006).

It is now accepted that the real solution to climate change can be attained through innovative technology. For this reason, the EU is working on new technologies. In February 2005, a new exploratory work on geological carbon capture and storage has been announced by the Commission. Also, the EU is now cooperating with China to build a zero emission power plant in China under the EU-China Partnership on Climate Change. So there is a need for a new legal framework to enable the use of these new technologies and to guarantee their environmental impacts. For this aim, another working group has been set up.

A study conducted by the British Insurance Industry has concluded that the financial implications of climate change resulting from extreme weather events will be increasing in the years to come. For example, by 2080, it is expected that the average annual losses due to storms in the Northern hemisphere will increase by two-thirds, to € 22 billion. Therefore, another important aim of the ECCP II is to develop sound adaptation policies and increase learning which will be the responsibility of another working group. The important point will be to improve Europe's resilience to the effects of climate change. According to Stavros Dimas, the Environment Commissioner, ECCP II confirms EU's commitment and leadership in the fight against climate change (Dimas, 2005a).

4.5.3 Measures to reduce GHG emissions

In order to reduce greenhouse gas emissions to reach its Kyoto targets, the European Union has taken serious legislative measures. Certainly, the most important among these is the ETS; however, there are many others which are worth mentioning.

4.5.3.1 EU - Emissions Trading Scheme

One of the major components of the European climate strategy on its way towards reaching its Kyoto target is the Emissions Trading Scheme (ETS) for carbon dioxide. The ETS aims to promote cost-efficiency to the member states in reaching their emission reduction commitments. The objective of the Emissions Trading Scheme (ETS) is to help those companies who exceed their individual emissions targets by providing them with the option of buying allowances from those who are in excess. In a nutshell, this special internal market which has been organized for the trade of carbon dioxide emissions has been set up to minimize the economic costs of Kyoto commitments. This system helps those investments made in clean technologies turn into profits as well as helping the EU meet its Kyoto commitments on climate change (Böhringer *et al.,* 2005:1-2). The concept of the system lies on the allocation and the trade of the right to emit GHGs (Allen & White, 2005: 50).

Emissions trading is both an instrument for environmental protection and a policy instrument which will not damage competitiveness and make sure that the target levels are achieved without slowing down economic growth (Svendson, 2003: 99). Through emissions trading, emissions reductions can be achieved where they are cheapest, which is a cost-effective and economic benefit (Svendson, 2003:100). Svendson presents the net gains from CO_2 trade compared to the situation without trade. Under the Kyoto Protocol, if all the countries would take place in the CO_2 emissions trading system, a 40% cost savings would be achieved compared to no trading at all. The EU Commission has estimated that EU trading by energy producers and energy intensive industry have the potential of reducing the implementation costs of EU's Kyoto commitments by nearly a fifth compared to the case where separate members implement their own schemes domestically. This potential savings is approximately €1.7 billion on an annual basis. On this basis, this system is "a politically feasible compromise between economic optimality and political feasibility" (Svendson, 2003: 104). The EU ETS has been influenced by the design of the US SO_2 (sulfur dioxide cap and trade program)[92] emissions trading program of 1995 to a certain extent. However, the EU ETS has been much more impressive in size, complexity with lots of new features. It will be a very important experience concerning the role of market-based policies in environmental regulation and thus act as a basis for the future of the European and international climate change policies (Kruger & Pizer, 2004: 8).

[92] Sulfur dioxide produces acid rain.

Although the member states had to develop the necessary administrative infrastructures to be able to implement such a complex system in a short time, the ETS started operation on January 2005. Starting from this date, almost 12.000 industrial plants of the EU-25 have been able to buy and sell permits to release carbon dioxide. The carbon dioxide emissions of these 12,000 plants represent almost 40% of total carbon dioxide emissions of the EU (Dimas, 2005b). The importance of the ETS should not be undervalued. As the Environment Commissioner Stavros Dimas has pointed out in a speech on 24 October, 2005 "The estimated 150 million allowances traded so far in 2005 have a financial value of some 3 billion euros" (Dimas, 2005b). The carbon dioxide quota (target) of each individual plant is set out in a National Allocation Plan (NAP) which is approved by the Commission. So, according to these quotas, companies are allowed to buy unused credits from those who have managed to leave excess emissions.

4.5.3.2 National Allocation Plans (NAPs)

Before the beginning of each ETS trading period, the Member States have to prepare their so-called NAPs. In the NAPs, the national climate strategies of the EU countries are summarized. Concerning the first trading period between 2005 – 2007, the European Commission has accepted and made public all the NAPs of the EU25. In the NAPs, different details of information with different time horizons can be found. The NAPs contain the allocation of permits to the ETS. Some NAPs contain information on the planned government purchase of CDM and JI credits. And some NAPs even contain information about the targets for the ETS sectors until 2012. In a nutshell, through the NAPs, greenhouse gas emission allowances are assigned to each participating industry installation (Klepper and Peterson, 2006: 2).

In the NAPs, the member states make three important decisions:

1. All the member states have their own national targets as a result of their being a party to the Kyoto Protocol and this has been negotiated under the burden-sharing agreement of the EU. Therefore, as Kruger and Pizer (2004) calls; the EU ETS can be seen as a "cap within a cap". Within this system, the first decision is how much of that country's Kyoto responsibilities will be realized by the sectors participating in the emissions trading program and how much of this burden will be met by the non-capped or the non-participating sectors.

2. The second decision concerns the setting of allocations for each of the sector involved in the trading system. This is a difficult decision because the allocation will determine the net burden which will directly have an effect on the competitiveness of the firm. (Net Burden = (Mitigation expense+Allowance Purchases) – Increase in Revenue)

3. The third decision concerns the distribution of these sectoral allowances to those firms of the sector (Kruger & Pizer, 2004: 11-12).

In all these decisions, availability of a complete, qualified and reliable data was very important for the trading system to reach its goal. This had been a problem for the EU which was quite decentralized concerning the collection of data. Besides, different legal systems, enforcement cultures, and administrative capabilities have been among the problems that had to be overcome during the first trading period (Kruger & Pizer, 2004:11-12).

The first trading period is between 2005 and 2007. The second trading period is between 2008 and 2012 which will be the first commitment period of the Kyoto Protocol. Presently, this system does not cover all the sectors. It only covers those industries of electricity generation, the production and processing of ferrous and non-ferrous metals, glass, cement, and pottery, bricks, paper and board production. For example, the transportation sector, which is responsible for a large part of the carbon dioxide emissions, is not included in this system yet. However, the Parliament supports the inclusion of emissions from international flights and shipping into the emission reduction targets of the second commitment period of the Kyoto Protocol (Klepper and Peterson, 2006:1).

In fact, the system is flexible. It is possible for some firms to opt out from this system with the request of the member states. Also, additional emissions allowances can also be issued in case of exceptional conditions such as very low winter or very hot summer temperatures. For the excess carbon dioxide emissions above the targets, fines of 40 euros will be charged per ton of CO_2 during Phase I (2005-2007). This will increase to €100 per ton in Phase II (2008-2012). The important point is that paying the fine will not free the company from its original obligation (Allen & White, 2005: 50-51). On the other hand, the Commission hopes the ETS to present a much cheaper alternative to the fines for those companies who are to exceed their quotas. In the ETS, trading prices have begun with 8.5 euros/tons of carbon dioxide and at most reached 20 euros, therefore, the ETS can generate cost savings.

4.5.3.3 The Linking Directive

The ETS is linked to the Kyoto Protocol through the adoption of the Linking Directive in the summer of 2004. According to this directive, the companies can earn carbon allowances through the flexible mechanisms of the Kyoto Protocol, namely Joint Implementation and Clean Development Mechanism, and then use these allowances for the emissions reduction targets in the ETS. This option offers companies a cheaper way of emissions cutting (Klepper and Peterson, 2006: 1).

Now that it has already been two years since this system has become operational, the Commission has announced that it will review some basic issues like the probable involvement of other gases and sectors, the effects of the system on competition, and its impact on prices. Of course, this is a process which can take a couple of years and therefore it will not be ready for the second trading period in 2008 anyhow.

The EU has managed to put this system into effect in a very fast manner. This was achieved with the combination of the interaction of various actors. First of all, the European Commission has played a very important entrepreneurial role throughout the process. This has resulted from the fact that the Commission was all unified for the procedures to be achieved concerning emissions trading. In addition to this, emissions trading was supported by both the environmental and industrial actors. The position of the European Parliament, which is a powerful co-legislator in the EU, was also positive towards emissions trading. After all, emissions trading was not a mechanism which would be implemented for the first time in the world, but rather there was the important lessons learnt from the US SO_2 emissions trading experience. All these important inputs have combined at the end and provided the EU with a high problem-solving capacity concerning the EU ETS. In fact, being left alone as the main global climate change player after the withdrawal of the US in 2001, the EU did not have the luxury of being passive. However, the important question of the present concerns the assessment of effectiveness and the efficiency of this system taking into consideration the very complex nature of the issue which is already one of the aims of the Second Climate Change Program (Wettestad, 2004: 43-44).

In the EU, the industries subject to the ETS can use CDM and JI credits to reach their targets. Within the ETS, the use of CDM and JI is allowed by the EU Linking Directive to be unrestricted. For example, a company operating under the ETS can fulfill its commitments only through CDM or JI credits. The EU governments are also allowed to use the CDM and JI credits to reach their Kyoto targets. However, the governments are obliged to consider

supplementarity. According to the Marrakesh Accords to the Kyoto Protocol, "the use of the mechanisms (International Emissions Trading, CDM and JI) shall be supplemental to domestic action and that domestic action shall thus constitute a significant effort" (Klepper and Peterson, 2006: 5). They had urged for this requirement as well as for a limit on the usage of credits coming from CDM and JI however not more than 50% should be imported (Klepper and Peterson, 2006: 5-6).

According to the Kyoto Protocol, the Annex B countries can transfer assigned amount units under the Kyoto Protocol (AAUs). The excess emissions rights of those countries who have a cap of AAUs above their expected emissions in 2012 is called hot-air. However the role of hot-air is limited in the EU. The countries of the former Soviet Union and to smaller extent the Eastern European countries have hot-air. The AAUs cannot be used inside the ETS. In addition to this, the member states have committed themselves to supplementarity; application of hot-air for achieving targets is very limited (Klepper and Peterson, 2006: 6, 21).

In reducing the cost of reaching the European Kyoto targets, the CDM and JI projects help a lot. The efficiency as well as the cost of the EU climate strategy is highly related to the supplementarity condition which requires that most of the emission reductions to be achieved domestically. As Klepper and Peterson have emphasized, the best way to reduce the cost and increase the efficiency of this hybrid European climate strategy is to include more sectors and gases as well as to allow for the unrestricted use of CDM and JI. In parallel to this, the usage of the restricted amount of CDM and JI will determine the distribution of costs of meeting the Kyoto targets among the member states (Klepper and Peterson, 2006: 21).

To a certain extent, this directive undermines the pledge for real emission cuts and technology development in Europe. Although, there is the option of adding financial value to emission cuts through the utilization of ETS, firms can simply buy cheap credits from projects which might even be damaging for the overall purpose. Therefore, although this directive presents an alternative to companies who are trying to reduce their emissions, it also presents a dilemma for reaching the final outcome of saving the climate (OJ L 338/18, 2004).

4.5.3.4 The Renewables Directive

The renewable energies are expected to be important elements of EU's climate strategy in attaining its Kyoto target of 8% below 1990 levels. These include wind power, solar energy, hydropower, geothermal, biogas and biomass, in short; energy coming from

non-fossil sources. This directive has been adopted in 2001 with the aim of increasing the share of electricity produced from renewable energy sources in the EU to over 22% by 2010 (from 15.2% in 2001) which will also contribute to the overall target of 12% of energy consumption from renewables by 2010. If this directive can be fully implemented, 200 million tons of CO_2 emissions could be saved. This represents almost 6% of the EU's 1990 emissions. With current implementation, the EU is not expected to reach this target though. To achieve the 12% target, the European Commission has estimated that additional investments of at least €1.6 billion per year until 2010 was necessary. Dramatically, the European subsidies given to fossil fuels every year is almost ten times greater than this amount. To be able to strengthen investment confidence, the EU should commit to the long-term target of 25% until 2020, and act accordingly in the years to come (EurActive, 2004).

In fact, the promotion of renewable energy sources for the fight against climate change also supports EU's efforts to diversify energy sources with the aim of securing supply as well as promoting social and economic cohesion. However, for this directive to be successfully implemented, a political framework which guarantees the easy access of renewable energy to the market is needed urgently.

4.5.3.5 The Cogeneration Directive and the Eco-design Directive

This directive has been adopted in 2004 for the promotion of simultaneous production of electricity and heat. Through cogeneration, meaning the combination of heat and power, it is possible to achieve increase in efficiency as well as cuts in emissions. However, the directive has not quantified targets for the member states to reach. It only asks them to observe and evaluate their national potentials. Therefore, it can rather be perceived as an introductory measure to be built on in the coming years (OJ L 52, 2004).

Eco-design Directive has been adopted in 2003 with the aim of making energy-using products (e.g.household items) more environmental friendly and efficient. Like the Cogeneration Directive, this should also be considered as an introductory step since it doesn't provide the member states with any targets and it is not clearly defined. In the Action Plan for Energy Efficiency dated 19.10.2006, its development has been proposed for effective implementation (OJ L 191, 2005).

4.5.3.6 The F-Gases Directive

F-Gases are used in many applications like industrial refrigeration, air conditioning systems, foam blowers, electrical switches, sport shoe 'air soles', car tires. These gases were introduced in 1990s to be used in place of the ozone-depleting CFCs and HCFCs. Although these are ozone-friendly gases, they have a high global warming potential and can stay in the atmosphere for thousands of years (almost 24.000 times that of CO_2). As of 2004, the F-Gases amounted to 2% of the total EU emissions (EurActive, 2004).

On April 25, 2006, the European Council has adopted a Regulation on fluorinated greenhouse gases and a Directive on emissions from air conditioning systems in motor vehicles. The Regulation has come into effect as of July 2007 and the Directive shall apply with effect from 2011 with a complete ban as of 2017 (OJ L 161, 2006). The improvement of containment of these gases, better reporting, specific restrictions on marketing, a phase-out of HFC-134a in car air conditioning systems are the basic motives of this Regulation and Directive.

4.5.3.7 Energy End Use Efficiency and Energy Services Directive

The Commission has issued a Communication on 19.10.2006; called Action Plan for Energy Efficiency: Realizing the Potential. In this report, it is stated that Europe is wasting at least 20% of its energy due to inefficiency. Energy End Use Efficiency and Energy Services Directive is one of the measures proposed in this Action Plan. Energy end use efficiency directive has been adopted with the aim of gaining the economic potential of unrealized energy savings, namely for the cost-effective and efficient end-use of energy within the Union. The Directive helps to remove existing market barriers and imperfections for the efficient end-use of energy by providing the necessary targets, mechanisms, financial and legal frameworks. The Directive demands that the Member States should achieve an overall national indicative energy savings target of 9% for the 9^{th} year of application of the Directive (OJ L 114, 2006).

The success of this directive is dependent on the shift of approach to energy consumption. The producers should be encouraged to develop more energy-efficient products. The European society should be able to change its behavioral patterns of consuming energy, and they should be motivated to buy these more efficient products. The role of innovative technology will be very important in the years to come. On the other hand,

the investment costs needed to achieve these are also very important. In the Action Plan for Energy Efficiency: Realizing the potential issued by the Commission on 19.10.2006, the objective has been defined clearly:

> The Action Plan is intended to mobilize the general public and policy-makers at all levels of Government, together with market actors, and to transform the internal energy market in a way that provides EU citizens with the globally most energy-efficient infrastructure, buildings, appliances, processes, transport means and energy systems. Given the importance of the human factor in reducing energy consumption, this Action Plan also encourages citizens to use energy in the most rational manner possible. Energy efficiency is about informed choice by individuals, not just about legislation (Commission of the European Communities, 2006a:4).

The achievement of all of these targets depends on the political will and engagement at the national, regional and local levels. Therefore, all the institutions of the EU, together with national and regional policy makers, should be fully committed for the successful implementation of this Action Plan.

4.5.3.8 Energy Performance in Buildings Directive

40% of the EU's energy is consumed by the buildings sector; therefore, this sector is the largest single potential for energy efficiency (OJ L1, 2003). This Directive, which is one of the measures proposed by the Action Plan for Energy Efficiency on 19.10.2006, has been in force since 2003 with the aim of increasing energy efficiency in public, private and commercial buildings (OJ L1, 2003).

The Directive aims to promote the energy efficiency of buildings by setting a general framework of methodology to be used in the calculation of integrated performance of the buildings, setting the minimum standards in new and existing buildings, creating Energy Certification for Buildings and inspecting heating and cooling installations. It is a measure which concerns a large number of actors at many levels. As of January 4, 2006, the Directive has been in force in all the Member States. Accordingly, the Directive is expected to increase the awareness of energy use in buildings and lead to serious increases in investments in energy efficiency measures within the buildings (EPBD, 2006).

According to research, through the application of more ambitious standards to new and the refurbishing buildings, more than one fifth of the present energy consumption can be saved by 2010 (OJ L 1, 2003). The cost-effective savings to be realized as of 2010 is expected to be 22% within the buildings sector. And if realized, 20% of the Kyoto commitment could be met through this measure. Therefore, this directive should be

considered to be one of the very important legislations of the EU designed to meet its Kyoto commitments.

4.5.3.9 Car efficiency and Aviation industry

Although, there is still no legislation on car efficiency, a voluntary commitment to achieve a specific target by 2008 has been set by the Association of European Automobile Manufacturers[93]. There are also similar agreements signed between the Japanese and Korean car manufacturers. The European transport sector use 70% of oil consumed in the EU. The half of all the energy consumed in this sector is used by cars (European Parliament, 2006). Therefore, although voluntary agreements are also very important, Council legislation should be issued as soon as possible in such an important sector which has connections with both energy and the climate change policies of the EU.

Air traffic has gone through a 50% increase over the last decade. Starting from 1990, CO_2 emissions from this sector, has shown an 87% increase, accounting for 3.5% of the total human activities leading to climate change (this increase is related to fuel consumption). Since aviation was excluded from the Kyoto Protocol, there have not been any attempts to decrease emissions in this sector until 2006. In December 2006, the Commission issued a proposal for imposing a cap on CO_2 emissions for all planes flying to/from EU airports as well as to allow airline companies to buy and sell pollution credits on the EU carbon market with the aim of reducing the climate change impact of aviation sector. As a result, the EU has also targeted the integration of the aviation sector in the EU-ETS. The targeted date for the aviation sector to start trading CO_2 emissions is 2011 (EU Press Release, 2006).

4.6 Policy areas undermining EU action on climate change

Although the EU has taken many measures aiming at emissions reductions in line with its climate change strategy, (of which some of the important ones are mentioned above), these do not seem to be enough for the EU Member States to achieve their Kyoto targets. In addition to taking new measures, the existing policies should be reviewed to eliminate their damaging effects on the climate and to be able to maximize different policies' outcomes for them to be supplementary to each other. In fact, presently, many policies are undermining the

[93] To achieve a target of 140 g. CO2 per km. for the new passenger cars sold in the EU.

efforts to reduce emissions. For example, in the energy sector, fossil fuels are still being subsidized by the EU Member States.

On the European side, the European Transport Policy also conflicts with climate policy because instead of promoting sustainable transport systems, it still works with the aim of building more roads. Dramatically, although there has been a 10% improvement in fuel efficiency, total transport has increased 20%. Additionally, the investments made to the new members within the scope of Regional Policy (in the form of grants and loans from the EU funds and the European Investment Bank) have been mostly used to create car-dependent societies instead of promoting environmentally sound transport activities. Therefore, these members are likely to face similar environmental problems presently faced by Europe (EEB *et al.,* 2001).

Given last ten years, the GHG emissions have risen in the EU15. Only Sweden, Great Britain, France and Germany seem to reach their targets. Due to the economic breakdown since 1990, the emissions have fell down dramatically in the former accession countries apart from Slovenia. Therefore, these countries have excess emission rights (hot-air) which can be sold on the ETS market (Klepper and Peterson, 2006:3).

According to Klepper and Peterson, among the reduction plans of the EU Member States, "the major burden for domestic reductions falls on the sectors outside the ETS in almost all countries" (Klepper and Peterson, 2006: 4).

4.7 Efforts for the policies post 2012

The European Commission has proposed a strategy called "Winning the Battle Against Climate Change" on 9 February, 2005 (Commission of the European Communities, 2005). This included strategies for the years beyond 2012. Major points of the strategy are as follows:

1. To bring all major world emitters together under a single binding scheme, including especially the US, India and China.
2. To increase the number of those sectors which can trade emissions within emissions trading scheme and to limit deforestation.
3. To support climate-friendly technologies.
4. To increase the use of market-based instruments like the EU-ETS.

5. To develop adaptation policies both in Europe and on a global scale (EurActive, 2005a)[94].

A recent report named "Climate strategy – between ambition and realism" prepared by the Scientific Council for Government Policy has been presented to the Dutch Environment Ministry on 28 June 2006. This report criticizes the EU climate change policy and highlights its weaknesses. According to the report, the EU climate change policy is too much focused on restricting carbon dioxide emissions within the EU, hence, away from global effect. The EU's effort on this field has been found to be ineffective. The Kyoto targets are criticized to be too limited, covering a short period and applying for a limited number of countries who already have carbon dioxide efficient economies. In addition to this, the policy of the EU has been criticized for lacking global long-term perspective (EurActive, 2006). The report recommends:

1. to work more to achieve adaptation policies.
2. to try to reduce emissions by using existing technologies and to concentrate on energy efficiency, since it is presumed that fossil fuels will continue to be the major global energy source until at least 2050.
3. to work on global coordination through meeting the interests of different parties.

Some reports argue about the positive effects of warmer weather around the world such as increases in agricultural production. One of these reports have been prepared by an environmental group called Friends of the Earth which has been published on 13 October 2006. However some studies such as the one which has been concluded by the Global Development and Environment Institute of Tufts University, United States, called the "Climate change – the costs of inaction" warns that the benefits of global warming will quickly be offset by the costs of extreme weather events (Ackerman and Stanton, 2006). The researchers argue that limiting the temperature rises less than 2º Celcius would eliminate half of the damages predicted. These recent reports attract the attention to the fact that climate change is not only an environmental and social disaster, but will also be an economic problem in the coming years.

Concerning the EU's Kyoto targets, it is projected that with its existing policies, the GHG emissions of the EU is expected to be only 0.6% lower than the base-year levels in 2010 and, unfortunately, more than the reduction target of 8% between 2008-2012. Additional

[94] See also (Rapid Press, 2005).

measures as well as removal through sinks may help the EU to reach its target. However, the successful implementation of all existing and additional measures will be very important in the coming years (European Commission, 2007). With this study the EU has already developed its scenarios and preparations for 2020 and beyond.

4.8 Energy and Climate Change

The main source for GHG emissions are energy production and use. This is the point where climate and energy policy meet; to be able to limit the global average temperature increase to not more than 2º Celcius above pre-industrial levels, there should be an integrated climate and energy policy. In the autumn of 2005, at the Hampton Court Summit during the UK Presidency, the EU leaders suggested the preparation of an Energy Green Paper. The reasons for this were Europe's increasing dependency on a few external suppliers like OPEC and Russia, the rising oil prices and last but not least, the emergence of climate change as a very important phenomena in the global scene. Accordingly, in March 2006, with the publication of A Green Paper, the Commission opened a debate concerning the future of the European energy policy. On January 10, 2007, the Commission announced its plans for a "unilateral 20% reduction in GHG emissions by 2020" and hence, "trigger a new industrial revolution" (EurActive, 2007a).

As a result of these Commission plans and proposals, during the Energy Summit held on 8-9 March, 2007, the European Council agreed on an action plan for the launching of a common European Policy for Energy by the year 2009. With this aim, they agreed on a two-year action plan (2007-2009). The achievements of this very important summit can be listed as follows:

1. GHG reduction: Regardless of progress made in international negotiations, the EU will bind itself to the target of 20% reductions to be achieved until 2020. In addition to this, under the condition that the other industrialized nations including the US join in taking similar steps, then the binding target will be 30%.
2. Renewable energies: The EU will bind itself to a target of 20% of its overall energy consumption to come from renewables by 2020. Additionally, each member state will bind them to achieve at least 10% of their fuel consumption in the transportation sector to be supplied from biofuels. However, this target is flexible because its implementation will be subject to production being sustainable

and to the commercial availability of second-generation biofuels. The member states are free to decide on how best to achieve the overall target on renewables, because of the specific national circumstances. They are required to establish National Action Plans to set specific objectives and targets.

3. Energy efficiency: The EU aims to achieve a saving of 20% of the energy consumption compared to the forecasts for 2020. In parallel with this aim, the Commission is expected to make a proposal for energy savings from office and street lighting in 2008. In 2009, the Commission is expected to make a proposal for energy savings from private households (EurActive, 2007b).

The European Commission has also proposed the full ownership unbundling of production and transmission activities in the electricity sector. Unfortunately, this proposal has been rejected by the heads of state which would in fact lead to real competition in the electricity sector. Although the internal market for gas and electricity has not seen enough progress, the above mentioned measures are very important milestones for the future. The German Chancellor Angela Merkel has described the adoption of the energy action plan as "one of the great moments of Europe's history" which will "open the door to a new dimension of European cooperation in the years to come" (Euractive, 2007b). It is expected that this energy action plan will give way to a third technological revolution. The Greenpeace also announced the new GHG reduction targets of EU to be the biggest such decision since the adoption of the Kyoto Protocol. On the other hand, Business Europe (European employers' organization) has been critical of the summit decisions and has warned about the technological and economic possibilities of Europe. In fact, this action plan provides Europe with a chance to change its energy-supply structure. From one point of view, the use of more renewable resources reduce the dependence on imported energy and as a result leads to less fluctuations in fuel prices. However, this requires the effective implementation of new decisions supported by a strong legal framework. Therefore, the next step for Europe, now, should be the building of such a framework (EurActive, 2007b).

Apparently many business organizations have criticized the unilateral CO_2 reduction targets of the EU for 2020. Since the other nations do not have the same binding targets, this will weaken the competitiveness of the European industries vis a vis the global business environment and its environmental benefits will not be effective. Another view is that the demand for renewable energy will lead to such an increase in its price that its sustainability will be impossible. As for nuclear energy, the Commission has expressed that nuclear energy

is one of the most important sources of carbon-dioxide free energy in Europe, however, has left the decision on the future use of nuclear energy to the member states themselves (EurActive, 2007a).

Concerning the post-Kyoto period, the European Council has endorsed the "strengthening and extension of global carbon markets, the development, deployment and the transfer of the necessary technology to reduce emissions, appropriate adaptation measures to deal with the effects of climate change, action on deforestation and addressing emissions from international aviation and maritime transportation" (Bulletin EU, 2007). The Council invites all the countries to join the efforts under this framework according to differentiated responsibilities and respective capabilities. The emission reduction targets should be taken very seriously since they constitute the backbone of a global carbon market. The European Council has also emphasized its commitment to transform Europe into a highly energy-efficient and low GHG emitting economy. The Council underlines the increasing GHG emissions from developing countries resulting from the emission intensity of their economic development and commits itself to supporting these countries' vulnerability and adapting to climate change. Since the EU ETS has a very important role in the fight against climate change, the Council looks forward to broadening its scope to land use, land-use change and forestry and surface transport.

The Council also calls for a European Strategic Energy Technology plan (to focus R&D efforts on low carbon technologies) which includes the environmentally safe Carbon Capture and Sequestration. This is aimed to be examined at the European Council meeting of Spring 2008. When taken into account that almost 50% of the EU's electricity supply comes from coal and gas and the EU aims low CO_2 fossil fuel future, the support for clean coal technologies becomes very important. Progress made in all these fields will be followed up and the Commission will be preparing an updated Strategic Energy Review at the beginning of 2009. This will serve as the basis for the new Energy Action plan from 2010 onwards (Council of the EU, 2007). In spite of the fact that the decisions taken in this summit are very important initiatives, as Friends of the Earth Europe has evaluated; the package is "good news for the dirty energy industry, bad news for people and the planet" (EurActive, 2007a).

For the fight against global climate change to be effective, the unified bold action of all the countries will be necessary. Hopefully, Europe's latest decisions will also serve to accelerate the realization of this action.

4.9 Climate Change and the New Member States

Since the beginning of the 1990s, the EU has shared the debate of and the action for climate change among the EU-15. The new Member States, thus, have shared less time in this debate up until now. Presently, with their accession, they have adopted the current climate change provisions of the EU. In these countries, the debate of climate change is weak due to limited resources as well as the low priority given to this issue in public. Consequently, their contribution to this debate is also weak. The urgent increase of public awareness and their support and contribution to the climate change debate is required for the EU to be able to exert pressure at the EU level as well as the international level for critical decisions to be taken and implemented (Ecologic, 2006b). By also taking into consideration the future as well, the EU has organized a series of events called 'Capacity Building in New Member States, Acceding and Candidate Countries on Further Climate Change Action Post-2012'. These events were to be held in some of the major cities like in Prague on 11-12 April 2007, in Ljubljana on 11-12 October 2006, in Sofia on 14-15 June 2006, in Riga on 25-26 April 2006 and in Warsaw on 23-24 January 2006. By this way, the EU is both supporting the development of climate policy in these countries and helping them to catch up with the existing EU climate change policies (Ecologic, 2006b).

4.10 EU and International Cooperation

Apart from its support for the Kyoto process and its own struggles within the Union to fight GHG emissions, the EU also works to develop bilateral technology partnerships with some of the emerging countries. With the EU-China clean energy partnership, a demonstration coal power plant is being built in China which aims to have zero CO_2 emissions resulting from the application of CO_2 capture and storage technology. The EU has also started a Clean Development and Climate Change Initiative with India, also covering the application of Kyoto Protocol's Clean Development Mechanism. The United States is also active in signing such partnership agreements with the same reasons; like the Asia-Pacific Partnership on Clean Development. These partnerships, developed outside the framework of the Kyoto Protocol, compete with each other. The EU tries to gather the efforts of these partnerships either under the body of G8, the UNFCCC or at least under the international cooperation projects like the Carbon Sequestration Leadership Forum or the International Partnership for the Hydrogen Economy (EurActive, 2005b).

Energy is a key source for economic growth. Therefore, the major energy producing regions are also of great importance due to their effects on stable growth. At the top of the agenda of the G8 meetings is the energy issue. Presently, any discussion on energy policy and energy security should take climate change into consideration. Therefore, the G8 meeting is an important platform to discuss the climate change issue as well (Saunders & Turekian, 2006: 78).

During the Paris Conference "Citizens of the Earth: For Global Environmental Governance" held on 2-3 February, 2007, the French President Jacques Chirac has suggested the building and strengthening of world environmental governance by the formation of a UN environmental organization.

In fact, the formation of such an organization would coordinate the activities of various international environmental agencies and organizations more efficiently. In addition to this, the implementation of environmental agreements would be easier. By this way, the environmental matters would be perceived and represented much more equally with respect to some other global matters (e.g. economy and the World Trade Organization). Besides, more funding would be made available. Depending on the fact that the future of climate policy has still not been shaped, various proposals are being announced. One of them is the French proposal to impose a border adjustment tax on those goods imported from the countries that have not ratified the Kyoto Protocol. The EU has stated that there will be more study on this proposal (EurActive, 2007c).

With the adoption of the latest energy-climate change package, the EU has shown its dedication to the climate change issue as well as its leadership. When asked about the consequences of the unilateral commitment to reduce EU's emissions by 20% until 2020, the Environment Commissioner Stavros Dimas has emphasized the importance of the existence of such a target:

> We do this because a longer term target is needed for the carbon market – not only here in Europe but also globally. The EU emissions trading scheme needs this long term certainty and, in this way, we make sure that it continues after 2012 (EurActive, 2007c).

It seems that this unilateral reduction would prove EU's commitment to climate change and represent an impressive edge to persuade other countries to join EU's efforts. On the competitive side, those companies who are investing in new opportunities and innovations as the result of climate change will be making profits. The growing public awareness

concerning the possible effects of climate change will reward those companies which are producing climate-friendly products. According to Dimas, if China and the US still do not join the efforts after 2012, then the EU will already be prepared for the low-carbon future and at that time this will be a competitive advantage for the European companies (EurActive, 2007c).

Under those circumstances, EU may attempt to impose countervailing duties against the imports of US or against the countries who have not participated in common action for climate protection to be able to compensate for the lower costs of those companies. Hopefully, this will not be realized. Taking into consideration the terrorist attacks of September 11, 2001, the US needs the cooperation of other countries for its national security as well as for the global economic and political security which is necessary for the US firms in terms of their trade relations. Most of these countries, whose cooperation is necessary for the US, are deeply concerned about climate change. The optimistic view suggests that they will be able to take the US among themselves in the coming years for the unified fight against climate change. The involvement of the US is very important for the involvement of the other major emitters like China as well as the developing countries, since the US is the major and biggest buyer of allowances in the emissions market (Stewart & Wiener, 2004: 74).

Notwithstanding the US hegemony on global politics, the increasing EU actorness in global scale has so far affected the current global climate change regime. What's more among all those actors who have been influential in the formation of the climate regime in one way or another, the EU has the potential to be the most effective actor to influence its neighborhood and especially those countries which have applied for membership. Hence it is not possible to evaluate the climate change policy of Turkey without the EU impact. Like in many other policy areas, the special relationship of Turkey with the EU has the perspective of helping to shape the future climate change policies of Turkey. Since the domestic and international dimensions of climate change policy are interrelated, Turkey's relations with the EU have the potential of bringing these two dimensions closer. Turkey is required to comply with the provisions of the Acquis Communautaire related to climate change prior to full membership. This requirement has the effect of helping Turkey to take its place within the global climate regime while at the same time helping Turkey on the domestic side to achieve its possible commitments. In addition to these, Turkey's relations with the EU provide Turkey with a support in international negotiations. All in all, the leadership position of the EU within the global climate regime will be very important for the future climate change policy of Turkey.

However, the policies of the other major actors will also be very important in setting the conjuncture for the post-2012 regime.

V. CLIMATE CHANGE POLICIES OF TURKEY

Global climate change has already challenged the long lasting perceptions on environmental protection and economic development throughout the world. Major actors of climate regime today are trying to cope with the new requirements of the changing climate for a safe future by integrating their environmental concerns into their development plans and establishing wider cooperation in the world. Yet with the current climate regime it does not seem very likely to have stable climate in the future. Therefore it needs to be improved and enhanced in such a way to involve as many countries as possible and to increase its ecological effectiveness. Post –Kyoto negotiations are, thus very crucial. They do not only constitute the vital steps to mitigate climate change and adapt to its impacts, but also serve as important indicators how the country positions and interest will evolve in a changing international environment. Although mitigation and adaptation policies are considered generally costly for those who can not and do not fully involve in the climate regime non –participation appears to be more costly in the long term.

Turkey at this point in time is at the cross-roads. While on the side she tries to stick with its deep-seated environment versus development dilemma, and seems to resist to any changes on the other her EU candidacy has to make immense changes not only in technical sense of legislation but also in implementation of environmental policy so in the perceptions with regard to environment-development link. What's more Turkey has to review 'its special circumstances' to become an active member of the future climate regime. Otherwise it will not be possible to Turkey either to avoid any international repercussions or to achieve her development goals in the near future. An overview of historical evolution of climate change policy in Turkey and relations with other (inter)national actors as well as the impacts of the climate change are, therefore, necessary to assess the policy options for the post-Kyoto negotiations. What is more, actions at the international and domestic levels should complement each other to formulate a strong bargaining position. However, being a party to the Kyoto Protocol seems the key to such formulations for Turkey at the moment.

5.1 The Impacts of Climate Change on Turkey

Climate change is a global problem. It has impacts on all the countries of the world. While some countries are highly vulnerable to the impacts of climate change (like the small island states which face the threat of being erased from the maps as a result of sea-level rise), others are less vulnerable. There are even some countries which might benefit from climate change (for example those which are close to the poles and have very low temperatures will benefit from the temperature rises). As a matter of fact, different climate systems will be affected differently from the impacts of climate change. Since Turkey has a mixed climate system, it is one of those countries which will be affected to a great extent from climate change. Different regions of Turkey are also expected to be affected in a different way (Öztürk, 2002: 47).

The most striking effects of climate change on Turkey are expected to be water scarcity, deforestation, desertification, droughts and ecological degradation related to these developments. With these circumstances, Turkey turns out to be within the risky group of countries with respect to its vulnerability towards the potential effects of climate change (İklim Değişikliği I. Ulusal Bildirime Hazırlık Projesi, 2005).

Due to climate change, a widespread increase in summer temperatures is expected in Turkey. This increase will mostly be felt in the western and south-western parts of the country. In the last five decades, the western provinces have seen a significant decrease in winter precipitation. Especially in the northern and eastern coasts, coastal erosion, flooding and inundation along shorelines are a major problem for Turkey. This is also a threat for its tourism sector which is mostly active at the coastal regions both with respect to the availability of beautiful coasts as well as the historical places. Many of these places might be lost due to accelerated sea level rise (MoEF, 2007: 19).

The projections show that as of 2030, almost 20% of the surface water in the studied basins will be lost. This number is even expected to rise to 35% in 2050 and 50% in 2100. Mainly in the agricultural, domestic and industrial sectors, the decreasing surface water potential of the basins will be a very serious problem for Turkey (MoEF, 2007: 19). The water shortages experienced in some of the major cities this summer should be evaluated as a signal of such a long-term devastating threat for the years to come.

The impacts of climate change can be analyzed under three headings: the economic, environmental and social impacts. These impacts are listed in Table 5.1.

Table 5.1 The Impacts of Climate Change

The economic effects	Environmental effects	Social effects
-losses in agricultural products -plant diseases, epidemic invasion, spread of epidemic diseases -degradation in product quality -losses in stockbreeding, degradation of pasture lands, difficulties in finding food and water for the animals -losses in forest products, fires, tree diseases -losses in water products -decrease in economic growth -losses in food production and stocks -difficulties in finding financial credits -losses in the income of farmers -losses in tourism -decrease in energy production -looses in those industries which are related to agricultural production -increase in unemployment due to decreasing production -losses in tax revenues of governments	-soil erosion due to both water and wind -deterioration in farming lands -deterioration in water quality -deterioration in animal quality -deterioration and loss in the natural living space of the animals	-social unrest -increase in migration -increase in poverty -food scarcity

Source: (Öztürk, 2002:63).

As a matter of fact, through an incremental increase in average temperatures resulting from climate change, a chain of events is expected to take place on the planet. In Turkey, the chain is expected to begin with water shortages as has been experienced this summer in some of the major cities of Turkey (MoEF, 2007: 18-19). Water scarcity may challenge the agricultural base of the country by changing its product design. It leads to deforestation and desertification. These may lead to food scarcity and poverty which create pressure for migration. Food scarcity and increase in poverty together with increase in migration create social unrest which can further undermine a country's stability. Water scarcity and migration can also be seen as potential problems with Turkey's neighbors. At the final analysis, these might have heavy social, economic, environmental and political consequences for Turkey.

All of these are highly serious problems that Turkey might face in the coming years. Therefore, the formulation of a comprehensive climate policy, including both mitigation and adaptation measures, is an urgent need for Turkey.

Taking into consideration the scientific knowledge of the present concerning climate change, it is apparent that 'wait and see' policies can not be applicable anymore. On the contrary current findings necessitate formulation of a comprehensive policy seems for Turkey without any delay. One dimension reflects Turkey's international responsibilities which arise from its membership in the international community, specifically; from its place in the global climate change regime which should be negotiated within the sphere of its domestic circumstances. The second dimension should reflect its domestic adaptation and mitigation capabilities and efforts. Both dimensions are interrelated in the sense that they support the implementation of each other. Domestic efforts will help Turkey to keep its word at the global level. The international efforts will financially help Turkey achieve its targets at home.

5.2 International Dimension of Turkey's Climate Change Policy

To be able to understand the international dimension of Turkey's climate change policy, it is necessary to analyze some of the events and Turkey's relations with some of the actors related to climate change. Turkey has been able to join the international effort; the UNFCCC, during COP7, in 2001. Therefore, understanding of the events which have taken place until COP7 is important in the sense that what Turkey was after, what it has achieved as a result and what the expectations of the international community were from Turkey. Turkey has been able to reach its present unique position within the UNFCCC as a result of its efforts it has shown in the first six COP meetings. In this respect, the examination of the first six COPs is beneficial for understanding the international dimension of Turkey's climate change policy and its place in the global climate change regime. On the other hand, examination of the positions of the critical countries[95], similar to Turkey, might also be useful in trying to understand what Turkey could have done at the international level as well as what it can do in the future, especially in the post-2012 period.

Turkey's relationship with the EU, also, has important implications regarding Turkey's climate change policy. The EU is the leading actor in the climate change negotiations. It gives high priority to the issue and, therefore, has taken serious measures to fight against climate change. These measures have already taken their place in the Acquis Communautaire of the EU. Turkey, being a candidate member to the EU, has responsibilities

[95] Critical countries are those which are not happy with their current status within the UNFCCC, or whose status does not fit with their actual capabilities. Therefore, these countries are in a position to change their existing status within the UNFCCC or the Kyoto Protocol.

emanating from the Acquis of the EU. It is necessary for Turkey to harmonize its policies in line with the Acquis of the EU prior to full membership. The detailed measures related to the climate change policy of the EU as well as signing of the Kyoto Protocol are parts of this Acquis. In addition to these, the EU, together with the other Kyoto and UNFCCC countries have already started working on the post-2012 system. Workshops and meetings are being held in this respect where countries put their views on the table in line with their special circumstances. Negotiations continue on a global scale where groupings of countries push for their proposals. All of these international events and relations have important implications concerning Turkey's climate change policy. As Mazlum points out, most of the time, Turkey has been motivated to take part in international environmental politics as a result of external factors. In the climate change case, Turkey's involvement has again been realized as a result of the ongoing international process as well as its relations with the EU (Mazlum, 2005: 6).

5.2.1 Historical Evolution of Turkey's Position in Climate Change Negotiations

Prior to the signing of the UNFCCC, although Turkey has attended the International Negotiating Committee meetings held between 1990-1992, it has been placed in both Annex I and Annex II lists of the UNFCCC. As a result, opposing to the inclusion of its name in both Annexes, Turkey has not signed the UNFCCC in 1992 at Rio. This has led to interesting developments on the part of Turkey in the following years. Coming to 2003, there has been only Iraq, Somalia, the Republic of Brundi and Turkey who were left out of the table. The other countries were already involved in the global climate change regime. As of 2004, Turkey has become a party to the UNFCCC, however, as of September 2007; it has still not ratified the Kyoto Protocol.

5.2.1.1 The Developments in the first 6 COPs

The United Nations Framework Convention on Climate Change was signed in 1992 with the aim of enabling the governments to take action against climate change. In this convention, countries have been classified according to their level of development. OECD membership has been chosen to be the criteria as opposed to total or per capita GHG emissions. As a result, Turkey, being an OECD member, has been placed in the Annex I[96] to the Convention together with the industrialized OECD countries and Economies-in-

Transition. In addition to this, Turkey has also been placed in the Annex II[97] to the UNFCCC again due to its OECD membership (Karakaya & Özçağ, 2003:4-7).

Under the UNFCCC, Turkey was considered to be a developed country and expected to reduce its GHG emissions to 1990 levels as of 2000 as well as to help the developing countries in their GHG reduction efforts. However, in the records and according to the criteria of the United Nations, the World Bank, the Montreal Protocol on Substances that Deplete the Ozone Layer, UNCTAD, GATT and even the OECD, Turkey is considered to be a developing country (Turkish Paper No: 1, 1997: 12-13).

The draft proposal of the UNFCCC was opened for signature in the Rio Conference of the UNDP in 1992 for two years. Although Turkey has been represented by Süleyman Demirel in Rio, it has not made any attempts to sign the UNFCCC for the following two years, since it was placed in both Annexes as a developed country with commitments. During the COP meetings, in the following years, Turkey has been represented by officials from lower levels of the political spectrum. These officials have only lobbied for Turkey's exit from both Annexes, unfortunately, after the UNFCCC entered into force (Şahin, 2007: 9). Certainly, Turkey has agreed with the objectives of the UNFCCC, that the GHG concentrations in the atmosphere should be stabilized. On the other hand, it also defended that it could only "bear the burden of reducing emissions in a way that reflects its own level of development" which has already been emphasized by the UNFCCC under its "common but differentiated responsibilities" (World Bank *et al.,* 1999:55).

By not becoming a party to the UNFCCC, Turkey officially opposed[98] its placement in the Annexes, defending that its position was more like those of non-Annex I countries when compared to their development and emissions patterns (Table 5.2).

Starting from the date of the opening of signature for the UNFCCC, Turkey has continually tried to take part in the Convention under the condition that its name is deleted from both Annexes. Its purpose has not been any exemptions, but rather the amendment of its

[96] Annex I to the UNFCCC consists of the OECD countries and the Economies-in-Transition. They have unbinding commitments of reducing their GHG emissions to 1990 levels as of 2000.
[97] Only the OECD countries are included in Annex 2. They have unbinding financial and technical commitments to support the GHG reduction policies in the developing countries.
[98] The documents related to Turkey's official opposition to its placement in both Annexes can be found in INC/FCCC Secretariat Document No. A/AC.237/18, Part II, paragraph 35, dated 16 October 1992. Turkey's further requests for deletion of its name from both Annexes can be found in many documents of the Secretariat.

place under the Convention as a developing country rather than a developed one.[99] Turkey has supported its requests for the amendment of its deletion from the Annexes with written reports. In the Paper No:1 titled 'Turkey and Greenhouse Gas Emissions', submitted to COP3 in 1997, when the Kyoto Protocol was adopted, Turkey has tried to prove by statistical data that it was a developing country with respect to its social and economic features as well as the developments in its energy sector (Turkish Paper No:1, 1997: 3-4).

Table 5.2 CO_2 Emissions Per Capita in Various Countries

	1990	1995
Annex I average	12.02	11.18
Non-Annex I average	2.42	2.29
USA	19.64	19.88
Republic of Korea	5.40	7.87
Mexico	3.58	3.46
Turkey	**2.53**	**2.79**

Source: World Bank *et al*., 1999: 55.

The adoption of the Kyoto Protocol has created a new situation for the Annex I parties of the UNFCCC, since, under the Kyoto Protocol, they were placed in the Annex B with the binding commitment of achieving a 5% reduction of GHG emissions below 1990 levels within the first commitment period of 2008-2012. However, the developing countries did not have binding emissions reduction commitments. This meant for Turkey that in case Turkey becomes a party to the UNFCCC as an Annex I party and ratifies the Kyoto Protocol, then, it would automatically become an Annex B country under the Kyoto Protocol. Turkey would, then, have to negotiate a quantified emission limitation or reduction commitment and come under legally binding obligations to meet its commitments. However, it was an unacceptable position for Turkey. Therefore, Turkey has not ratified the Kyoto Protocol so far, either (World Bank *et al*., 1999: 57).

[99] Turkey's request submitted to the COP1, in 1995, with number FCCC/CP/1995/Misc.5 can be found at the

On the other hand, becoming a Party to the UNFCCC and the Kyoto Protocol has significant benefits for the developing countries in the non-Annex I of the UNFCCC. First of all, these countries will be able to receive grants and other countries' assistance from the Global Environment Facility (GEF) which is the financial mechanism of UNFCCC[100]. Second, the non-Annex I countries will be able to benefit from the CDM under the Kyoto Protocol for the developing countries.

Assuming that Turkey has accepted its position as an Annex I and an Annex II country under the UNFCCC and ratify the Kyoto Protocol as such, then by becoming an Annex B country under the Kyoto Protocol with quantified emission reduction commitments, it would benefit from the GEF funds as well as JI and emissions trading for the achievement of its target. However, due to its developing country status, it was not possible for Turkey to set such a quantified emissions reduction target. Knowing this, Turkey has kept on making attempts to amend its status under the UNFCCC. Therefore, in COP3, Azerbaijan and Pakistan have made a proposal to delete the name of Turkey from the lists in both Annexes to the Convention.

At COP4, in Buenos Aires in 1998, Turkey has repeated its request to be deleted from the Annexes and presented a National Report on Climate Change, which was prepared jointly by its various ministries[101]. The report was aiming to show the efforts made on the side of Turkey until that time, as well as its plans for the future to reduce its GHG emissions over a business-as-usual scenario based on energy consumption patterns in 1992. Since Turkey was not a party to the UNFCCC, it was not required to prepare this report. However, since it was in an effort to take place in the Convention and was expecting this to happen at any time related to the acceptance of its amendment request, Turkey has found it useful at the time to be prepared and not to fall behind those already member parties (World Bank *et al*., 1999: 55).

In Bonn, in 1999, Turkey's request has been discussed at COP5. However, no consensus was reached by the parties and the decision was deferred to COP6 to be held in

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web: http://unfccc.int/resource/docs/cop1/misc05.pdf.

[100] Although Annex I countries were not actually eligible for the GEF funds, GEF funds can also be extended to those countries who are eligible for borrowing from the World bank (World Bank *et al*., 1999). Therefore, Turkey after becoming an Annex I party to the UNFCCC in 2004, has been able to utilize GEF funds to which it has itself contributed annual payments since 1994.

[101] These ministries were Ministry of Environment, Ministry of Energy and Natural Resources, State Planning Organization, State Institute of Statistics and the Ministries of Forestry, Agriculture, Industry and Transport.

2000 in The Hague. Understanding that it would not be possible to be deleted from both Annexes, Turkey has pursued another alternative. In COP6, it has requested to be deleted only from Annex II and to stay as an Annex I country under the condition that privileges similar to those given to the Economies-in Transition be given to it as well (FCCC/CP/1999/6/Add.1).

5.2.1.2 From COP7 to COP10

As a result of Turkey's new request which had been put forward in COP6, Turkey's name was deleted from Annex II of the UNFCCC in COP7 which was held in Marrakesh in 2001. It was accepted by the Parties to the Convention that Turkey will become a Party to the UNFCCC as an Annex I Party, while at the same time they were invited to "recognize the special circumstances of Turkey, which place Turkey, after becoming a Party, in a situation different from that of other Parties included in Annex I to the Convention" (FCCC/CP/2001/13/Add.4)[102]. Finally, as a result of many requests for amendments almost for a decade, Turkey has taken its place in the UNFCCC as an Annex I Party. However, since the unbinding commitment of fixing emissions at their 1990 levels as of 2000 was not valid any more in 2001, Turkey did not have such commitments and this has helped Turkey to accept becoming an Annex I Party under the UNFCCC with special circumstances.

The decision concerning the approval of Turkey's participation to the UNFCCC has been presented to the Turkish Grand National Assembly. This decision has already been accepted by the related commissions in 1996 (Türkeş, 2003: 27). After COP7's approval of the Turkish proposal in 2001, it was expected that this decision would quickly be accepted by the TGNA, leading to the immediate accession of Turkey to the UNFCCC. Although, Turkey has insisted on becoming a party to the UNFCCC through various proposals over the last couple of years, Turkey's ratification of the UNFCCC has almost taken 3 years. As a result, Turkey has not been able to attend COP8, in New Delhi, in 2002 and COP9, in Milan, in 2003 as a Party but still as an observer. On 24 May, 2004, Turkey has become the 189. party to the UNFCCC. Consequently, Turkey's actual involvement in the UNFCCC process as a party has started with COP10[103], in Buenos Aires, in 2004. Until this time, Turkey has spent its

[102] Decision 26.CP/7 : See Annex 1 for the original decision.
[103] In COP10, Turkey has been represented by Osman Pepe; Minister of Environment and Forestry (MoEF) with the accompany of a group of 10 people. Among these, four have been from the Ministry of Environment and Forestry, three from the Diplomatic Mission of Turkey to Argentina, two from the Ministry of Energy and Natural Resources and only one from the Ministry of Foreign Affairs (see UNFCCC web site, COP10).

time on trying to prove its developing country status and has ended up with being a developed country whose circumstances are different from those other developed countries. There is no other single country in the global climate regime who shares this status with Turkey.

Turkey was not active in the preparation of the draft framework convention between 1988 and 1992, especially, within the Intergovernmental Negotiating Committee, which has prepared the draft framework convention. Consequently, it has faced with a result which it could not accept at the Rio Summit in 1992; that is its placement as an Annex I and Annex II country to the UNFCCC. If it had been active during the negotiation period between 1988 and 1992, then it might have had the chance of being placed as a non-Annex I country to the UNFCCC as it should have been. In the later years, Turkey has lost significant time in trying to change this situation. However, once the Convention was signed, things had become much more difficult to change. The successive COPs were not supportive to the requests of Turkey, because accepting the demands of Turkey, at especially during the 1990s, might have water down the whole Convention giving way to the requests of many others. This would decrease the effectiveness of the whole process, after all, which was just a start.

As a result, Turkey has not been able to achieve what it had deserved actually, but has only been able to come up with a position that has made its involvement in the climate regime possible with special circumstances which have not been negotiated up until the present day. Therefore, what these special circumstances are still vague today, they need to be clarified through negotiations. If Turkey had made an initiative to ratify the Kyoto Protocol until the present, then these would have been negotiated. The Kyoto Protocol has been effective as of February 2005. As a result of this somehow extraordinary position of Turkey within the climate regime, Turkey has not shown interest in signing the Kyoto Protocol so far, fearing to end up with quantified emission reduction requirements. This has kept Turkey away from the flexibility mechanisms of the Kyoto Protocol which decreases to a certain extent, the related costs of low carbon investments. Starting with COP11 in 2005, the world has started to discuss the alternative scenarios for the post-2012 period, when the first commitment period of the Kyoto Protocol ends. Yet Turkey has, only recently, started to discuss whether or not to sign the Kyoto Protocol.

Most scholars have urged Turkey not to ratify the Kyoto Protocol since this would bring Turkey, an Annex I country under the UNFCCC, an obligation to assume quantified emission reduction targets under Annex B to the Kyoto Protocol. However, there is no clear obligation for Turkey since Decision 26/CP.7 puts Turkey in a place different from the other Annex I countries due to its special circumstances. As a matter of fact, it is clear that

Turkey's special circumstance is that it is still developing. Therefore its difference from those of the other Annex I countries is that since Turkey keeps its developing status, its energy consumption has not been stabilized and consequently, it cannot set quantified targets. Although, in Decision 26/CP.7, this has not been mentioned clearly, for sure, the expression is a political one open to negotiations.

Turkey could have ratified the Kyoto Protocol and would not be forced to assume quantified emissions reductions. However, Turkey did not ratify, rather, it postponed the issue. Turkey is the country which needs to take place in the present discussions concerning the post-2012 period the most, since it has not been able to shape its place in the prior discussions before 1992 and had to deal with a position it could not carry for the last decade. It is, therefore, a prerequisite for Turkey to ratify the Kyoto Protocol as soon as possible and declare its support to the international collaboration against climate change. It should take its active place within the global climate regime, if it wants to negotiate its position in the present discussions for the post-2012 period. Presently, Turkey cannot leave its future in climate change regime to be shaped by the other countries as had happened in 1992. Being present in the meetings of the dialogue of the Convention was not enough. Turkey needed to join the meetings of the AWG to be able to change its position from an Annex I country to another position, acting together with those countries that are in a similar developmental stage with Turkey like Mexico, South Korea, and South Africa, which might be called the advanced developing countries. However, for such developments, it should make a start by signing the Kyoto Protocol.

As a matter of fact, Turkey is generally inclined to ratify international agreements long after their adoption. This might be due to its complex domestic policy processes and complicated institutional structures as well as the insufficiency of its institutional capacity to cope with the new global norms (Mazlum, 2005: 6-7). As Türkeş points out, the major difficulty for Turkey at the beginning of 1990s was that Turkey has not been prepared for the intergovernmental process which aimed at the protection of global climate either scientifically or politically (Cemre 2006b: 8). The Turkish ministries or the related institutions did not have units which directly worked on climate change and followed international developments on the issue. In other words, there were not any epistemic communities[104] present in Turkey.

[104] The epistemic communities provide the knowledge and decrease the uncertainty necessary for international cooperation and action. These communities lead the states through a learning process that pushes states to reconsider their respective policies. They are also effective in the evolution of the regimes. In short, epistemic communities have been a driving force for the political process. However, such networks and scientific work

However, if there were active epistemic communities in Turkey at that time, they could have pushed the climate change issue up the political agenda much earlier. Then, both the historical evolution of Turkish climate policy as well as its present global position would be quite different from today. Due to this reason, Turkey has not been able to actively participate or intervene in the intergovernmental discussions prior to the 1992 Rio Summit to shape its place in the draft framework convention.

If Turkey had been able to join the UNFCCC in 1992; it would be able to develop its climate change policies together with the other parties. Due to its non-participation in the UNFCCC process until 2004, Turkey has not been able to utilize any benefits which have been provided by the UN, the EU or the US to the UNFCCC parties to meet their obligations (Cemre, 2006b: 8). Besides, as a result of being a passive member of the regime, Turkey was not able to develop its climate mitigation and adaptation policies in parallel with the other countries and missed the chance of 'learning by doing' prior to the starting of the commitment periods. More importantly, the discussions of climate change both at the public and political level had been deferred to 2007. The global discussions for the post-2012 period have started as of December 2005, during COP11. The countries are continuing negotiations for almost two years. It is obvious that Turkey is late on this issue. Even to be able to take place in the present discussions concerning the future climate regime, being a Kyoto Protocol Party is a prerequisite.

Turkey has faced many domestic environmental problems in the recent years particularly during unplanned industrial activities due to waste related problems. Although it takes great deal of time and money (in terms of investments) to eliminate these domestic problems, Turkey has to also concentrate on global climate change issue and take place in international negotiations.

5.2.1.3 The Developments in COP11

The year 2005 has been an important year for climate change. In July 2005, Asia-Pacific Climate Pact had been initiated. Climate change has been underlined by the G8 meeting which had gathered in July 2005. In addition to these, in the United Nations Summit

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have not been present in Turkey during the same years as they had been active in most of the industrialized countries. Climate change has not been on the agenda of the political parties, political leaders, NGOs and even scientists until recently.

which took place on 14-16 September, 2005, climate change has emerged to be a priority issue (Rec Turkey, 2005a).

COP 11 has been held in Montreal, Canada, in December 2005. The importance of COP11 is that it was held together with the first session of the governing body of the Kyoto Protocol; COP/MOP1 which signaled the full legal implementation of the Protocol. This important event has coincided with the year agreed to in the Kyoto Protocol to start negotiations on industrial country commitments post 2012 (Müller, 2006: 1).

Accordingly, what made the Montreal meeting an historic one was the decision of the Kyoto parties to start formal negotiations on industrial country targets for the post-2012 period. This was a very important decision because it provided the business sector, especially of the industrial world, with a perspective concerning the post-2012 period; in the sense that it has brought regulatory certainty to the aftermath of the first commitment period of the Kyoto Protocol. An important message has been given to the world from Montreal that the Kyoto Protocol was "the only viable existing multilateral effort to combat GHG emissions" (Müller, 2006: 2).

Within COP11/MOP1, three meetings have taken place: The first one has been the 11th Conference of the Parties. The second one has been the 23rd meeting of the Subsidiary Bodies, and the third one has been the 1st Meeting of the Parties.

All the Parties who have ratified UNFCCC had taken part in the first two meetings[105]. As the end of 2005, 189 countries had ratified the UNFCCC. However, only those who have ratified the Kyoto Protocol have been able to join the first Meeting of the Parties. The others; which have not ratified, have been allowed to join the meeting only as an 'observer'. As the end of 2005, 159 countries had ratified the Kyoto Protocol. Turkey, since it had not ratified the Kyoto Protocol, has been able to attend the 1st Meeting of the Parties only as an observer without having the right to say a word (Rec Turkey, 2005b).

[105] Turkey has been represented by an official group in COP11. There had been officials from the Department of Environment and Forestry, Department of Foreign Affairs, Department of Energy and Natural Resources, General Directorate of Electricity, General Directorate of State Meteorological Affairs and officials from the GEF Project Group of the First National Communication. There has been one participant from the academic world. From the non-state organizations; Rec Turkey has attended the meeting within the international Rec delegation and ASAM (Eurasian Strategic Research Center) has been the first and the only Turkish NGO ever to attend a COP meeting from Turkey (Rec Turkey, 2005a). Even this small participation from the NGOs is very important since it shows the emerging attention started to be given to climate change in Turkey.

5.2.1.4 The Developments in COP12

The year 2006 has also been an important year for climate change developments. In July, climate change became one of the major issues of the G-8 meeting held in Russia. In August, former US President Bill Clinton gave a start to the Climate Program[106] to which many big companies have given support (Clinton Climate Initiative, 2007). In October, within the Gleneagles Process[107] which was started by Britain, twenty countries that had the highest GHG emissions gathered in Mexico. In addition to this, the Stern Review[108] has been prepared by Sir Nicholas Stern. In the fall of 2006, the 'Inconvenient Truth', a movie prepared by Al Gore, has been started to be shown in many countries all over the world and increased public awareness to a great extent (Rec Turkey, 2006a).

COP12/MOP2 has been held in Nairobi, Kenya between 6-17 November 2006[109]. During COP12, there were three meetings: 1. 12th Conference of the Parties, 2. 25th SBI and SBSTA, 3. Second Workshop on Long-Term Cooperation. MOP2 included two meetings: 1. 2nd Meeting of the Parties, 2. Meeting of a Workshop (Ad Hoc Working group - AWG – according to Article 3.9 of the Kyoto Protocol). Clearly, Turkey has not been able to attend the MOP2 meetings, but has taken part as an observer (Rec Turkey, 2006a).

In COP12, business and economic issues were more in the front place. Especially, the report presented by Sir Nicholas Stern from the Government of United Kingdom attracted attention to the economic consequences of climate change. The report was a very important document in showing that the impacts of climate change are forecasted to be far more costly to the global economy compared to the present steps needed to be taken to control them (Pew Center on Global Climate Change, 2006).

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[106] On May 16, 2007, Bill Clinton has announced a program which would reduce energy use in buildings worldwide. Four multinational corporations, five global banks and fifteen cities work together with the Clinton Foundation to reduce energy consumption in existing buildings owned by these cities by retrofitting them with more energy efficient products (Clinton Climate Initiative, 2007).

[107] The Gleneagles Plan of Action has been launched during the UK Presidency of the G8 meeting of 2005. This Process aims to complement the slow progress of the UN negotiations concerning action for the post-2012 period. It also aims to raise climate change policy to the highest political level by engaging the five major economies with the G8 economies to reach a global agreement (Fujiwara, 2007:1). More information can be found at http://www.ceps.be/files/CEPSNews_July_August_WEB1.pdf .

[108] The Stern Review is the report prepared by Sir Nicholas Stern; the former Chief Economist of the World Bank. The report emphasized that the world has to act immediately against climate change; otherwise, economic consequences might be devastating. The benefits of early action outweigh the costs. For detailed information see: http://news.bbc.co.uk/1/shared/bsp/hi/pdfs/30_10_06_exec_sum.pdf accessed on 07.08.2007.

[109] In COP12, Turkey has been represented by the Minister of Environment and Forestry; Mr. Osman Pepe as well as other officials from the same department, Department of Foreign Affairs, Department of Energy and Natural Resources, State Planning Organization, General Directorate of State Meteorological Affairs, UNDP, Turkish Cement Manufacturers' Association (TCMA) and representatives from Rec Turkey. TCMA has been the first NGO from the business world who has joined the UNFCCC process (Rec Turkey, 2006a).

In Nairobi, Turkey has already handed in its first GHG emissions inventory to the UNFCCC Secretary. Additionally, it has been able to give information about the latest developments concerning its First National Communication to be published in 2007 (Rec Turkey, 2006a).

The decisions taken at the COP12/MOP2 have provided strong implications that the Protocol will somehow continue in the post-2012 period. Additionally, the Protocol has become stronger, supported with necessary corrections and additions (Rec Turkey, 2006b, 2006c). These implications should be evaluated correctly and timely by Turkey to take the necessary steps in getting involved for the post-2012 period.

5.2.1.5 2007 Bonn and Vienna Meetings

The third meetings of the AWG and the Convention Dialogue were held in Bonn, on 7-18 May, 2007. On the part of Turkey, the Russian proposal for the involvement of the developing countries through voluntary commitments should be followed closely. The fourth meetings of AWG and the Convention Dialogue were held in Vienna, on 27-31 August, 2007. AWG4 has concluded that Annex I countries would be required to reduce emissions by a range of 25-40% below 1990 levels by 2020 to be able to stabilize the concentration of GHG emissions in the atmosphere. These conclusions will be presented to COP13 as a report. Therefore, the Vienna Meetings can be seen as an important step for the constructive negotiations on post-2012 framework to be realized in COP13 (ENB, 2007b).

Turkey, also, joins these meetings of the Convention Dialogue though it can only join the AWG meetings as an observer. Certainly, this time period, in which the framework of the post-2012 period is being negotiated, is very important for Turkey. However, Turkey, so far has discussed whether or not to sign the Kyoto Protocol, rather than actively negotiating its place. However, neither other countries are waiting to shape the future of the climate regime nor the factors leading to climate change are vanishing. Within this framework, the AWG meetings as well as the workshops under the Convention Dialogue call attention to the increasing distance which comes in between Turkey and the rest of the world with respect to climate change cooperation for Turkey.

5.2.2 The Developments Related to the Critical Countries in the UNFCCC

Under the UNFCCC and the Kyoto Protocol, a few countries have come up with some demands to make some amendments in recent years. Until presently, although some of these demands are accepted during the meetings, none of them has been able to enter into force. This is both due to the unwillingness of the parties to make changes in the original Protocol and the rigidity of the Kyoto Protocol itself towards possible amendments. This situation is very important for Turkey, since Turkey's probable demands in case it ratifies the Kyoto Protocol, would also require amendments to the Protocol. Therefore, the reorganization of the decision making under the Kyoto Protocol is one of the important goals of the countries for the post-2012 period.

5.2.2.1 Amendment Procedure of the Kyoto Protocol and Its Implications for Turkey

The process of amending the Kyoto Protocol is a long task. First of all, six months prior to the COP/MOP session, the request of amendment must be circulated to all the other Parties through the UNFCCC Secretariat. The next step is that the COP/MOP should approve the amendment. Then, the amendment must be ratified by at least ¾ of the Kyoto Protocol Parties. This process, even if it continues with a rather smooth procedure, can finalize at best in two years. The first amendment to the Kyoto Protocol has been requested by Belarus[110] for the setting of a quantified emissions reduction target under Annex B to the Protocol. In November 2006, COP12/MOP2 has approved the amendment concerning the request of Belarus. However, for the amendment to be in effect, it should be ratified by the ¾ of the Kyoto Protocol Parties (Joint Implementation Quarterly, 2007). Unfortunately, no country other than Belarus itself has ratified the amendment as of August 2007 (UNFCCC website).

5.2.2.2 The Critical Countries of the Global Climate Regime

Turkey, facing a unique standing in the global climate regime, can be evaluated as a 'critical country' whose future standing within the global climate regime is still unclear. A critical country, within the scope of this study, is the one who is not content with its current standing in the regime or the one whose actual status does not fit its existing status within the

regime. Turkey is not the only critical country; there are some other countries who are seeking to change their existing status. Some of these countries have made some attempts over the last few years in this respect. However, their requests require amendments to the Kyoto Protocol. Until the present day, no amendments have been successful in entering into force. However, they have been useful in the sense that they have helped to underline the present demands and the insufficiencies of the existing Kyoto Protocol decision-making mechanisms to answer these demands. Therefore, in an effort to overcome this inadequacy of the Kyoto Protocol, new discussions have started concerning the post-2012 period. It is very important for Turkey to follow these developments closely to be able to come up with an appropriate Turkish climate change policy for the post-2012 period.

5.2.2.2.1 The developments concerning the position of Belarus

Belarus is a country, like Turkey[111], who is an Annex I Party under the UNFCCC, but not a Party to the Annex B of the Kyoto Protocol since it had not ratified it[112]. However, after ratifying the Protocol, Belarus, in August 2005, applied for becoming a Party to the Protocol with a commitment of 5% below its emissions in 1990. It has been accepted in COP12 that Belarus will take its place in the Annex B to the Kyoto Protocol with a reduction target of 8% as of 1990 as the base year. This has been an important development since it has been the first amendment made to the Annex B of the Kyoto Protocol. This development has also important implications for Turkey as well. The proposal for the involvement of Belarus and Kazakhstan in the Annex B of the Protocol has been developed and initiated by Russia. The willingness behind the request of Belarus to be taken to the Annex B of the Kyoto Protocol lies in the fact that it has already achieved a 40% reduction in its GHG emissions below its 1990 emissions. In addition to this, Belarus by becoming a Party under Annex B of the Protocol hopes to gain easier access to foreign investment which is presently very important for the Belarus economy (Korppoo and Tashchilova, 2007:8). However, the other parties expect that Belarus, by selling its excess carbon in the international carbon market, might decrease the price of carbon, which they do not wish to happen. Therefore, this decision might not come into effect before 2012. As a result, Belarus, although have joined the Kyoto

[110] Belarus, like Turkey, was an Annex I country under the UNFCCC, however, it was not a party to the Kyoto Protocol. After its ratification of the Kyoto Protocol, it has requested to be involved in the Annex B to the Protocol with a quantified emissions reduction target.

[111] Belarus is not in the Annex B of the Kyoto Protocol because, like Turkey, it was not a party to the UNFCCC during 1997 when the Kyoto Protocol was signed.

Protocol by taking its place in the Annex B, it might not be able to utilize the flexibility mechanisms of the Protocol within the first commitment period (Rec Turkey, 2006a & 2006c).

Although Belarus has demanded a target of 5%, it has accepted 8% to be able to win the approval of the COP/MOP. It has even given safeguards to limit the potential of hot air; like holding 7% of its allowances in reserve, not for trade, as well as committing itself for using the proceeds from emissions trading for further emission reduction measures (Pew Center on Global Climate Change, 2006). In spite of all these efforts, the Kyoto Parties have not ratified the Belarus amendment.

The Belarus example shows Turkey, one more time, how it is hard to change the existing structure of a global agreement after the deal has been made. In the case of Belarus, it has accepted all the terms that the COP/MOP has demanded for approving its amendment, however, no single one party have ratified the Belarus amendment, apart from itself. Under these circumstances, Belarus, like Turkey, has to concentrate on the post-2012 negotiations where it can be possible to reorganize the new terms.

5.2.2.2.2 The Developments concerning the position of Croatia and Kazakhstan

Croatia[113] had signed the Kyoto Protocol, back in 1999, however, had not ratified it due to the level of GHG emissions in 1990. As a result of Croatia's negotiations concerning its special circumstances (that it was a transition country which was at war until recently) concerning its level of emissions in 1990 as the base year, a decision has been adopted in COP12 which allows Croatia to add 3.5 Mt. CO_2 equivalents to its 1990 level of emissions. As a result, the Croatian Parliament has ratified the Kyoto Protocol in April 2007 with a 5% reduction commitment over its new base year level. For Croatia, the ratification of the Kyoto Protocol was at the same time a precondition to join the EU (Austrian Energy Agency, 2007). As a result of this development, the position of Croatia cannot be considered critical anymore.

On the other hand, Kazakhstan, a non-Annex I country, wants to take place in the Annex B to the Kyoto Protocol with a base year of 1992. The EU has emphasized that Kazakhstan should first ratify the Kyoto Protocol and then negotiate this request. In COP12, it has been accepted that for its responsibilities resulting from the Convention, base year has

[112] Belarus has been treated as an economy in transition, and has not been assigned a target in the Protocol.
[113] Croatia is an Annex I country under the UNFCCC and had been listed in the Annex B of the Kyoto Protocol.

been set to be 1992. However, concerning its negotiations within the Protocol, it has been stated that it first needs to ratify the Protocol (FCCP/CP/2006/L.2).

5.2.2.2.3 The Positions of the Other Critical Countries

Within this picture, apart from Belarus, Croatia, Kazakhstan and Turkey, the positions of some of the non-Annex I countries, such as; Mexico, South Korea, Argentina, Brazil, India, China, Cyprus and Malta also attract attention. Cyprus and Malta are non-Annex I countries, however, they have taken place in the EU-ETS after becoming members to the EU. This contradiction; that Cyprus and Malta do not have commitment targets under the Kyoto Protocol, however, are taking place within the EU-ETS has not been overcome in the first commitment period. Therefore, solution to this inconsistency has been left to the post-2012 arrangements. On the other hand, Mexico, South Korea, Argentina, Brazil, India and China are non-Annex I countries, however, it is more suitable to call these countries 'advanced developing countries' due to their more developed status vis a vis the other developing countries. These countries have somehow been squeezed between being developed and developing. Due to their advanced development phase, a rapid increase in their carbon emissions is expected in the near future. Therefore, limiting their emissions somehow in the post-2012 period has become an important topic in the negotiations. Turkey is also in a similar developmental phase with these countries and its emissions are expected to rise rapidly in line with its continuing economic growth. However, Turkey is not a non-Annex I country like them, and has not ratified the Kyoto Protocol. Therefore, the negotiation of getting similar treatment with these countries in the global climate regime should be a priority area for Turkey for the post-2012 period.

To be able to understand Turkey's position in the global climate regime, it is useful to look at the whole picture. Table 5.3 shows the existing positions of the critical countries within the global climate regime. As can be seen, Turkey does not share its unique position in the global climate regime with any other countries. Turkey is the only Annex I country to the UNFCCC who is not an Annex B party to the Kyoto Protocol, since during the signing of the Kyoto Protocol; Turkey was not a party to the UNFCCC. There are some other countries who have still not signed the Kyoto Protocol, however, since they were Annex I countries during the signing of the Kyoto Protocol in 1997, they have been listed in the Annex B to the Kyoto Protocol, like the United States, Australia and Croatia.

Presently, it has become clear that the industrialized countries are not in favor of any change either in the original terms of the Convention or the Protocol. Accepting the demands of one single country might have given way to many other demands from other countries with regard to both the base years and targets. For them, this would damage the whole agreement and downgrade its effectiveness whereas the success of the first commitment period is a prerequisite for the continuation of the process in the post-2012 period under the UN umbrella. Even for those who wanted to become a party to Annex B of the Protocol by taking on quantified commitments, the Kyoto system is very rigid. To illustrate; although the amendment demand of Belarus has been accepted during the COP meetings, almost like the part of a silent agreement among the parties, amendment has not been ratified in the national parliaments of any of the parties[114]. It is evident that the parties did not want to water down and mix the agreement from the beginning which, in fact, was the only international agreement as well as the forum to take collective action towards climate change. For those, who are wishing to demand different terms, this might be only possible for the post-2012 period by negotiation before the consecutive deal is finalized for that period.

Table 5.3: The existing position of the critical countries within the global climate regime

UNFCCC Listing	Relevant KP Articles	KP Listing	Critical KP Countries	Critical Non-KP Countries
Annex-II	Art.3.9	Annex-B		USA Australia
Annex-I		Non-Annex-B	Belarus (until 10/CMP2 enters into force)	**TURKEY**
Non Annex-I	Art.9	Non Annex-B	Cyprus (member of EU as of 2004) Malta (member of EU as of 2004) S.Korea (member of OECD since 1996) Mexico (member of OECD since 1994) Argentina (asked for voluntary commitments at COP4)	Kazakhstan (plans to be considered as Annex-I for the purposes of the KP)

Source:http://www.iklimlerdegisiyor.info/english/modules.php?name=turkeykyoto Accessed: 10.08.2007.

[114] Only Belarus itself has ratified its amendment.

5.2.3 Climate Change in Turkey – EU Relations

> Clearly, Turkey and Turkey alone sets the rhythm of reforms. It can be a quick samba, it can be a slow waltz – but the band and the music must not stop, otherwise the process will lose momentum and credibility. Whatever the obstacles we encounter along the road, we must not lose sight of our common objective (Rehn, 2007).

Being a member of the EU has been the official objective of Turkey for more than half a century. In parallel with the reforms achieved by Atatürk and his followers in the first half of the century, the second half has almost been devoted to the efforts to westernize the country with an aim to catch up with the European standards. Along this road, aim of becoming a member to the EU has, most of the time, enforced certain decisions and reforms, apart from those which have been perceived to be related to national security issues. Many economic and political reforms have been achieved as a result of the EU conditionality. Today, Turkey is among the advanced developing countries in the world with a per capita income of $5.477 in 2006 which has increased from $3.750 in 2004 to $5.008 in 2005. The economic growth rates which have been achieved in Turkey for the last five years, including 2006, have been a record in the country's history, and consequently have also strengthened country's global standing giving way to increases in foreign investments (ATO, 2007).

The former EU Commissioner for Enlargement; Günther Verheugen[115], in a speech on 19 January, 2007, emphasized that there were approximately 7.500 European companies who invested in the Turkish market. Both the successful continuation of these firms as well as the employment of thousands of Europeans depends on the healthy economic growth in Turkey. Under these circumstances, the EU would not be willing to see a narrowing Turkish economy and therefore, logically, support those actions of Turkey in a way to further develop its economy (TUSIAD, 2007).

The accession negotiations between Turkey and the EU have been launched on October 3, 2005 with the adoption of the Negotiation Framework by the Council of the EU. Prior to the opening of the accession negotiations, compliance with Copenhagen criteria has been accepted to be an appropriate measure concerning the decision to open negotiations. When the negotiations were opened, a new stage was started between the EU and Turkey. In this new stage, adaptation of Turkey to the EU Acquis by harmonizing its rules and procedures with those of the EU has gained importance[116].

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[115] Günther Verheugan is the present Deputy President of the EU Commission and Commissioner for Industry and Business.

[116] See further ABGS webpage www.abgs.gov.tr/index.php?p=37&ı=1.

On the way towards accession to the EU, environmental issues attract attention. The EU treats climate change as a priority area and supports the fight against climate change almost in every policy area. The situation is not the same in Turkey. Turkey has not been able to give the necessary attention to the climate change issue over the last couple of years.

The situation that Turkey faces presently has its roots in various factors which had affected Turkey's possible responses towards the issue. Among all, financial difficulty is the most important one that Turkey has gone and still goes through so far, particularly over the last couple of years. The economic and financial crisis that the country has faced over and over again has deprived it from any initiative in new policy areas which required extra investments.

Although Turkey continues working on adapting to the Acquis of the EU, the implementation process turns out to be problematic again due to financial incapacity in many areas. With the low priority given to environmental issues and the high costs related to the investments in parallel with environmental responsibilities, the available funds have been utilized in 'higher' priority areas; such as energy and industry. Until the end of 2012, it does not seem possible to finance these investments through the Kyoto mechanisms. The time left is not enough for the long process of amending the Kyoto Protocol which is needed for the involvement of Turkey in the first commitment period[117]. Even if this could be achieved, the procedures of utilizing the Kyoto mechanisms would take time. Therefore, the real benefits would expect to be left for the post-2012 period.

On the other hand, it is highly probable that Turkey might find some investment opportunities and funding from the EU under the circumstances that Turkey demonstrates its willingness to become an active part of the climate change regime. Before its probable accession to the EU, Turkey, already, is required to ratify the Kyoto Protocol and take responsibilities concerning the climate change issue, being part of the Acquis Communautaire. Besides, Turkey should take its responsibility towards the present and future generations by taking its responsibilities within the international climate regime. However, such responsibility will not be an easy one; on the contrary, it is a highly important as well as difficult responsibility. In other words, Turkey should not wait to be compelled to join the

[117] Supposing that Turkey had already ratified the Kyoto Protocol by negotiating a reasonable target, then it might have been benefiting from the Kyoto mechanisms and funds to be able to comply with its commitment.

international efforts through threats or sanctions. Certainly, that kind of treatment would damage Turkey's external image, deprive it from negotiating power and lead to deterioration in other policy areas, especially its foreign policy as well as its relations with the EU. Instead, it would be to the benefit of Turkey to take the initiative itself and start the negotiations to become a part of the climate regime which it had observed over the last couple of years. This requires the preparation of a detailed strategy for Turkey to lead the negotiations. At this juncture, it will not be hard for Turkey to get the support of the EU. The financial difficulties of such an action plan can be supported then by firstly the EU, through the flexibility mechanisms of the Kyoto Protocol, World Bank, voluntary carbon markets, and local administrations.

If Turkey fails to take this initiative to become an active part of the climate regime with its own will, which is at the same time a part of the Acquis Communautaire of the EU that Turkey is required to adapt before final accession anyhow, it might lose its international credibility as a reliable and respectable country. Just like the regime theory emphasizes; it will be perceived as a free-rider, who needs extra threats and obligations to comply with the international effort. On the other hand, since Turkey will not be able to become a part of the post-2012 arrangements if it fails to take its part in the negotiations by demonstrating its will to take on its responsibilities in one way or another, it will not have the power or opportunity to shape its own future. Besides, Turkey will not be able to benefit from the mechanisms of the climate change regime both technologically and financially. At the end, any steps taken by Turkey will be to the benefit of the Turkish citizens together with the whole world population as well as the generations to come. Certainly, any steps will first require the formulation of an integrated examination of what Turkey can afford to do and what it cannot. To put it briefly, this means the determination of the special circumstances of Turkey onto which a realistic climate change policy can be built. Cost of action on climate change is high; however, cost of inaction would be much higher in the coming years.

Rösch, from the Secretariat General for European Affairs in Ankara, names the agricultural and the environmental chapters of the Acquis to be the most difficult ones for Turkey during its negotiations for membership to the EU (Rösch, 2006). She even describes the completion of adaptation to the environmental Acquis of the EU to take place within a 10 years period of time. Under these circumstances, it is very important for Turkey to approach this issue in a much more urgent and detailed manner.

At this juncture the local administrations and the NGOs take on important responsibilities both to push the issue forward and to help the implementation of the decisions taken. In this respect, the efforts to build capacity in these entities should be one of the objectives.

5.2.3.1 The EU Enlargement Process and Climate Change

In January 2006, an International Conference was held in Warsaw called "The Future EU Climate Change Policy: Challenges and Opportunities for the New Member States (NMS), Acceding (AC) and Candidate Countries (CC)" (Ecologic, 2006a). There are three important outcomes of this conference for the EU and the candidate as well as acceding countries. First, it was underlined during this conference that GHG emission reductions offer opportunities to enhance economic development in a world of increasing energy prices, as well as increasing energy supply and energy security challenges. The benefits of decreased fossil-fuel dependency and greater energy efficiency include: fuel cost savings, decreased exposure to volatile fossil fuel prices, health related benefits, new employment opportunities. Secondly, in this conference, the importance of integration of climate change policies into sectoral and regional policies was also highlighted. Thirdly, it was agreed during the conference that the GHG emissions of the new Member States, Acceding Countries and Candidate Countries were likely to increase in the future in parallel with continuing economic development. However, it has been underlined that it was high time for the start of a debate in these countries to develop and evaluate options for a long term strategy. This requires economic studies on mitigation potentials and their associated costs and benefits. To be able to develop and implement a long-term strategy requires building capacity across the country as well as the government level. Certainly, strengthening capacity means employing more resources as well as making better use of existing resources and knowledge. However, in these countries other policy topics have higher political priority (Ecologic, 2006a).

Nevertheless, funding is a major problem in these countries, particularly for implementation. The EU structural funds could certainly be utilized, but they require national co-financing as well. Besides, the EU funding, itself, contributes to a large increase in GHG emissions through some investments, such as motorways. For example, emissions in Greece, Portugal, Ireland and Spain have shown large increases after these countries started receiving EU funding. Therefore, it is a necessity for the EU to change its funding priorities. On the

other hand, raising awareness should be taken very seriously. In this framework, the economic benefits of climate change policies both for companies and individuals (energy bills, pollution) should be emphasized. Improving energy efficiency both at the industrial as well as the individual level should be a priority for climate change mitigation strategies. Moreover, there should be support for R&D activities, especially in the field of energy efficiency and adaptation. Public transportation is also another important policy area which should be further developed. Last but not least, potentials for sound mitigation policies should be manipulated. Necessary legislation to make renewable energy investments should be developed. However, long-term certainty is needed for business investments. Therefore, action for the future requires a stable framework. Under these circumstances, for long-term cooperative action, Kyoto is only a first step (Ecologic, 2006a).

As a result of the 2004 enlargement, 10 countries, including Cyprus and Malta have acceded to the EU[118]. Together with Cyprus, Malta is in an extraordinary position. These two countries are Non-Annex I countries under the Kyoto Protocol, but also EU countries subject to EU-ETS allocations. As Non-Annex I countries, they can utilize CDM. Cyprus has already utilized two CDM projects in the wind energy sector. Malta is also preparing to utilize CDMs (Balint, 2007:1-5). According to the Kyoto Protocol, EU is not allowed to expand the EU bubble for the first commitment period until 2012. Therefore the new members of the 2004 and 2007 enlargements are expected to take their place in the EU bubble after 2012. However, all of them being Kyoto Protocol parties, they have their own commitments (except Cyprus and Malta). As a result, they have begun to exercise JI projects which will help them in the post-2012 commitments (Wagner & Michaelowa, 2005:79).

Since climate change has become a priority area for the EU for the last couple of years, EU's expectations from the Acceding and Candidate countries are increasing. Mainly, the EU expects from these countries to share the same values with the EU concerning the climate change policies. Therefore, the issue at stake for these countries is not whether to be involved in the international effort against climate change or not, but rather to take the initiative of becoming a part of this effort as soon as possible on the way of becoming an EU member state.

[118] For further information, see http://ec.europa.eu/enlargement/enlargement_process/past_enlargements/index_en.htm

Based on the complexity of the international climate change policies as well as the diversity of national circumstances, the NMS, the AC and the CC have different capacities to participate in the negotiations for the post-2012 framework. Even though the probable post-2012 regime may have important consequences for them, they may lack human resources as well as technical and administrative capacity to get fully involved in the process. Apart from everything, the EU expects that all of these countries must strengthen their capacities in an effort to be involved in the process concerning the post-2012 period (Ecologic, 2006b: 2-3).

Among the four AC and CC countries, the highest increase in GHG emissions is expected in Turkey which amounts to a six-fold increase in CO_2 emissions over the period 1990-2025 (Ecologic, 2006b: 4).

Table 5.4: Emission reduction Commitments of NMS, AC, and CC under the Kyoto Protocol

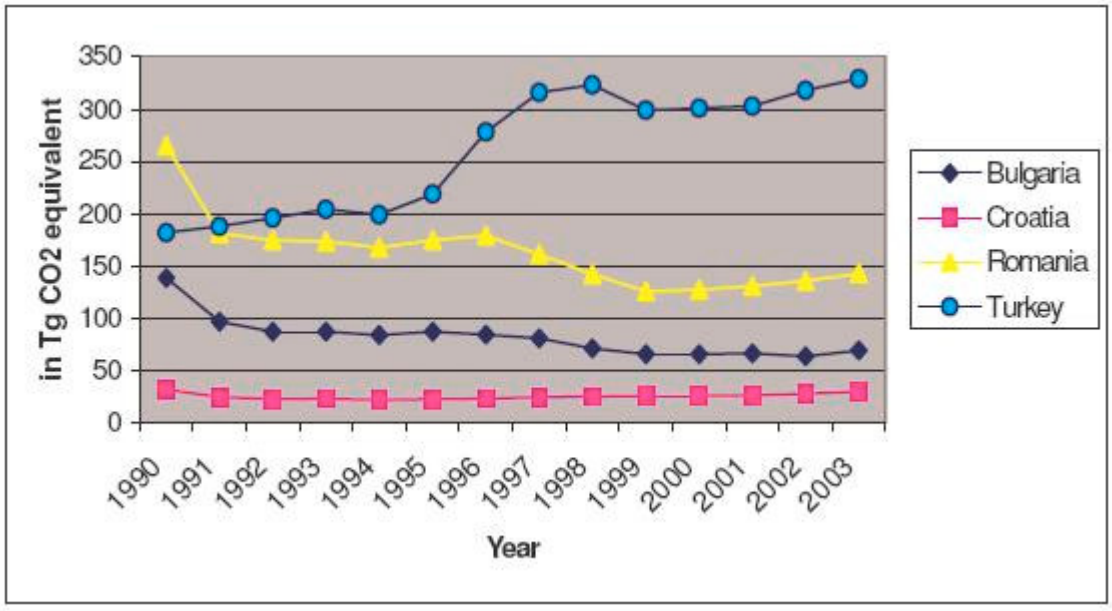
Country	Base year emissions (million tons	KP target (%)	KP target (million tons)	2003 emissions (million tons)	Change base year – 2003 (%)
Bulgaria	141.8	-8%	130.5	62.2	-56.0%
Croatia	31.6	-5%	30.0	28.0	-11.4%
Cyprus	6.0	None	None	9.2	52.8%
Czech Rep.	192.1	-8%	176.7	145.4	-24.3%
Estonia	43.5	-8%	40.0	21.4	-50.8%
Hungry	122.2	-6%	114.9	83.2	-31.9%
Latvia	25.4	-8%	23.4	10.5	-58.5%
Lithuania	50.9	-8%	46.8	17.2	-66.2%
Malta	2.2	None	None	2.9	29.1%
Poland	565.3	-6%	531.4	384.0	-32.1%
Romania	261.0	-8%	240.1	139.0	-46.8%
Slovakia	72.0	-8%	66.2	51.7	-28.2%
Slovenia	20.2	-8%	18.6	19.8	-1.9%
Turkey		None	None		

Source: Ecologic, 2006b: 10-11.

The expectation of the EU from the candidate countries in the short term is the expansion and the strengthening of resources allocated to energy efficiency improvements in households and industries as well as the removal of institutional barriers for such improvements (Ecologic, 2006b: 5). All the NMS, AC and CC are parties to the Kyoto Protocol apart from Turkey. Among these Kyoto Parties, only Cyprus and Malta are Non-Annex B countries. Table 5.4 shows the emission reduction commitments of the NMS, AC and CC under the Kyoto Protocol. Unfortunately, it has not been possible to observe the position of Turkey among these countries (Ecologic, 2006b: 10).

Turkey is different from the other AC and CC in economic terms as well. Bulgaria and Romania are transition economies and Croatia has suffered from civil war during the break down of Yugoslavia in the early 1990s. On the other hand, Turkey has a different economic background. It is the largest economy among the four countries. Its emissions have also risen faster than the other countries (Ecologic, 2006b: 17). Table 5.5 shows the emissions of GHGs in the AC and CC.

Table 5.5 Emissions of GHGs in the Accession and Candidate Countries (Gg CO_2-equivalent)



Source: Ecologic, 2006b: 17.

Recent developments also show that non-Kyoto countries will have to face some non-tariff barriers in the near future. For instance, on 30 October, 2006, an industry-led advisory

group of EU Government officials[119] have proposed the imposing of a green tax on the imports from non-Kyoto countries (Cozijnsen, 2006). On November 13, 2006, the French Prime Minister Dominique de Villepin has proposed to impose an EU carbon tax on the imports from the Non-Kyoto countries (EU Environment News, 2006). The European Parliament has initiated action towards those non-Kyoto countries by passing a resolution on calling the Commission to establish special tariffs to be utilized for those goods coming from non-Kyoto countries. Presently, the Commission has not approved such a decision; however, it might approve taking such measures in the future[120]. The Commission has to reflect the views of the industry and governments (Brewer, 2007:9).

The draft Screening Report of the European Commission for Turkey on environment emphasizes the risk that Turkey might face through a 'Kyoto criteria' for the opening of negotiations on this chapter. Although EU's 20% reduction as of 2020 officially applies for the present 27 member countries, it also raises the parameters for the candidate countries like Turkey. In the report, the Commission has expressed that obligations arising from Kyoto are an integral part of the Acquis Communautaire on climate change. The Commission has urged Turkey to ratify the Kyoto Protocol as well as to start preparations for a post-2012 target. The EU experts emphasize that if Turkey does not take the necessary steps today, possible economic and political costs will be too high during the latter phases of negotiations (Çamlıbel, 2007). There is also a probability that the European Commission might use the ratification of the Kyoto Protocol as a benchmark to open negotiations on the environment chapter.

5.2.3.2 Expectations of the EU from Turkey

Particularly, in the last couple of years, climate change has emerged as one of the priority areas not only for the environmental policy but also energy, transport, agriculture and foreign policies of the EU. Therefore, within the entire Acquis Communautaire, but especially in the environmental legislation, there are various acts and procedures related to the

[119] This is the High Level Group on Competitiveness, Energy and Environment which has been established by the European Commission in April 2006.

[120] For most of the issues, the procedure has been this way; the Parliament reflecting the inconvenience of the business groups as well as NGOs and governments calls the Commission to consider certain measures. Within a certain time period, the Commission answers affirmatively most of the time. Therefore, it should not be a surprise to hear about the measures to be taken towards non-Kyoto countries by the EU in the future.

climate change. Prior to full membership, the EU expects the candidate countries to accept and implement all the legal arrangements existing in the Acquis Communautaire of the EU. In addition to this, the candidate countries are obliged to ratify all the international agreements to which the EU is a party (Türkeş & Kılıç, 2003: 27-29).

Barbara Helfferich argues that (the spokeswoman for the environment), it is possible to see how far a candidate country has been able to meet the accession criteria or the Acquis Communautaire of the EU through its level of success in meeting its environmental responsibilities. This is so because most of the other policy areas are also somehow related to environment in the sense that prior to each decision or action to be taken, the probable effects on the environment should be assessed (Helfferich, 2006). According to Stavros Dimas (The Environment Commissioner of the EU), climate change is the first priority for the EU among the environmental issues. Since the EU has placed climate change at the center of its environmental agenda, it will have a critical importance in the coming years. For the adoption of low-carbon technologies, financial opportunities should be available for the firms and emissions trading is the key tool in that respect. Emissions trading makes the utilization of these new technologies possible by making the required investments economically possible and feasible for the companies (Dimas, 2006a).

In the EU, an integrated approach is being implemented with the support of all these sectors. Therefore, the implementation of climate change mitigation measures in other sectors is also an important expectation of the EU from the candidate countries. The candidate countries are expected to implement this integrative approach. Under the present goals of the EU (achievement of a 20% decrease in GHG emissions as of 2020), EU will be in need of buying carbon credits from other countries as a complement to its domestic efforts. It is logical that it will prefer to buy these credits from its candidate countries in a way to help them achieve the low carbon economy as quickly as possible so that their harmonization with the EU will be easier and smoother. Therefore, especially the Kyoto Protocol (its flexibility mechanisms) can be seen as a tool for strengthening and deepening the relationship between the candidate countries and the EU.

Within this perspective, ratification of the Kyoto Protocol is inevitable for Turkey and Turkey should move faster on harmonizing its policies with the EU. Consequently, it is an obligation for Turkey to integrate climate change mitigation measures in all the related

sectors. Only then will it be possible for Turkey to benefit from the low-carbon investments of the EU as a candidate country.

When the energy needs of Turkey are examined, it can be seen that Turkey is highly dependent on oil and natural gas imports. According to the present economic trends, this dependence is forecasted to increase further. However, Turkey has an important potential in renewable energies from biomass, wind, hydro as well as solar. Investments in these types of energy production both help to protect the climate as well as to increase that country's energy security (Karakaya, 2007:2). Stavros Dimas, the EU Commissioner for Environment, also emphasized that the Turkish economy was 25% more energy intense with respect to the EU average, although the per capita CO_2 emissions in Turkey is almost the half of that in the EU. If the energy intensity of the Turkish economy can be decreased as a result of climate friendly investments, then both the global climate and the energy efficiency of Turkey would improve. Both of these results would be beneficial for the Turkish citizens since energy could be spent at a lower cost in a healthier world (Dimas, 2006b: 8-9). Therefore, the integration of climate change policies to the other sectors is both a prerequisite for sustainable development as well as a tool for enhancing economic development and competitiveness which would be to the long term benefit of the citizens of a country.

The EU tries to achieve its international target through a special bubble. The candidate countries will also be assigned a special target within the EU bubble when they become full members. The EU treats its members in a democratic way and assigns them different targets according to their special circumstances. After becoming a member, Turkey will also be taking its place within the EU bubble according to its special circumstances.

On 8 November, 2006, the European Commission published the Progress Report for Turkey in which the attempts made by Turkey to harmonize its policies with the Acquis of the EU have been evaluated. This evaluation was realized for the 35 chapters of the EU. In the Acquis, environmental expectations and regulations were described in Chapter 27. Unfortunately, Turkey has not been able to achieve progress in this chapter. The Commission has openly emphasized this failure in its Progress Report:

> No substantial progress can be reported in the field of horizontal legislation. The overall Level of alignment in this area is limited. Turkey has not ratified the Kyoto Protocol, nor has it transposed the Emissions Trading Directive and related decisions. Though some elements are present in the current Turkish legislation, no progress can be reported on the transposition and implementation of the environment liability and reporting directives. No progress has been

> made as regards further transposition of the directive related to public access to environment information. Some elements of the directive on public participation have been transposed through a new Law on Environment adopted in May 2006. Turkish legislation on the Environment Impact Assessment continues to exclude trans-boundary consultation requirements (Commission of the European Communities, 2006b: 66).

In the National Program (2003) related to Turkey's undertaking of the Acquis of the EU, there were almost no mention of climate change. Only in the part where the Agreements to which the EU has been a party to have been listed, the UNFCCC Kyoto Protocol was mentioned with the explanation that the process of being a party to the Convention was continuing and that the Protocol would be evaluated in parallel with the special circumstances of the country (Ulusal Program, 2003: 589-647).

In the latest Accession Partnership Document prepared for Turkey in 2006, the need for the transposition and implementation related to the framework legislation concerning the environment chapter as well as international environmental conventions were underlined as a short-term priority (Accession Partnership Document, 2006: 34).

On April 17, 2007, a 400 page long road map for Turkey's accession preparations, covering the period between 2007-2013, have been adopted by the Turkish Government. This document was the initiative of Turkey, not an obligation under the accession negotiations. With this document, Turkey aims to speed up the reforms needed for EU accession. It is called Turkey's Program for Alignment with the Acquis of the EU. Within this program, there are three preparatory measures which are directly related to climate change and planned to be issued as secondary legislation between the years 2010-2013. The first one foresees the transposition of rules and regulations related to emissions trading with a note that appropriate arrangements will be made according to whether Turkey becomes a party to the Kyoto Protocol[121] or not (Turkey's Program for Alignment with the Acquis (2007-2013), 2007: 350).

The second regulation planned to be issued in the same period (2010-2013) is related to the transposition of the rules and procedures concerning the monitoring of GHGs. This regulation, again, will be arranged according to Turkey's ratification status of the Kyoto Protocol [122] (Turkey's Program for Alignment with the Acquis (2007-2013), 2007: 351).

The last regulation planned to be issued in this period, directly related to climate change, concerns the determination of national emission ceilings in parallel with the efforts to harmonize the Turkish laws and regulations with the EU Acquis[123] (Turkey's Program for

[121] Ref. 27.1013.2.06), as per Emissions Trading Directive, No:2003/87/EC of the EU.
[122] Ref. 27.1013.2.07, as per Regulation of Monitoring GHGs under the Kyoto Protocol, No. 280/2004/EC of the EU.
[123] Ref. 27.1013.2.8, as per National Emissions Ceiling Directive, No. 2001/81/EC of the EU.

Alignment with the Acquis (2007-2013), 2007: 351). However, there is neither a decision concerning the ratification of Kyoto Protocol in the report nor a planning regarding legislation for the smooth operation of voluntary carbon markets.

As can be seen, as a result of this examination of related EU documents in which the EU has expressed its expectations from Turkey are in a much generalized approach concerning climate change. Thus, it is clear that its major and foremost demand is the ratification of the Kyoto Protocol which the EU considers as a first step on this issue. As being the cornerstone of EU climate policy, the Kyoto Protocol is the most important and indispensable part of the Environment Chapter of the Acquis. Without its ratification by Turkey, expectations about the other measures of the environment legislation will lose their base. The definition of how cooperation would take place and what expectations would the EU have in this field from Turkey could be developed only when Turkey takes its place in the same Protocol as the EU.

Certainly, Turkey has started to take related measures and implement those policies to protect the environment to a certain extent starting from the 1990s. However, the involvement of Turkey in the global climate regime has not been realized fully until the present.

5.2.4 Possible Future Developments and Their Implications on Turkey

Turkey is a member of the global community. It shares membership relationships with lots of countries on various regional and international agreements and protocols. Turkey does not exist in a vacuum. Therefore, it is apparent that its decisions and actions will have repercussions. Therefore, by not ratifying the Kyoto Protocol in the near future, Turkey might face various responses from the other parties.

5.2.4.1 EU ETS and Turkey

It seems quite certain that the major tool of the post-Kyoto system will also be emissions trading even if another Protocol other than the Kyoto Protocol will govern the new period.

> ...the potential cost savings and emission reductions that the Emission Trading System may bring to a nation is of great importance while designing the strategical priorities of the economic development (Zaim, 2005).

According to Kumbaroğlu, emissions trading is the most promising way of supporting climate-friendly technologies in Turkey (Kumbaroğlu, 2007: 3). However, since Turkey is not a Kyoto Protocol party and it does not have a quantified emissions reduction target, it is not eligible for emissions trading under the Kyoto Protocol. The EU ETS, on the other hand, has already started operation as of January 2005. Under the EU ETS, the EU countries with their commitments specified in the EU Bubble can trade emissions to reach their targets. Recently, studies have been started both to further develop EU ETS in the subsequent periods with respect to its sectoral coverage as well as to be able to link EU ETS with the non-EU third countries. The officials from the Environment DG attract attention to the possibility of including Turkey in the EU ETS as a result of this on-going review[124]. However, for this linkage to be possible, Turkey should first ratify the Kyoto Protocol and, then, set a target in parallel with its special circumstances. Certainly, being able to trade its emissions would boost climate friendly investments in Turkey as well as helping the further development of its economy, competitiveness and energy security.

Being involved in the EU ETS can be perceived as a very important development for Turkey to happen before full membership. Such an initiative would have a substantial support in the financing of low carbon investments in Turkey. Turkey would get the chance of learning by doing prior to full membership. At this juncture, again, the immediate ratification of the Kyoto Protocol and the negotiation of a target which Turkey can afford gains importance for Turkey to be eligible to be involved in the EU ETS as a non-EU third country in the near future.

The fact that Turkey is expected to increase its emissions three folds from 1990 to 2020 will create a big problem in the accession negotiations with the EU especially when EU keeps supporting Kyoto strongly (MOEF, 2007:7). In line with this and within the perspective of Turkey's accession to the EU, taking the necessary steps related to climate change, should be evaluated as tools to modernize the industrial setting of the country, attracting foreign investment in this respect, securing the future energy needs of the country, improving the country's image in the international arena as well as transforming it as a European partner for the EU. All these would have the effect of improving its relations with the EU in a way supporting and strengthening Turkey on the way towards accession. Even in

[124] Personal interview with an official from the Environment DG.

the scenario that Turkey does not become a member of the EU, then it will become a stronger and more respectable global country.

Under these circumstances, Turkey should formulate its climate strategies in parallel with the EU, which it is already required to do as part of the Acquis Communautaire. Foreseeing that it will be taking its place in the probable EU bubble in the years to come, its climate strategy should be prepared together with the EU as to what Turkey can offer to do and what the EU can offer to do in a way to help Turkey take its place within the global climate regime as well as within the specific EU climate regime.

Since climate decisions encompass many decisions in various policy areas, formulation of climate change policies should be evaluated within a broad area covering various reforms to be made which have the capacity of changing the outlook of the country and prepare it for the 21st century. All these related preparations are, in nature, necessary attempts for a strong, respectable and low-carbon Turkey.

Similar to Turkey, but due to different reasons, the US is one of the few countries which have preferred to stay out of the present climate regime. However, the latest developments in the US seem to have important implications for Turkey concerning the post-2012 period.

5.2.4.2 The Possible US Responses

Although, the US is one of the strongest opponents of the Kyoto Protocol, it is interesting that some states have already made commitments to meet Kyoto targets. There have also been initiatives for establishing emissions trading systems as have been in California, RGGI and CCX. Efforts are continuing for the creation of a mandatory national cap and trade system in the US. Even though the US might not become a Kyoto Protocol party, Brewer forecasts that these efforts to establish such a system will be successful between 2010 and 2012 in the US due to the fact that the agricultural and the Conservative Republican areas who were opposing the climate change measures to be taken, seem to be moving towards consensus (Brewer, 2006: 15-26).

Recently, there have been proposals to establish requirements for the purchase of emission allowances or offsets for those goods coming from the non-cooperating countries or

the free-riders. Bad news is that these kinds of views are gaining support in the US (Brewer, 2007: 10). Claussen and Diringer from the Pew Center on Global Climate Change, also, expect that the US politics are beginning to favor the building of mandatory measures to reduce US emissions. They expect the enactment of mandatory US measures no later than 2010. Many individual states have already started to take action. Certainly, this would be a very important development for global climate politics (Claussen & Diringer, 2007).

Realizing that constraints on carbon are inevitable and fearing from the different rules applied in different states in this respect, business groups have started to put pressure for the establishment of a uniform national approach. The formulation of a uniform US approach at home would have significant implications for those countries that have still not set constraints on their carbon emissions. Not to lose competitive advantage to those countries without controls, the US would then work for a stronger global effort (Claussen & Diringer, 2007).

The future global climate regime might continue with Kyoto's binding emissions targets coupled with emissions trading. According to the World Bank, targets and trading is the likeliest means of generating the cash needed for investments to reduce emissions in rapidly growing developing countries. Although this policy is economically ideal, it might not be politically ideal under certain circumstances. The developing countries who cannot project their future emissions confidently, oppose any constraints on their growth, namely; quantified emission limits. For them policy-based commitments would be more realistic. This requires that countries agree to undertake policies such as energy efficiency or renewable energy goals that reduce emissions while advancing core development objectives like economic growth. Although, under these circumstances, these countries would not have binding targets, they could nevertheless participate in the emissions trading through a system of awarding emission credits for meeting or exceeding their policy commitments. This would create a powerful incentive for compliance, too. Another approach would be through sectoral arrangements in which governments commit to targets, standards or other measures to reduce emissions in a certain sector rather than the whole economy (Claussen & Diringer, 2007).

Therefore, for the post-2012 period, it is highly possible that the US will try to implement a provision in its climate change cap and trade legislation like the purchase of emission allowances or other kinds of offsets for the non-cooperating countries' imports to the US. The EU, on the other hand, can be expected to push for the establishment of some kind

of border measures towards the non-Kyoto countries in the post-2012 negotiations. This can even be expected to be negotiated under the WTO regime. Although this would create a contradiction with the objectives of the WTO which aims to liberalize the world trade, it has the potential of curing the free-riding problems as well as supporting the climate change regime[125] (Brewer, 2007: 15).

5.2.4.3 Present Position of Turkey within the Global Climate Regime

Among the 195 world nations, of which 192 are members of the UN (the remaining three are Taiwan, Vatican and West Sahara), 175 parties have ratified the Kyoto Protocol as of July 2007 (UNFCCC website). Those which have not ratified the Kyoto Protocol have been listed in Table 5.6.

Table 5.6 List of countries which have not ratified the Kyoto Protocol (as of July 2007)

1. Australia	12. San Marino
2. The United States	13. Sao Tome and Principe
3. Afghanistan	14. Serbia
4. Brunei	15. Somalia
5. Central African Republic	16.Tajikistan
6. Chad	17.Timor-Leste
7. Comoros	18.Tonga
8. Iraq	19.Turkey
9. Taiwan	20.Vatican City
10. Sahrawi Arab Democratic Republic	21.Zimbabwe
11. Saint Kitts and Nevis	22. Kazakhstan

Source: UNFCCC, 2007.

[125] During the post-2012 negotiations, some pressure is expected to be made by the developed countries to change the existing relationship between North and South which has identified the North to be responsible for the present situation. The present system demands that action for reducing GHGs should be taken by the developed North through the establishment of targets, creating funds for investments in the developing world to help them move to a low carbon economy as well as transferring technology. However, many advanced developing countries like China, India and Brazil have become leaders in certain technological areas. For example; on the global arena, Brazil in the ethanol biofuel sector, China in coal gasification, India in 2nd generation biodiesel feedstock and South Africa in coal-to-synfuels have already become technological leaders (Brewer, 2007:4). All of these are climate change mitigation technologies. Therefore the developed world is expected to demand the involvement of the developing world as well in the climate change mitigation efforts in the post-2012 period. In the new period, the system is expected to expand as to include transactions from South to North, South to South in addition to the existing North to South (Brewer, 2007:3).

Within this list, the United States and Australia have announced that they are not intending to ratify. The remaining countries within the list have not ratified the Kyoto Protocol by not showing any interest, though Kazakhstan is in an effort to ratify. Most of these are micro states whose GHG emissions are not even calculated. Turkey should not be placed in this list together with these countries.

Presently, 41 Parties comprise the Annex I list of the UNFCCC. Apart from the two countries, Belarus and Turkey, all the Annex I Parties have been placed in the Annex B list of the Kyoto Protocol. Turkey and Belarus, since were not Annex I Parties when the Protocol was signed, they were not placed in Annex B to the Protocol. Recently, Belarus has also ratified the Kyoto Protocol and Turkey has been left to be the only Annex I country which has not become a Kyoto Protocol Party. The uniqueness of Turkey's status within the climate change regime emanates from this position.

Mexico and South Korea are Non-Annex I countries under the UNFCCC because they were not OECD members during 1992-1994 when the Convention was open for signature. They became OECD members in 1996. Later memberships of OECD have not led to an automatic or compulsory shift of status in prior agreements. Therefore, Mexico and South Korea, after becoming OECD members, have not been in a position to become Annex I countries in the UNFCCC. In a similar manner, Turkey was not an Annex I country when the Kyoto Protocol was signed. Therefore, becoming an Annex I Party on a later date has not led to the placement of Turkey's name under Annex B of the Protocol. Hence, when Turkey ratifies the Kyoto Protocol, it does not have to become an Annex B country. Due to its special circumstances, it can negotiate a different position for itself.

By stepping away from the Kyoto process, Turkey has also been late in preparing its national GHG inventory. Ironically, during this period, the GHG emissions of Turkey have increased drastically. The per capita GHG emissions of Turkey might be low and even its contribution to the total GHG emissions of the world might be around 1% which sounds low. However, as can be seen in Table 5.7, Turkey ranks as the 23nd country within the list of those countries with the highest total GHG emissions.

Besides, due to its large population, Turkey's position is even more dramatic when its GHG emissions are compared with the Annex I countries. When the Non-Annex I countries are eliminated from the list in Table 5.7, it can be observed that Turkey ranks as the 13th country among the Annex I countries with respect to its GHG emissions.

Table 5.7 The First 30 Countries with respect to the Highest Total GHG emissions

	Top 30 CO2 emitters	Total emissions (Mt CO2) 1990	Total emissions (Mt CO2) 2004	Growth rate (%) 1990-2004	Share of world total (%) 1990	Share of world total (%) 2004	Population share (%) 2004	CO2 emissions per capita (t CO2) 1990	CO2 emissions per capita (t CO2) 2004
1	The United States	4,818	6,046	25	21.2	20.9	4.6	19.3	20.6
2 *	China	2,399	5,007	109	10.6	17.3	20.0	2.1	3.8
3	Russian Federation	1,984	1,524	-23	8.7	5.3	2.2	13.4	10.6
4*	India	682	1,342	97	3.0	4.6	17.1	0.8	1.2
5	Japan	1,071	1,257	17	4.7	4.3	2.0	8.7	9.9
6	Germany	980	808	-18	4.3	2.8	1.3	12.3	9.8
7	Canada	416	639	54	1.8	2.2	0.5	15.0	20.0
8	United Kingdom	579	587	1	2.6	2.0	0.9	10.0	9.8
9 *	Korea (Republic of)	241	465	93	1.1	1.6	0.7	5.6	9.7
10	Italy	390	450	15	1.7	1.6	0.9	6.9	7.8
11 *	Mexico	413	438	6	1.8	1.5	1.6	5.0	4.2
12*	South Africa	332	437	32	1.5	1.5	0.7	9.1	9.8
13*	Iran (Republic of)	218	433	99	1.0	1.5	1.1	4.0	6.4
14*	Indonesia	214	378	77	0.9	1.3	3.4	1.2	1.7
15	France	364	373	3	1.6	1.3	0.9	6.4	6.0
16 *	Brazil	210	332	58	0.9	1.1	2.8	1.4	1.8
17	Spain	212	330	56	0.9	1.1	0.7	5.5	7.6
18	Ukraine	600	330	-45	2.6	1.1	0.7	11.5	7.0
19	Australia	278	327	17	1.2	1.1	0.3	16.3	16.2
20*	Saudi Arabia	255	308	21	1.1	1.1	0.4	15.9	13.6
21	Poland	348	307	-12	1.5	1.1	0.6	9.1	8.0
22*	Thailand	96	268	180	0.4	0.9	1.0	1.7	4.2
23	***Turkey***	146	226	55	0.6	0.8	1.1	2.6	3.2
24*	Kazakhstan	259	200	-23	1.1	0.7	0.2	15.7	13.3
25*	Algeria	77	194	152	0.3	0.7	0.5	3.0	5.5
26*	Malaysia	55	177	221	0.2	0.6	0.4	3.0	7.5
27*	Venezuela	117	173	47	0.5	0.6	0.4	6.0	6.6
28*	Egypt	75	158	110	0.3	0.5	1.1	1.5	2.3
29*	United Arab Emirates	55	149	173	0.2	0.5	0.1	27.2	34.1
30	Netherlands	141	142	1	0.6	0.5	0.2	9.4	8.7

(*) Non-Annex I countries

Source: UNDP, 2007: 69.

The reason why China is being perceived as one of the most critical countries in the world with respect to GHG emissions is not because GHG emissions per capita is high in China but rather because China has a large population as well as an economy which continues its development on a rapid pace. Certainly not at the same level, but in a similar way Turkey

shares the same faith with China. Although on a per capita basis, the GHG emissions are low, the large and increasing population of Turkey together with continuing industrialization and development put Turkey under a position in which taking action to slow down this increasing trend becomes a necessity rather than an option. Taking such action should not lead to a slow down in its economic development. With appropriate measures, Turkey can continue its economic development on a more sustainable path which is beneficial for both itself and the world. The fight against climate change requires a transformation into a low carbon economy. Hence, Turkey, together with the other countries in the world, is compelled to achieve such a transformation. Certainly, the sooner is the better as well as with lower costs for the countries. Under the condition that Turkey postpones the initiation of such a transformation to a later date in the future, it will be facing a harder situation to handle. If in Turkey new investments will continue to be made through old technologies, a few years later, the amount of investment needed for Turkey's transformation to a low carbon economy (which will then be a 'must') will be much more costly. Besides, by not becoming a part of the Kyoto process, Turkey will become a backyard for the old technologies of those countries that are moving towards more environmental-friendly technologies at their own countries. Taking decisions and measures in this respect would even open new areas of investment for Turkish companies and also create new funding opportunities for them as well as attracting more foreign investment. Also, by not becoming a part of the Kyoto process, Turkey has been late in preparing its GHG inventory. Ironically, during this period, the GHG emissions of Turkey have increased dramatically.

Some academics evaluate these investment opportunities to represent the profit-maximizing games of the capitalist economy which, in fact, does not aim to provide a solution to the climate change problem. At the present day, the capitalist economic system has become almost a common reality of the world. Climate change, on the other hand, is a problem which requires the immediate action of the countries. Therefore, the most feasible way of taking immediate action seems to be within the existing structures. The urgency of the issue requires broader participation by both developing and developed countries and enhanced cooperation. Nevertheless, economic challenges create great obstacles to achieving broader participation and effective implementation. Therefore, economic incentives are very important for the success of climate change policies in today's world. Since, the issue is at the top of the urgency list of the world, and the difficulties of solving it are mostly related to economic problems, coming up with economic solutions and incentives comprise the most important part of a successful climate change policy. It will not be realistic to expect the immediate shut

down of those industries which contribute the most to the climate change problem. As a result, supporting climate-friendly investments particularly in developing countries while helping the existing ones to use more climate-friendly technologies offer more realistic and sound policy tools.

5.2.4.4 Possible Alternatives for Turkey

At this juncture, Turkey can either ratify the Kyoto Protocol or still defer this decision to the coming years. If it chooses the latter, then the problems it might encounter have been mentioned above. It would start to receive reactions from the rest of the world. Most important of all, it would be perceived as a reckless actor on the global arena; a country that can not be trusted and cooperated, in a way, distant from the international community. As with its relations with the EU, its accession negotiations can be damaged. It might start to face various sanctions in many areas other than those directly related to climate change as well. What's more, it might lose its international credibility and face the loss of foreign investment. If after facing a few of these developments, Turkey, then, decides to negotiate its terms, then it might be forced to accept deals which it cannot afford, just like it has experienced over the last decade. Without an appropriate negotiating base, Turkey would suffer from wrong decisions for years, without having the chance of changing them for a long time. Hence, Turkey should be able to manipulate this critical period of negotiations among the countries for a new post-2012 deal, in an effort to accommodate itself with an acceptable status within the global climate change regime. This requires Turkey to take the initiative in this direction, of which the starting point should be the ratification of the Kyoto Protocol. The ratification of the Kyoto Protocol, as a first step, would symbolize that Turkey is ready to handle negotiations concerning its special circumstances. At this point, it is worth remembering that the ratification of the Kyoto Protocol has turned out to be criteria that should be fulfilled prior to any negotiations as has been declared to Kazakhstan in response to its request for amendment.

If Turkey takes the opportunity of this critical period, and ratifies the Kyoto Protocol, it can start negotiating its special circumstances for the post-2012 period without bearing any commitments for the first commitment period. This is the result of the Decision NO.26/CP.7 (see Annex 1). Even under the scenario that it will be forced to take on commitments for the first commitment period, it is almost impossible to complete these negotiations until 2008; the starting date of the first commitment period. Therefore, from now onwards, Turkey's

ratification of the Kyoto Protocol can only be seen as a signal for the willingness of Turkey to actively participate in the global effort as well as a preparation for Turkey the necessary grounds for its participation in related groups and organizations. These might be the EU ETS prior to full membership or Turkey's involvement in groupings of countries with similar developmental levels which might end up with the introduction of new kinds of targets, base years or even new Annexes under the Kyoto Protocol for the post-2012 period. Certainly, the domestic circumstances of Turkey will play an important role in the level of its involvement in the climate regime of the post-2012 period. As Mazlum has stated; "economic development has always been, and still is, an overriding priority for Turkish politics" (Mazlum, 2005: 10). Since measures for protecting the environment are generally perceived as burdens on economic development and growth, Turkey has been facing the "environment versus development impasse" for a long time (Mazlum, 2005: 11). However, the recent developments concerning the climate change regime signals the urgent need for Turkey to reconcile its economic development goals with environmental protection measures to be able to continue its development in a sustainable and successful manner.

5.3 The Domestic Dimension of Climate Change policies of Turkey

The major component of the international dimension of Turkey's climate change policy is, certainly, determined by its national capabilities and special circumstances as well as its climate change policy-making process. In this respect, the evaluation of these special circumstances and its policy-making process related to climate change is very important for the formulation of Turkey's future climate change policy.

5.3.1. Turkey's Special Circumstances: An Advanced Developing Country

Turkey has given a fight to explain its special circumstances to the UNFCCC community over the years and finally has ended up with the UNFCCC Decision 26/CP.7 in 2001 which approves Turkey's special circumstances (FCCC/CP/2001/13/Add.4). Turkey is special, in the sense, that even though it was listed in the Annex I to the UNFCCC as a developed country, it was not a developed but rather a developing country at those years. Due to this fact, it has not been suitable for Turkey to sign the Kyoto Protocol since as an Annex I country; it was believed that it would be placed in the Annex B list of the Kyoto Protocol. Annex B list requires that countries should assume binding quantified emissions reduction targets. However, Turkey as an advanced developing country was not in a position to take on

commitments. This was, in fact, its special circumstance among the other Annex I countries who were at the same time Annex B parties to the Kyoto Protocol who have assumed quantified emissions reduction targets.

In 1992, Turkey took place as an Annex I and an Annex II country under the UNFCCC. With this placement, Turkey was treated as a developed country together with the industrialized OECD countries. However, when compared to the economic development levels of those countries, it becomes clear that Turkey is still continuing its economic development. Although it has managed to westernize and improve its economy rapidly since the 1980s, it is still hard to place Turkey among the developed industrial countries. On the other hand, in the last few years, it does not show fully the characteristics of a developing country, either. It is somehow in the middle. There are some other countries like Turkey, such as; Brazil, Argentina, South Korea, Kazakhstan and Mexico. Recently, these countries have become to be called as 'advanced developing countries'. These countries differ from the majority of the non-Annex I countries with respect to their high economic growth and emissions patterns. As a matter of fact, the development and emission patterns of Turkey is very comparable to this group as has been announced by the World Bank in a report back in 1999 (World Bank *et al*., 1999:60).

5.3.1.1 Turkey's Energy Use Patterns

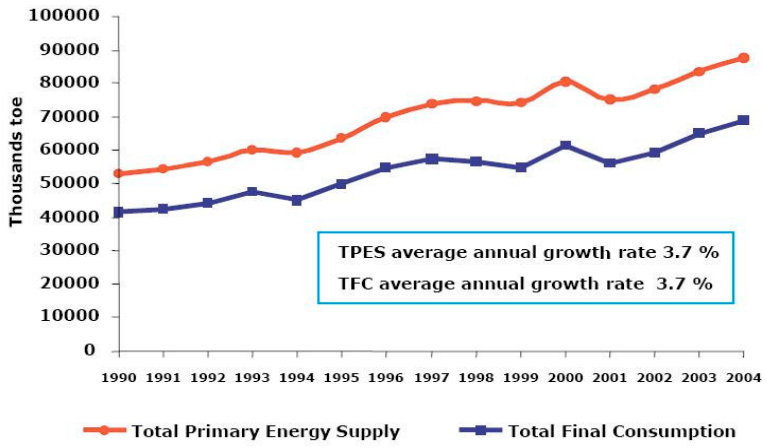
Turkey has gone through a successful transition to a market economy in the last two decades. During this time period, the demand for energy has also increased in accordance. Graph 5.1 shows the increase in energy use in Turkey between 1990 and 2004. Accordingly, the average annual growth rate of total final energy consumption has shown a 3.7% increase within this period (MoEF, 2007:3).

In parallel with a projected rate of 6% growth in GDP over the 15 years, the energy sector as well as pollution related to this sector is expected to rise substantially (MoEF, 2007:13). Table 5.8 shows the projections for the sectoral energy consumption until 2020.

The expected increase in Turkey's total energy consumption until 2020 is almost three folds of the amount in 2003. This should be enough to attract the attention of Turkish policy-makers to the urgency of taking related measures to slow down this rapid trend of increase.

On the other hand, this drastic increase demonstrates the advanced developing nature of its economy.

Graph 5.1 Historical Trend of Energy Use



Source: MoEF 2007: 4.

Table 5.8 Total Energy Consumption by Sector as of 2020

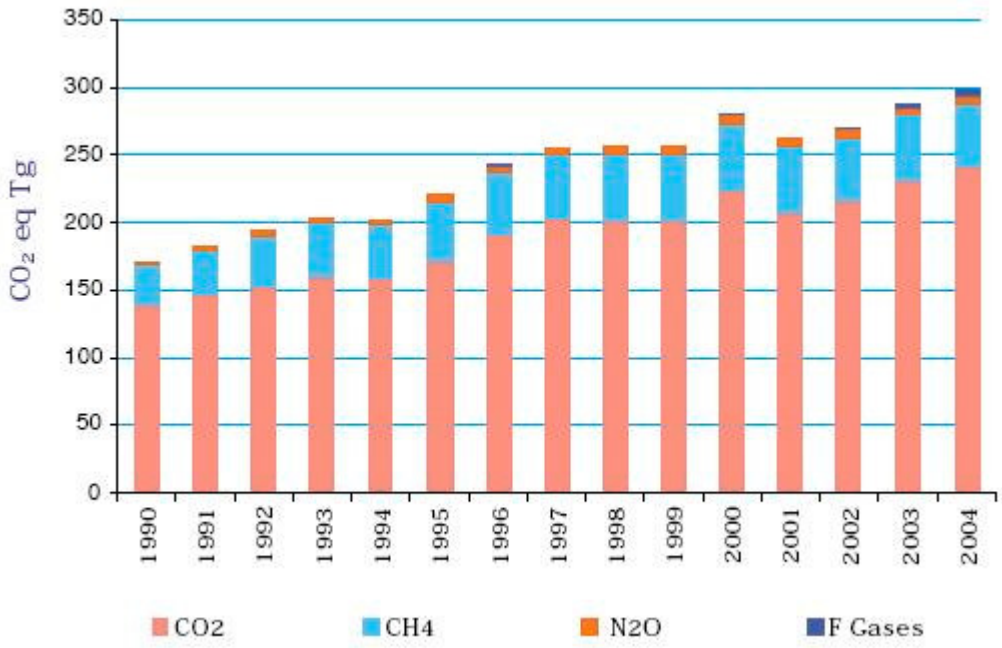
Sector	2003	2005	2010	2015	2020
Industry (ttoe)	26,117	27,003	41,646	55,508	76,408
Residential (ttoe)	19,634	21,648	29,015	38,503	47,542
Transport (ttoe)	12,395	14,298	19,915	26,541	34,037
Agriculture (ttoe)	3,086	3,475	4,368	5,441	6,751
Non-Energy (ttoe)	2,098	2,202	2,514	2,844	3,220
Own-Use (ttoe)	4,558	4,807	5,967	6,997	8,593
TOTAL (ttoe)	67,887	73,433	103,425	135,834	176,551

Source: MoEF 2007: 123.

5.3.1.2 Inventory of GHG emissions and removals

Total GHG emissions of Turkey excluding LUCF (Land Use Change and Forestry) have risen from 170.1 Tg. to 296.6 Tg. CO_2 equivalents between 1990 and 2004 (Graph 5.2).

Graph 5.2 Turkey's Total GHG emissions excluding LUCF

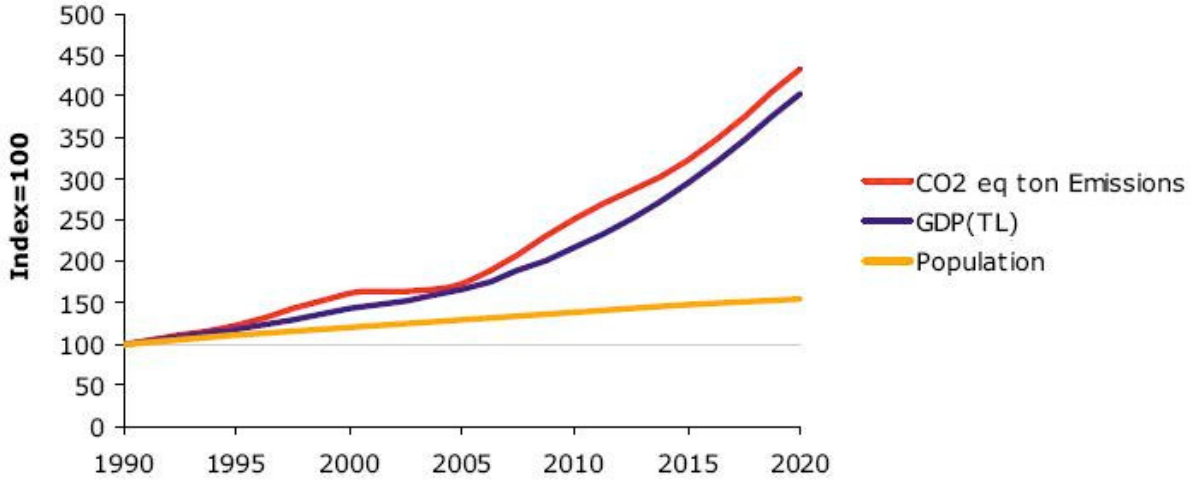


Source: MoEF 2007: 63.

Within this period, among total emissions, energy sector had the largest share of 76.6%. The share of waste disposal had been 9.3% and the share of the industrial sector had been 8.9% (MoEF, 2007: 5). The rapid increase in the GHGs of Turkey between 1990-2004 shows why Turkey needed special circumstances compared to the other Annex I countries. This increase demonstrates that Turkey still continues its development. Therefore, it is vital for Turkey to insist on the establishment of criteria other than OECD membership under other Annexes in the post-2012 negotiations. Such criteria can be per capita GHG, comparison of the overall GHG emissions from 1990 to the present, sectoral carbon intensity and etc...(Cemre, 2007:7).

Within the GHGs, CO_2 had the highest proportion with 81.6%, CH_4 with 15.6%, N_2O 1.9% and F-gases with 1% % (MoEF, 2007:5). The percentage of Turkey's GHG emissions within the total global GHG emissions is less than 1%. With this rating, Turkey seems to be among the least polluting countries in the world. However, graph 5.3 shows that this is not the case, its GHG emissions in 2020 is projected to rise sharply in parallel with increase in its GDP, being the result of its economic development (MoEF, 2007:7).

Graph 5.3 Projections of GDP- CO_2 -Population



Source: MoEF 2007: 39

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5.3.1.2.1 Comparison of CO_2 Per capita

To be able to understand Turkey's standing in the international arena, it is helpful to compare its total CO_2 emissions as well as its CO_2 per capita with the world and with some country groupings. It can be seen from the Table 5.9 that with a 3.3 tons of CO_2 per capita in 2003, Turkey has been both below the world average as well as OECD and the EU (MoEF, 2007:6). However, due to its high population, this number loses its significance *vis a vis* its total emissions, especially, when the projected numbers are also taken into consideration. Nevertheless, it reflects the advanced developing nature of the Turkish economy.

5.3.1.3 Comparison of GDP per capita

Within the UNFCCC, Turkey was listed as an Annex I country, in other words, a developed and industrialized country due to its OECD membership. However, when compared with the EU-15 and the OECD countries (Graph 5.4), Turkey's purchasing power parity in terms of GDP per capita is still the lowest (MoEF, 2007: 40).

Therefore, with respect to its emission levels, its energy use patterns, the amount of per capita emitted to the atmosphere as well as its GDP per capita; Turkey is considered as an

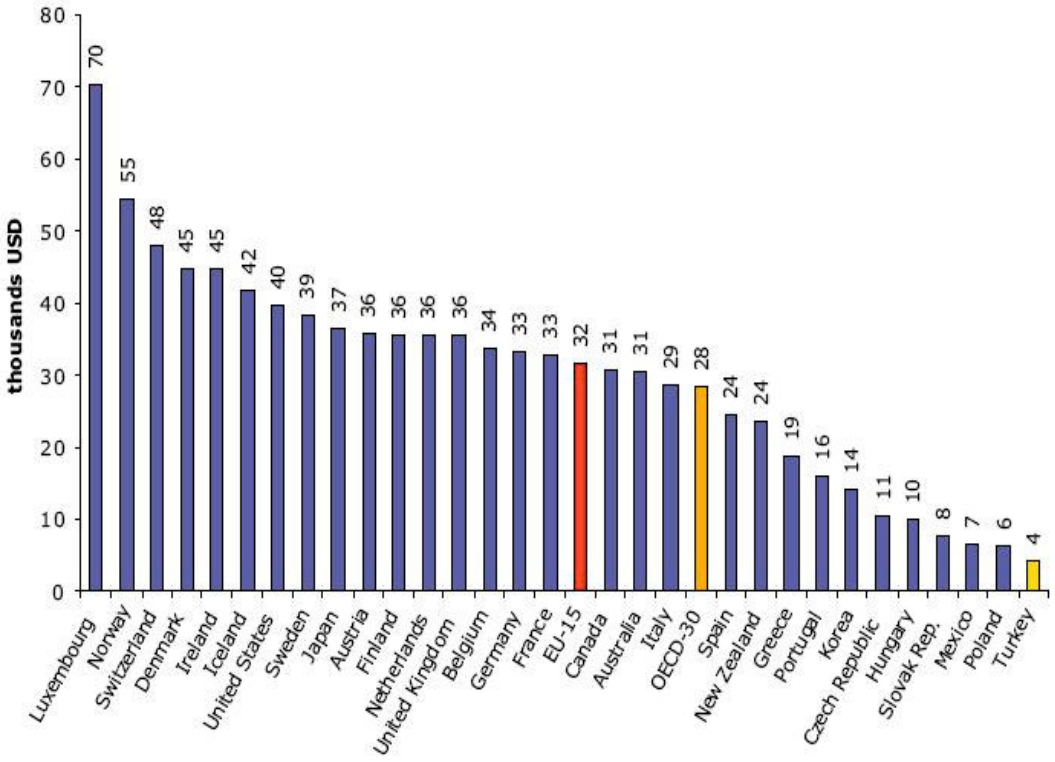
advanced developing country like Mexico, South Korea, South Africa and Argentina which have been successful in improving their industrialization on a global base in a few sectors. The achievement of the companies of these countries on the global market by being able to compete with the global multinationals of the industrialized world have separated their countries from the other developing countries. Therefore, it has become more appropriate to call these countries 'the advanced developing countries'. These are not developed countries in the sense that their industrialization process still continue and their energy consumption has not become consistent. The energy use is expected to continue rising in these countries with an increasing rate over the coming years. Turkey is among the 25 countries whose energy use in the industrial sector shows the most rapid increase due to continuing industrialization. Besides, Turkey's per capita energy consumption is still not consistent. Under these circumstances, setting quantitative emissions reduction targets is hard for Turkey (Yeldan, 2005). However, there are other kinds of commitments that these countries can choose which would again lead to a decrease in the GHG emissions. These are, presently, the topics of discussion for the post-2012 period.

Table 5.9 Comparison of CO2 Emissions for Turkey and Relative Parties of UNFCCC (2003)

	CO_2 Emissions CO_2 eq (Tg)	CO_2/Per capita Without LUCF (ton)	GHG Emissions without LUCF CO_2 eq (Tg)	GHG without LULUCF/capita CO_2 eq (ton)
EU-15	3,447	9.0	4,180	10.9
EU-25	4,064	9.0	4,925	11.0
OECD	12,780	11.1	NA	NA
Annex-I Countries	14,289	12.2	17,288	14.7
Non-EIT Parties	11,633	13.4	13,855	16.0
World	24,983	4.0	NA	NA
Turkey	231,0	3.3	286,3	4.1

Source: MoEF, 2007:6.

Graph 5.4 GDP Per Capita in OECD, EU-15 and Turkey (2004)



Source: MoEF 2007: 41.

5.3.2 Climate Change in Turkish Policy-Making Process

The examination of the policy-making process is also very useful to understand the present position of Turkey in the global climate regime. The level of significance given to climate change at the state level, the perceptions of the Government officials as well as political parties on climate change, the involvement of the Government, the level of involvement of the non-state actors and the business lobbies as well as the level of public awareness are all important factors in shaping the climate change policy of Turkey along with its national economic and technical capabilities with regard to climate change.

5.3.2.1 The Government Level

The main body responsible for environmental legislation and policy development is the Ministry of Environment and Forestry (MoEF); the other ministries are also responsible for integrating environmental policy targets laid out in the Integrated National Environmental Strategy for EU Accession. The primary aim of MoEF is to harmonize all their policies and

applications as well as environmental law with the environmental policies of Turkey with those of the EU (MoEF, 2007: 7). The Ministry of Environment and Forestry has submitted Turkey's first GHG inventory and National Communication to the UNFCCC Secretary in January 2007. This report has been prepared with the efforts of many governmental institutions and stakeholders. It has been started to be prepared as of August 2005. The UNDP has been involved with technical assistance and GEF with financial assistance. The report included a summary of country's efforts on climate change as well as the below headings:

*Turkey's national circumstances

*Turkey's GHG inventory

*Policies and measures to reduce GHG emissions

*Impacts of climate change on Turkey, measures for mitigation and adaptation

*Vulnerability assessment

*Financial resources and technology transfer

*Energy projections

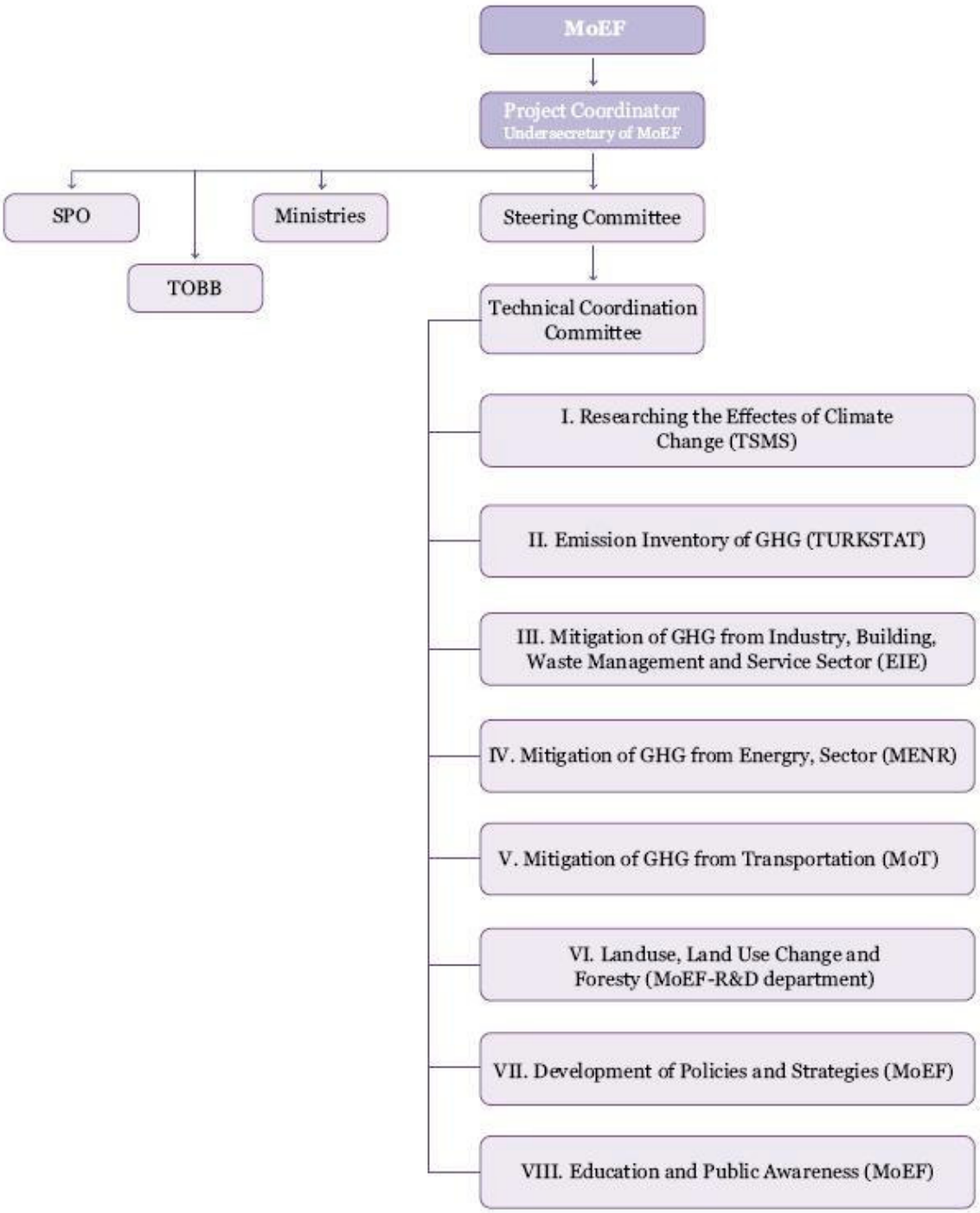
*Capacity building, education, training and public awareness (MoEF, 2007).

Especially in 2007, perceptions have begun to change in Turkey. Now that Turkey's National Communication has been prepared, Turkey should be able to formulate a strategy according to its special circumstances.

In the MoEF, an inter-ministerial Coordination Board on Climate Change (CBCC) has been established in 2001 with the responsibility of prevention, mitigation and adaptation of policies against climate change. The CBCC also works to fulfill the requirements of UNFCCC obligations like the preparation of National Communications. A Technical Working Commission on Climate Change operates under the CBCC. This commission helps the preparation of the National Communication through the studies and reports prepared by eight different working groups. The organization chart for the CBCC and the names of the working groups are shown in figure 5.1 (MoEF, 2007: 32).

In the 7th Five-year Development Plan of Turkey (1996-2000), the State Planning Organization (SPO) has called for the development of a national environmental strategy. As a result, National Environmental Action Plan (NEAP) has been prepared that has been the most comprehensive document which integrates environment and development (MoEF, 2007:6).

Figure 5.1 the Organization Chart for CBCC



Source: MoEF 2007: 33.

The 9th Development Plan, which covers the 2007-2013 periods, calls for the preparation of a 'Climate Change National Action Plan' for the establishment of national policy concerning the mitigation and adaptation to climate change (DPT, 2006). The Plan perceives those efforts to protect the environment to be costly in the short term, however, attract attention to the fact that only through these costly investments, improving the competitiveness of the country in the long term in a sustainable manner could be achieved (DPT, 2006: 115).

With recent legislation, municipalities have begun to assume larger environmental roles. The reduction of CO_2 emissions by promoting public transport and buildings with adequate insulation have become important missions for them (MoEF, 2007: 83).

5.3.2.2 Climate Change and Political Parties

July 2007 national elections signaled a slight change in political parties' attitudes with regard to climate change. When the political programs of the parties were examined prior to the elections, it can be observed that climate change has managed to enter the party programs contrary to the programs prepared for the earlier elections. The recent climatic conditions and the campaigns of the NGOs together with the support of the media have helped the issue find its way to the programs of the political parties finally in the 2007 elections. However, these parties have preferred to use generalized, overall and similar descriptions about the issue without touching the details or formulating a strategy or a bundle of policies as to what kind of action could be taken (Mazlum, 2007).

Environmental issues have entered the Turkish political agenda in the 1980s. Starting from that time, these issues have always been treated as state politics and have not been examined under party politics. Due to this fact, in the earlier elections, the environmental problems have been treated as a supra-party issue which should not be dealt with at the party level and have not taken place in the political party agendas. As a result, a nation-wide debate concerning climate change has not started until 2007. In their programs, parties have not tried to come up with any solutions, policies or strategies. Only a few have emphasized the global character of climate change and urged Turkey's involvement in international cooperation. No mention has been made as to how; through which ways. The others have treated the issue as a national problem within the borders of Turkey. As a result of this perspective, there has been no mention of the Kyoto Protocol. It can be observed that at the

party level, the climate change issue has not been understood thoroughly. Many members of political parties are not aware of the international dimension of the climate change issue and they are not informed about the possible environmental friendly policies, either (Uyar, 2007).

Following Turkey's accession to the UNFCCC, more attention has been started to be given to the subject both at the state level as well as the public level through the NGOs. At the state level; reports have been prepared, workshops, seminars and conferences have been held as well as commissions have been established to examine the issue and make the background preparations for the establishment of related policies and measures. Certainly, all these efforts show the increasing attention given to the subject to make Turkey a part of it. Turkey has started to attend the SB meetings under the Convention recently. It has even been included in some of the statements together with the EU (Mazlum, 2007).

Although Turkey has been a member of GEF[126] starting from the 1990s, the First National Dialogue Meeting was held on 26-27 June 2006. The aims of the meeting was to increase climate change awareness at all levels of the society and the state as well as to give start to a study within the Resource Allocation Framework to be able to set the priorities of the country in the fields of climate change and biodiversity (Mazlum, 2007). This late meeting can be seen as the result of the lack of interest and information about climate change in Turkish politics.

These should be perceived as the first steps of Turkey in formulating a national climate policy which will be implemented both at the domestic and international arena. The actions implemented at the domestic level will support Turkey's place within the international climate regime. On the other hand, the foreign climate policy of Turkey will shape Turkey's standing at the international arena supplementing the other important foreign policy issues like energy, trade as well as its relations with the EU (Mazlum, 2007).

The Research Commission on Global Warming established under the Turkish Grand National Assembly (TGNA) in 1 March, 2007 has submitted its draft report to the Presidency

[126] Global Environment Fund is an independent financial entity established in 1991 under the UN to support those projects which help the protection of the global environment. It is the financial mechanism for three Conventions: Convention on Biodiversity, Convention on Desertification and the UNFCCC. Turkey has signed all of the three Conventions. The budget of GEF is prepared by the contributions from the donor countries, especially the US. The fourth 4-year budget of GEF is around $3.2 billion. The first National Communication of Turkey on climate change has also been financed by GEF. Since Turkey is an OECD country, it is both a donor and an acceptor country. Turkey pays approximately $1.5 million per annum to GEF (Yeni Ufuklar,

of the TGNA on June 2007. However, due to the elections which took place on 22 June, 2007, it has not been discussed yet. If the draft report is accepted by the TGNA, there will be more opportunities before Turkey to finalize the discussions on the signing of the Kyoto Protocol. Then if Turkey decides to become a party to Kyoto, it will be more easy for Turkey to get involved in post-2012 climate negotiations and to create suitable conditions for itself concerning its place in the future climate regime.

Being an Annex I country with special circumstances and a standing different than those of the other Annex I countries, Turkey could have ratified the Kyoto Protocol and negotiate its different circumstances without taking a quantified emissions reduction target. Until now, Turkey has feared that it might have been enforced to commit to a quantified target. As a result, Turkey has preferred to watch the international process in a 'wait & see' approach. To put it simply, Turkey wasted significant time since COP7 in Marrakesh where Turkey's special circumstances were accepted. During this time, decision makers in the related ministries were however, not able to form a common perspective on the issue.

Most of the decision makers in the ministries were still looking for ways to defer the decision with regard to the ratification of the Kyoto Protocol. It is always been hard to change the status quo, since such decisions requires personal responsibility and initiative on the part of the decision maker. Due to this reason, decision makers among the bureaucracy, most of the time, tend to postpone the issue as much as possible, because they cannot afford to take the responsibility of changing the status quo (Cemre, 2006b: 9). Unfortunately, postponing the formulation of an active climate change policy still seems to govern Turkish politics at the Government level. Besides, the Turkish officials continue to perceive the problem on a national basis. The new Minister of the MoEF; Mr. Veysel Eroğlu has emphasized recently that climate change was not threatening Turkey, and that the water shortages experienced this summer were not related to climate change (Eroğlu, 2007). It seems that either the Government officials are still misinformed and misguided concerning the reasons and consequences of climate change or they find it quite hard politically to change the status quo. Fighting climate change requires the cooperation of various ministries such as the MoEF, Ministry of Foreign Affairs, Ministry of Energy and Natural Resources, Ministry of Agriculture, Ministry of Industry as well as many other state organizations. This requires effective coordination among the ministries.

2006).

At this juncture, understanding of the critical relationship between what Turkey can achieve at the domestic level and what position it can secure at the international arena is utmost important. These two are interrelated in the sense that what Turkey can offer to achieve at home depends on its standing in the global climate regime. On the other hand, Turkey can secure its place in the global climate regime as a result of what it can achieve at home. This interrelationship requires that these two should be worked together within a broad package. This package which consists of give-and-takes as well as issue linkages should openly be negotiated at the global level. If Turkey turns inside and concentrates on what it can achieve as climate change policies itself alone, by not supporting it with an international standing, then results will not be satisfactory. On the other hand, if Turkey ignores or overestimates what it can do at home and works out a global position, then results may not be in favor of Turkey's national interests. That is to say, these two levels should complement each other. Past experience of Turkey as well as other countries' experiences proves that the best way for such an interaction is to participate actively in international climate change negotiations.

5.3.2.3 Public awareness and NGOs

Contrary to the inaction at the political level, global climate change has caused great concern in the public sphere. In other words, public awareness about climate change has developed much faster than political awareness at the party level. A recent study conducted by Pew Center shows that almost 70% of the sample chosen in Turkey considers climate change as a very important global threat. Besides, a letter which has been signed by 168 thousand Turkish citizens in a very short period of time has been sent to the Turkish Grand National Assembly under the campaign called 'Turkey should sign Kyoto immediately'. On 28 April, 2007, the Global Action Group, active for the last three years, has organized a meeting in Kadıköy calling those people who care for the climate to raise their voice (Mazlum, 2007). Nevertheless, some interest groups and experts in Turkey argue that since Turkey has not been responsible for the evolution of the climate change issue, it should not be expected to take any responsibilities for its solutions. Ironically, the most vulnerable countries to climate change are the poorest and less developed countries that really have no responsibility about the increase of GHGs at all. On the part of Turkey, although Turkey's contribution to climate change has been very limited in the previous years, it has changed recently. Turkey's emissions have started to rise on an increasing trend which gives the

signal that Turkey needs to control these emissions immediately. Under these circumstances, the perspective to see Turkey as a country who has no responsibilities for the climate change issue places Turkey in the same group with the less developed countries on the international arena. Such a situation would hurt Turkey's global standing on other issues especially within the sphere of its foreign policy. Therefore, the awareness among the Turkish people concerning the future emission levels of Turkey should be increased. In parallel with this, individual efforts in this direction should be reinforced.

Fighting climate change requires the involvement of civil society as well as the non-governmental organizations (NGOs). With increasing globalization, public awareness about climate change has increased and this has been an important factor for the existing environmental NGOs to start dealing with global climate change and the establishment of new NGOs on the issue. The most prominent and active ones are the Turkish Foundation for Combating Soil Erosion, for Reforestation and for the Protection of Natural Habitats (TEMA), WWF – Turkey, Rec Turkey[127], Green Peace – Turkey and the Greens. These NGOs play an important role in enforcing policy-making as well as helping the implementation of regulations against climate change. In addition to this, they work to further increase awareness at the public and governmental levels through campaigns, conferences and educational programs.

5.3.3 Climate Change as a Turkish Foreign Policy Issue

After identifying the possible areas through which emissions reductions can be achieved, the formulation of an international approach or a strategy is very crucial for Turkey. Until the present day, the responsibility of climate change has been mainly assumed by the MoEF. However, the international approach of Turkey should have been dealt as part of its foreign policy, together with the Ministry of Foreign Affairs.

[127] Rec (Regional Environmental Center for Central and Eastern Europe) is established in 1990 by Hungry, the United States and the European Commission. Rec is an independent and non-profit organization which works on environmental policy, biodiversity, climate change, renewable energy, environmental information and waste management. It also tries to find solutions to these issues by bringing the governments, NGOs, private institutions, businesses and stakeholders together. It promotes exchange of information and public participation in environmental decision making. Rec Turkey has started operations as of May 2004. Its establishment has been ratified by the TGNA. In May 2005, Rec Turkey has been appointed by the MoEF to act as the 'national focal point', as per Article 6 of the UNFCCC, for education, training and capacity building activities related to climate change in Turkey (Rec Turkey web site: www.rec.org.tr).

Through this approach, it can be possible to fund those low-carbon investments to mitigate climate change which have been planned and developed by the contributions of the various ministries. At this juncture, it is important to note the important role which should be played by the Ministry of Foreign Affairs. The international approach of Turkey towards climate change should therefore be formulated in an urgent manner to be able to take place in the international negotiations concerning post-2012 period.

5.3.3.1 Climate Change as a Foreign Policy Issue

Looking for achieving climate change objectives within the context of foreign policy will certainly provide new incentives for Turkey. But first of all rather than an environmental discussion, it should be recognized that climate change is a cross-cutting issue. Certainly, it is hard to integrate climate change into policy areas where decision-makers already have a track (Drexhage, 2007:35). Global climate change negotiations do not take place in isolation. Climate change is related with a wide social, economic and geopolitical agenda which makes foreign policy a natural tool to evaluate opportunities in enhancing efforts against climate change. As Drexhage pointed out; integrating climate change into the foreign policy making could offer different and sound perspectives for enhancing international environmental cooperation. As Drexhage underlined:

> An integrated climate change foreign policy approach has the potential to improve prospects for more effective efforts to address climate change at the national and international level (Drexhage *et.al*., 2007:iii).

Decisions taken at some other areas of foreign policy will affect climate change and climate change negotiations at the international level. It was also emphasized by Drexhage that climate change decisions should be taken at a broader foreign policy context:

> The threat of climate change is not only global. It is also multidimensional, invisible, unpredictable, and transcends national borders. Traditional strategies and alliances are becoming ineffective against climate change, when the cause (greenhouse gas emissions) is not the result of a "hostile enemy". Addressing the challenges posed by climate change along with threats such as terrorism, poverty and conflicts calls for new thinking in foreign policy (Drexhage *et.al*., 2007:v).

First of all, in diplomacy and foreign relations (especially *vis a vis* the EU or the UNFCCC on this issue), foreign policy can enhance climate change agenda. For example, Turkey's place in the climate change negotiations can be secured as part of its foreign policy. At this juncture, Turkey's geopolitical location, its position among the energy routes, the

probable investment which can be made to Turkey in return for carbon credits, its EU candidacy; all are important tools to be manipulated accordingly by its foreign policy to secure a just position for Turkey in the climate change negotiations. Within this perspective, the increasing political priority given to energy security requires the climate-friendly energy solutions for more reliable energy. This should be evaluated within a broad foreign policy concept. Foreign policy, again, can play an important role regarding the peace and security issues related to climate change:

> While climate change may not be the sole cause of conflict, climate-induced environmental stress may worsen local and regional tensions over scarce national resources and increase the number of refugees from countries suffering from the consequences of climate change (Drexhage *et.al*., 2007:v).

Foreign policy can also influence the inclination of nations to engage in international climate change efforts with regard to trade and investment. Through development cooperation, on the other hand, the developing countries might be able to deal with the effects of climate change within the framework of their national development goals. In a nutshell, the integration of climate change into foreign policy increases a nations' ability and willingness to meet the challenges related to climate change (Drexhage *et.al*, 2007:v-vi).

> This requires senior managers within Foreign Ministries to set the direction and provide a focal point within their institutions for pushing the agenda forward. Beyond that, ongoing political engagement, a diplomatic network willing to deliver and a coherent cross-government approach are the three most important elements needed to achieve climate change objectives (Drexhage *et.al*., 2007:xii).

If the major goal of Western foreign policy is to provide stability and security for the well-being of humans, then climate change, although abstract, becomes an enemy of the nations which they should fight under their foreign policy:

> The transfer of climate change decision-making from the environment track to the foreign affairs track could offer an opportunity to provide a more strategic perspective to the way the EU negotiates and to incorporate related external policies and foreign policy aspects (Louise van Schaik and C. Egenhofer, 2003 quoted in Drexhage *et al*., 2007:6).

The transformation to a low carbon economy requires geopolitical and strategic decisions not environmental ones, such as changes in investment patterns which gives high importance to climate change as well as rapid acceleration of clean energy markets. Climate change is an international collective action problem, not just another environmental one.

Therefore, it should be evaluated within the broad UN system as a fundamental threat to peace and security (Drexhage *et al*., 2007:10).

Climate change presents new security threats both to the ecosystems and well being of the people. Particularly due to extreme weather events, the world has witnessed natural disasters in the last decade. The effects of these disasters are immense especially in areas where social and ecological resilience is weak. In other words, climate change hits badly already vulnerable areas. At worse its impacts may escalate resource related conflicts in those areas. In that case, even the most developed states with high adaptive capacities become vulnerable to the large scale climate induced conflicts. Social, ecological, economic and political impacts of climate change will certainly vary in different parts of the world. However, since it is a global problem, no country can escape from any security challenge that threatens international peace and security (WBGU, 2007).

All these security risks arising from environmental degradation, resource scarcity, movements of environmental refugees, contests over access to new resources should take their place in the peace and security studies of a country which are handled by foreign policy. In line with these explanations, Turkey should also be able to address climate change within its foreign policy basing on domestic preparations which had been achieved by the Climate Change Coordination Committee as to what extent Turkey can afford to contribute to the fight against climate change. Turkey's foreign policy should be able to take the necessary initiatives to negotiate a suitable place for Turkey within the global regime which do not conflict with other foreign policy objectives. For instance, today, energy security has turned out to be the top priority for countries. The major topic of the G-8 meeting in July 2007, in Russia has been global energy security. The countries become more and more interdependent in their efforts to achieve energy security. Since energy security has become a global issue, it should take its place in the foreign policy of the countries (Drexhage *et al*., 2007: 14-15). The energy security is also very much related with global climate change itself and measures to fight it. Therefore, Turkey should evaluate its energy policy on the basis of its global climate change policy. At this juncture, the cooperation of the Ministry of Environment and Forestry with the Ministry of Energy and Natural resources gains importance.

As being a party to the Montreal Protocol in 1987, to protect the ozone layer, Turkey has been able to decrease its related emissions successfully. Turkey has been treated as a

developing country in this Protocol and accordingly has been able to abide by its requirements. If such a standing had been achieved in the Kyoto Protocol as well during 1992, Turkey would have successfully taken its place in the climate regime by fulfilling its responsibilities. Therefore, at present, Turkey should immediately take the initiative to place itself under those circumstances which it can afford to achieve together with those countries which share similar characteristics. This requires the beginning of such negotiations as well as the ratification of the Kyoto Protocol. However, the negotiations concerning the post-2012 period have already started at the global level. If Turkey acts slowly, then it might be forced to take place among the Annex I countries once more in the post-2012 period.

5.3.3.2 International Funding

Presently, the climate change issue presents Turkey an opportunity to establish a comprehensive strategy for the 21st century highlighting the important areas that will help formulate this strategy for a sustainable future. Some voices within the country emphasize that this process would require huge amounts of investments and reforms and therefore, it should not start before Turkey becomes stronger. However such a claim sounds irrelevant in the sense that it cannot be possible for Turkey to become stronger without such reforms. In very near future, Turkey will likely have to face the pressure of the international community. Nevertheless, to realize these reforms with regard to global climate change, Turkey needs external funding for investments. The major source of these fundings will naturally be the EU. However, the EU firms would also be looking for using the extra carbons resulting from such investments in Turkey for achieving their Kyoto targets. When the Turkish market cannot produce these carbon credits to be used within the Kyoto targets, then these companies would be more willing to make these investments in the Kyoto countries to be able to receive their returns. Therefore, on the part of Turkey, standing on the way against these reforms would be shortsightedness and would only increase the costs that Turkey would need to invest anyhow while delaying the action required to be taken this way or another.

In line with aligning Turkey's environmental infrastructure with the Acquis of the EU, many initiatives and measures have been taken by the Turkish Government. This has been achieved as environmental awareness increased in Turkey as a result of EU candidacy, the increasing environmental activity at the global level, and the seasonal experiences over the last couple of years as well as the increasing activity of the environmental NGOs at the

domestic level. More can be done if the financial burden can be shared. Presently, there are many funds which Turkey can make use of. First of all, within the sphere of environmental finance within EU harmonization, the relevant programs of MEDA, LIFE-Third Countries Program and SMAP have been accelerated. Turkey has already obtained support for some of its projects. Until the present, many environmental projects have been supported by donations from International Environment Donors such as UNEP, Mediterranean Action Plan, UNDP, UNIDO, EU, World Bank, GEF, Japanese International Cooperation Agency (JICA), UN Food and Agriculture Agency (FAO), German Development Bank, German Development Cooperation, Mediterranean Environmental Technology Assistance Program (METAP), Defra and embassies of countries (MoEF, 2007: 21).

Certainly, Turkey has made many attempts over the years to adapt to the environmental problems it will be facing. However, mostly due to financial inadequacies, these attempts have been limited. Another factor on this outcome is the fact that Turkey has become a passive member of the climate regime over the last couple of years. The inappropriate placement of its name as both an Annex I and an Annex II country in the 1992 UNFCCC has given way to a process of defense on the part of Turkey. Turkey has lost many years in trying to explain its developing country status. This also has led to the development of negative feelings both at the state level as well as among the society towards the issue. As a result, Turkey has not been able to take its place in the Kyoto process. Consequently, it has not been able to make the necessary adjustments and preparations together with the other parties. While the parties to the Kyoto Protocol have started to benefit from the flexible mechanisms as of 2005, Turkey has kept on discussing whether or not to sign the Kyoto Protocol. Presently, the time left until 2008, the beginning of the first commitment period, is not enough for Turkey to handle any negotiations for the first commitment period. However, the Kyoto parties have already started negotiations for the second commitment period which would start after 2012. Therefore, above everything, Turkey's priority must be to get involved in these negotiations as soon as possible to be able to shape its own future in the climate regime. For this end, it should, first, sign the Kyoto Protocol at its earliest convenience.

Over the years, the Kyoto Protocol has turned out to be a European project. Under these circumstances, Turkey will be faced with pressures from the EU to sign the Kyoto Protocol as part of its Acquis Communautaire which Turkey is responsible for adapting.

Unfortunately, Turkey does not have the financial capability to make the necessary investments on its own which are required to achieve a low carbon economy. This will require a gradual but new industrial revolution. At this juncture, most of this investment can be achieved by the EU. Under the alternative scenario that Turkey becomes a party to the Kyoto Protocol, investment of climate friendly technologies in Turkey would become very attractive for the EU since the carbon earned from these investments would be used for reaching their Kyoto targets. As a consequence, Turkey would become a major market for those European firms who have become world leaders in low-carbon technologies. Under these circumstances, the formulation of Turkey's climate policy, being an important part of its foreign policy, should be achieved within the perspective of its candidacy to the EU.

Logan emphasizes that China's shift to climate-friendly energy depends on international collaboration (Logan *et. al*., 2007). For Turkey, the transition to a low carbon economy depends on international collaboration, too. However, within this international cooperation, the EU takes the center stage due to the strong relations between the EU and Turkey.

Only through signing the Kyoto Protocol can Turkey be able to find the necessary funding for a low carbon economy. The negotiations should aim at both eligibility for CDM projects and eligibility for emissions trading, which most probably will require the setting of a target. This should not threaten Turkey. Variety of targets can be negotiated; a target does not have to be on quantified emissions reductions. They can be policy based or sectoral based as indicated by the on-going negotiations for the post-Kyoto era.

Turkey has gone through a long and difficult time period between 1992 and 2001. It was the only country trying to get special circumstances from the world community. Therefore this time, it should be careful as to not to be left alone. It should belong to a group of like countries to make its voice heard better as well as to be able to exert more pressure to negotiate. Presently, the emissions trading and the CDM mechanisms of the Kyoto Protocol are already in effect and have been started to be utilized by the Kyoto parties in an effort to decrease the financial burden of low-carbon investments. Since there is not enough time for the arrangements, Turkey, even if it signs the Kyoto Protocol, will not be able to utilize its flexibility mechanisms. In addition to this, Turkey needs to further negotiate a new status to

be able to utilize CDM projects in the second commitment period. Whereas, the non-Annex I countries have already started hosting CDMs.

5.3.3.2.1 The Present CDM Market

As of August 27, 2007, there have been 2424 CDM projects officially prepared and applied all over the world. Among these, 26 have been rejected, 6 have been withdrawn, 763 have already been registered and 161 are in the registration process (UNEP Risoe, 2007). A detailed description of the present status of the CDM projects is listed in Table 5.10.

In Table 5.11, the regional distribution of CDM projects can be seen. Latin America and Asia Pacific host the majority of CDM projects. The leading countries in these two regions; India, China, Mexico and Brazil have started with hosting 50% of the total CDM projects and presently, this has been increased almost to 80%. These are the advanced developing countries in those regions whose carbon emissions are expected to increase rapidly in the coming years as a result of their continuing fast economic development.

Turkey shares a similar position with these countries and needs CDM projects to slow down the increase in its emissions in the coming years. After setting its strategy, Turkey should be represented with a strong team in the negotiation meetings and should be able to make its voice heard with strong presentations. For example, in the Earth Negotiations Bulletin (ENB), these negotiations which take place within the SB and COP/MOP meetings are followed closely. The different views of different countries are published. Turkey should hurry to set its own strategy and announce it to the world. Just like other countries, Turkey's views should take their place in the Earth Negotiations Bulletin and in other similar sources. By this way, Turkey would be able to engineer a better place for itself within the global climate regime and form alliances with those countries who share similar characteristics and interests.

Apart from the funding opportunities related to the status of Turkey within the global climate regime, Turkey can also raise funds from the voluntary carbon markets until it becomes a Kyoto Party.

Table 5.10 Status of CDM Projects

Status of CDM Projects	Number
At validation	1468
Request for registration	72
Request for review	52
Correction requested	23
Under review	14
Total in the process of registration	161
Withdrawn	6
Rejected by EB	26
Registered, no issuance requested	499
Registered, request for CERs	11
Registered, correction requested	6
Registered, request for CER issuance review	15
Registered, under review	0
Registered, CER issued	232
Total registered	763
Total number of projects (including rejected and withdrawn)	2424

Source: UNEP Risoe CDM/JI Pipeline Analysis and Database, August 2007.

www.cdmpipeline.org/graphs/overview_1.gif. Accessed on 30.08.2007.

5.3.3.2.2 Voluntary carbon markets

The voluntary carbon market gives individuals and companies the chance to balance their CO_2 emissions through the trade of Verified Emission Reduction (VER) credits. The buyers of VERs are companies, organizations, institutions and private people who wish to compensate for emissions on a voluntary basis. VERs can be sold by those countries that

have not ratified the Kyoto Protocol, in other words, those emissions which have not been generated from JI or CDM can be sold as VERs. They can be seen as the CDM projects in the future, however, these projects do not conflict with future Kyoto positions. Under these circumstances, VERs should be seen as an opportunity for Turkey in encouraging CO_2 emission reductions (Frenzel, 2007). VER projects should involve reductions in GHG emissions. It can be energy production from wind, biomass, biogas, solar, geothermal, fuel switch, landfill gas, waste water treatment, waste incineration, efficiency improvements in energy generation and utilization.

Table 5.11 Total CDMs with respect to regions

Total in the CDM Pipeline	Number	Percentage
Latin America	590	24.7%
Asia & Pacific	1716	71.7%
Europe & Central Asia	22	0.9%
Sub-Sahara Africa	32	1.3%
North Africa & Middle East	32	1.3%

Source: Source: UNEP Risoe CDM/JI Pipeline Analysis and Database, August 2007. www.cdmpipeline.org/graphs/region_7.gif. On 30.08.2007.

There have been a few projects for which Verified Emission Reduction (VER) Certificates have been issued in Turkey and traded at the global voluntary carbon markets. However, VER prices are very low when compared to the price of carbon in the global markets reigned under the Kyoto Protocol. The utilization of VERs in Turkey would open Turkey's access to the global carbon market. It would, nevertheless, provide additional income for the investments and it would help 'learning by doing' which would also serve as a preparation for the post-2012 period. If such projects can be seen as an opportunity rather than a threat and could be increased, this would both decrease Turkey's emissions and set the basis for the relationship between the government offices and the firms by involving them in the process. Becoming aware of the fact that almost every decision has become carbon-

centered, that is decisions are evaluated with respect to their effects on carbon outputs, Turkey should also increase awareness on this issue and accelerate its preparations and adjustments in every policy area in this respect. The average price of carbon in the voluntary carbon markets is between €4 and €6. However, under the CDM projects, the price of carbon is between €20 and €30 (Can, 2007).

If Turkey had been a party to the Kyoto Protocol, then the emission reduction seeker countries would not go to China or Indonesia for CDM projects. However, under present circumstances, even if Turkey ratifies the Kyoto Protocol, the time left until the beginning of the first commitment period is not enough for it to start emissions trading or other flexibility mechanisms of the Kyoto Protocol. Therefore, until the beginning of the second commitment period, voluntary carbon markets offer Turkey the opportunity of gaining experience in emissions trading.

The development of a VER market has many opportunities for Turkey. These markets open the way for the involvement of private sector in climate change mitigation activities. They create incentives for renewable energy without state funds. They help capacity building for future climate change mitigation. They make the dissemination as well as the opportunities of the carbon market possible in Turkey. Through the VER projects, carbon reducing projects can be supported financially. Additional funds from the international carbon market can be earned. Learning about the carbon market as well as relevant processes can be enhanced. Turkey and the Turkish companies would be able to prepare for the future regulations and strengthen their competitiveness in this field (Frenzel, 2007). The VER market has shown a steady increase over the last few years. The estimations of the Climate Group as to the size of the market can be seen in Table 5.12.

The World Bank estimates the size of the voluntary carbon market in 2010 to be around 400 Mt (Leclaire, 2007). VERs are sold in a price range of 4-6 €/tCO_2e (Frenzel, 2007). That makes a market worth of almost €2 billion. Table 5.13 lists certain stages that are required for the development of a VER project.

At some stages, the cooperation of the Turkish Government becomes necessary. However, to realize such collaboration, there is need for certain legislation. The Turkish Government should arrange such legislation as soon as possible. Since, even if

Turkey ratifies the Kyoto Protocol, it cannot benefit from its mechanisms, therefore, the application of such projects are very important for Turkey prior to the post-2012 period.

Table 5.12 Voluntary Carbon Market – Market Size

Year	Estimated in Million Tons
2004	3-5 Mt
2005	10-20 Mt
2006	20-50 Mt
2007	100 Mt

Source: Dreves, 2007.

Table 5.13: Major Stages of a VER Project

project idea and feasibility
project design document
host country endorsement
validation and registration project implementation and monitoring
verification and certification
sale of emission credits

Source: Frenzel, 2007.

Until present, two VER projects have been achieved in Turkey, while others are waiting for validation (see Table 5.14). At this juncture, further involvement of the Turkish Government is necessary for the setting up of the standard procedures at the government level, which would help to the realization of the projects. Currently, problems of validation

and registration, project implementation and monitoring, verification and certification decrease the attractiveness of such projects in Turkey. Actually, these are measures that Turkey will inevitably be forced to take in the near future. Therefore, there are no gains that Turkey might get by a wait and see policy in this respect. Unfortunately, in none of the official plans prepared for the near future, it is possible to see a preparation for taking such measures or developing supportive policies which would in fact enhance the implementation of these projects in Turkey. On the other side, the foreign investors are waiting for such developments to take place to speed up their investments in Turkey in this respect.

Table 5.14: The carbon market in Turkey

• **Bares II** (first private wind farm in Turkey, first VER project!, commissioned May 2006)
• **Karakurt** (small-scale wind farm, commissioned April 2007)
• **Sebenoba** (large-scale wind farm)
• **Şamli** (large-scale wind farm, Gold Standard, under validation)
• **Geothermal power plant** (Gold Standard, under validation)
• **Large-scale wind farm** (Gold Standard, under validation)

The ENB has reported recently that during the 2007 Vienna Climate talks[128], Turkey has emphasized the importance of adaptation. This is most probably due to the water shortages which had been experienced this summer, especially in the capital city Ankara. However, mitigation strategies and especially Turkey's place within the post-2012 system are also priority areas for Turkey. At the international level, the need for new country groupings and new kinds of targets for the post-2012 period should be the priority areas that should be emphasized by Turkey. The advanced developing country status of Turkey should be underlined. For example, Mexico's views can be an example for Turkey which is a country in a similar position with Turkey as an advanced developing country. Mexico has stressed that advanced developing countries should have incentives for innovative schemes to build and achieve goals over time (ENB, 2007a). In addition to this, Turkey can also make a presentation on its energy needs and mitigation potential in key sectors to attract investments as well. However, since Turkey has still not formulated its official policy concerning both the Kyoto Protocol and its place in the future climate change regime, it cannot enter into detailed negotiations. Turkey still does not have a target to negotiate. The process still continues

[128] AWG4 and the Dialogue #4.

without serious Turkish efforts needed to place Turkey in a right position in the regime. Becoming deeply involved in the climate regime requires critical decisions to be taken at several areas of policy. Being under the pressure of many factors, such as the business firms, sectoral lobbies, inter-ministerial uncoordination, lack of knowledge and understanding, lack of capacity as well as the political difficulties, the policy makers in Turkey face the difficulty of changing the status quo which is required to catch up with the climate regime as well as to harmonize its policies with the EU Acquis.

5.3.4 A Climate change policy for Turkey

Presently, if Turkey can quickly take necessary decisions and acts in goodwill and willingness in a way taking its own responsibilities, it will have the power to negotiate its special circumstances. However if Turkey waits to see that it is being compelled by other countries to take its responsibilities, then it will not have the power to negotiate and may be forced to accept the terms outlined for it by the other countries. During the UNFCCC negotiations in the past, Turkey had been directed by the other countries and has not been able to put its own circumstances forward and consequently has been placed both in the Annex I and II of the UNFCCC at those years. It has taken so many years and so much efforts trying to change a wrong decision. As a result, it has still not been possible to correct this misplacement. Although Turkey has been able to exit from the Annex II list of the UNFCCC, it has stayed in Annex I which has been the major reason why Turkey has stayed out of the Kyoto Protocol up until today without being able to benefit from the possible mechanisms. Today, Turkey should not leave its future to others' decisions. Turkey is supposed to take the initiative itself immediately. If the necessary deal had been achieved at those years prior to the signing of the Convention and Turkey's special circumstances had been explained in a way which would result in Turkey's taking place in UNFCCC as a non-Annex I country, then it would have the chance of taking its place in the Kyoto Protocol as a non-Annex B country. As a result, the transition to a low-carbon economy would have started years ago and Turkey could have been able to benefit from the financial mechanisms of the Kyoto Protocol, especially the CDM, to share this financial burden resulting from this transition.

Therefore, today, the major aim should be to take place within the global climate regime as soon as possible. As time passes, Turkey's negotiating power erodes. For example, Mexico, who is at a similar developmental stage as Turkey, however not an Annex I party, has recently proposed to set a voluntary emissions target (Rec Turkey, 2007).

President of the World Resources Institute (WRI), Jonathan Pershing emphasizes on the importance of making a start:

> One thing that happens as companies move forward in identifying emissions is that they also identify opportunities, they identify energy savings....Energy has a significant cost, and the lower your energy cost, the more profitable your company is (Mongobay, 2005).

It is true that the Kyoto Protocol aims to create a global carbon market in which those countries that have generated more emissions over their permitted quotas will have the opportunity of buying the excess emission rights of those who have generated less than their permitted quotas. The resulting emissions trading market becomes very attractive for the international financial sector as a source of revenue. This brings the question whether the world will be saved by emissions trading which sounds hopeless and unreliable. However, it should not be forgotten that the Kyoto Protocol is just a start. The climate change issue is an extensive policy area covering lots of important policy issues and consequently lots of sectors. Presently, especially the financial and business sectors representing the production of goods and services as well as the industrial sectors are governed by the principles of the capitalist system; mainly revenue maximization in a competitive environment. In such a global market, which is governed by the rules of laissez-faire economics of the capitalist system, expecting voluntary measures from these companies, as part of an ethical and responsible approach towards the earth on which they operate, would be unrealistic. Therefore, the Kyoto Protocol should be seen as a good start in convincing these companies to make the necessary investments for a low carbon economy in the years to come. Leaving the firms aside, there are other measures as well to reduce emissions which sound more ethical and more responsible. These can be achieved through little changes in the life styles of the people. This requires the introduction of new values and norms in the society through increasing public awareness about the possible consequences of climate change.

The world cannot wait longer for the establishment of more idealist policies. The urgency of the issue requires the building of policies and strategies over present conditions and realities. Turkey is expected to increase its 1990 carbon emissions three fold until 2020 (MOEF, 2007: 2007). Expecting such a rise without taking measures to slow it down would be irresponsibility on the part of Turkey. It should not be forgotten that the potential of reducing GHG emissions is quite high in Turkey (Cemre, 2007:8).

Now that Turkey has prepared its First National Communication, it is time to establish some measures at the national level to slow down the accelerating trend of its rising GHG

emissions. These measures will also help Turkey to continue its development in a sustainable manner. These national measures which will be established in line with Turkey's national economic and technical capabilities will be the consequence of an inter-sectoral approach, in other words, by integrating climate change measures to the related sectors for harmonization. These measures will serve as the means and tools of negotiation at the international level to place Turkey under an appropriate status. This negotiation process would involve the UNFCCC as well as the EU and the other countries of the world. To be able to protect and represent its own national capabilities, Turkey needs to join actively the international effort and negotiate its special circumstances. At this juncture, it is certain that for Turkey to be able to formulate a successful climate change policy, a thorough combination of its domestic and international efforts is a precondition. Its domestic efforts are to be compelling for negotiating a just position for Turkey within the global climate change regime. Similarly, efforts to place Turkey in an appropriate status within the global climate regime is necessary to support the implementation of national policies both financially as well as technologically. As had been emphasized by Putnam back in 1988, it is impossible to separate the domestic and the international dimensions of the climate change policy making process from each other. They are both interrelated.

The climate change issue has been introduced to the Turkish politics as a result of the international developments of the 1990s to establish the global climate change regime. Otherwise, climate change has not been an issue to which awareness about it has been developed within Turkey itself. Turkey has learned about the climate change issue as its interaction with the global climate change regime has increased. Therefore, both to be able to catch up with the requirements of the regime as well as to benefit from it, Turkey should actively integrate itself with the global climate change regime. As an EU candidate country, this has almost become a requirement for the sustainable development of Turkey.

The protection of this common good requires common global action with the participation of every nation having access to the atmosphere. During the last two decades, most countries of the world have come together under the UN for collective action against climate change; to protect the atmosphere. Turkey, accepting that the atmosphere is a global commons as well as a collective good to which every individual has access, should take more vigorously its own responsibility of protecting it just like most of the other nations. Under

these circumstances, there is no way for Turkey other than to join the international efforts in searching for a more effective climate regime.

However, this grand strategy at the domestic level should be supported by an international standing on the subject, which will in fact determine the way and level of international financing of the implementation of this grand strategy. Unfortunately, Turkey, still, has neither formulated such a strategy, nor a global standing on climate change. When the government officials are asked about the official national climate change policy of Turkey, they find it difficult to answer. Most of them pronounce very generalized and common statements away from tangible measures. However, Turkey now has its First National Communication. Basing on the information provided in this document, although the numbers may not be very realistic, Turkey can manage to negotiate a position for the post-2012 period.

Given the economic and environmental policies and priority assigned to climate change, it can be argued that Turkey has not been able to integrate its environmental concerns into other sectors of development so far. Depending on the theoretical elaborations, it can also be argued that environmental protection and economic development are seen in terms of a zero-sum game in which the environment loses most of the times. Realist themes seem more dominant elements in Turkish policy making process although Turkey is party to many international environmental agreements. Nevertheless, it is necessary to underline once again the significance of the 'external factor' which has so far played an important role for Turkey to become party to those agreements. In the case of climate change, this influence is even more evident. Therefore, it can be claimed that environmental values in Turkey are not well understood or deep-seated but rather regarded as trivial for most of the time. However, changing climate and its impacts force Turkey to review her priorities and to take a close look at the environmental values and human security. Otherwise, Turkey seems to stick to only traditional geopolitical concerns which provide limited tools whereas neoliberalism offers more beneficial opportunities for Turkey to actively take place within the emerging climate change regime in the long term. Briefly, constructing its own special circumstances for better bargaining positions, Turkey has to take the environmental challenges as threats to its socio-

economic development rather than perceiving environmental values and policies as obstacles to its development.

VI. CONCLUSION

The world has begun to hear disturbing scientific information about the state of the environment since the early 1960s. A wide range of environmental problems from stratospheric ozone layer depletion to the loss of biodiversity have started to challenge social and economic structures and even human survival on earth. Among all, climate change is the most complex environmental challenge threatening human survival and requiring the worldwide restructuring of a broad range of policies and life styles in a short time period. Briefly, climate change results from the increase in the emissions of GHGs in the atmosphere to the levels which exceed the carrying capacity of the atmosphere. Current scientific findings have already proved that this increase has been induced by various human activities. Controlling these human activities is therefore the prerequisite of the stabilization of these gases in the atmosphere, which would otherwise have huge impacts on the lives of people as well as the generations to come.

The most recent report of the IPCC, prepared in 2007, warns the states about the dramatic consequences of climate change in the short term and calls for drastic measures and efforts which are needed to be taken by the states to be able to stabilize the concentration of these gases in the atmosphere at a normal level. As a result, presently, the climate change issue has turned out to be a priority policy area for the countries of the world within a short period of time.

Going back to the 1970s, scientific research provided better information about the working of the world climate system and brought the climate change issue to the attention of the nations of the world. Through ongoing scientific findings, climate change has managed to move up on the political agendas of the countries culminating in the preparation of a Framework Convention on Climate Change.

Climate change is different from most of the environmental problems in the sense that its impacts are not local. On the contrary, they are global in their very nature. Moreover atmosphere is a global commons; that is it is open to the access of every individual and no one state or individual can assume jurisdiction over any part of the atmosphere. In this sense, it is a collective good to be used and protected by every nation and individual. However protection of a collective good makes it a global problem requiring global action. Consequently, global action requires international cooperation. As a matter of fact, climate change issue is a useful experience for the world countries to see that international cooperation for a collective good is inevitable as well as possible. It has also provided the neoliberal institutionalists with a good

example that international cooperation could be achieved for the protection of a collective good. Besides the establishment of a global regime with institutions, rules and procedures have also supported their arguments that international institutions are the agents of international cooperation.

As the first step in international effort to cope with climate change, UNFCCC was signed in 1992. Under the UNFCCC, the industrialized countries of the OECD were given non binding reduction targets under Annex I. However, it was clear from the beginning that the issue was urgent and required more rigorous measures; otherwise, it might become too late to take action once the critical 2 °C increase in world mean temperature has been passed, and impacts of climate change might become devastating for many countries. This has led the countries to the adoption of the Kyoto Protocol in 1997 which has brought binding targets for the industrialized world as well as mechanisms to help them overcome the economic burden of meeting their targets. While the UNFCCC has been important as being the first international agreement concerning climate change, Kyoto Protocol is also very important as being the first concrete step towards a low-carbon future. Besides, the Kyoto Protocol has provided the countries with a future vision that there would be subsequent periods in the future following the first commitment period to negotiate for the future of the climate regime. Accordingly, start has been given for the negotiations of the post-2012 period during COP11/MOP1 in Montreal. Two bodies have been established with this purpose. The AWG assumed such responsibility under the Kyoto Protocol and, the Convention Dialogue assumed responsibility under the UNFCCC. The AWG and the Convention Dialogue have already met four times as planned and are expected to submit their reports to COP13/MOP3 which will take place in Bali, in December 2007.

One of the critical handicaps of the Kyoto Protocol is its rigidity with respect to the types of targets. The Annex B Parties under the Kyoto Protocol have only been provided with quantified emission reduction targets. Under the existing Protocol, commitments to other kinds of targets such as sectoral or policy-based targets are not possible. However, the inclusion of alternative targets would certainly enhance cooperation; that is more countries would be able to and willing to take on commitments for reducing GHG emissions. Therefore, new types of targets are being discussed at the ongoing negotiations concerning the post-2012 period. Another important handicap of the Kyoto Protocol relates to its long decision making mechanism. Under the Protocol, a country who wishes to become an Annex B Party by taking on a quantified emissions reduction target needs to go through a long process. Until the present day, although some countries have come up with such demands

like Belarus and Croatia, their demands have not been concluded. Even though all the Parties to the Protocol have accepted their demands and taken the decisions accordingly during the COP meetings, no other Parties apart from the demanding Parties have ratified these decisions at their national parliaments. As a matter of fact, due to the high number of participants, both the UNFCCC and the Kyoto Protocol have rather chosen to pursue a silent track towards the demands coming from various countries over the years. The message was that such negotiations should take place prior to the finalization of the deal. After the deal has been done, accepting changes and amendments would water down the agreement, in a way reducing its effectiveness as well as its credibility. This is also another topic which is being discussed within the ongoing negotiations. The countries are looking for alternative mechanisms for the post-2012 period which would offer some sort of flexibility both with respect to the availability of different targets from which the countries would choose according to their development levels as well as their national capabilities and a system which could offer different status groups other than Annex B that would enhance the willingness of the developing countries to take place within the international effort to reduce GHG emissions in the second commitment period.

The first commitment period has been restricted to the binding commitments of the industrialized world. However, presently, the industrialized world is more prone to the idea that some of the developing countries should also be included in the efforts, especially those whose emissions are expected to rise rapidly in the coming years which are the advanced developing countries such as China, Brazil, Mexico, South Africa, South Korea and Turkey. Under these circumstances, the time period until 2009, when the negotiations for the post-2012 period are expected to be finalized, have utmost importance for these countries since only through this short time period will it be possible for them to accommodate themselves with a suitable position within the post-2012 climate change regime. These negotiations are very important, since these countries should be able to continue their rapid economic development during this period by at the same time trying to control the rapid rise in their emissions as a consequence of this development. However leaving the burden of cost of emission reductions on the shoulders of these countries would not be just. Therefore, this period is very important for the setting of new adjustments for the post-2012 period which could motivate these countries to take commitments without slowing down their development. New investments are required to help transforming their economies into a low-carbon economy. Therefore post-2012 mechanisms should involve incentives for new investments in developing countries.

The latest scientific information from the IPCC has warned the international community that highest levels of GHG emissions were expected to be seen within 10 to 15 years and that 25-40% reductions of emissions were necessary before 2050. With this recent information together with the broad opinion within the UNFCCC community that every country should do its best, more pressure is expected in the coming years for the actual involvement of the developing countries in the international effort by taking on responsibilities in parallel with their national circumstances, especially for those advanced developing countries.

While international cooperation is moving ahead, the position of Turkey is still a big question mark. Turkey signed the UNFCCC only in 2004 as the 189th country in the world to take part in this important international initiative. Besides, although the Kyoto Protocol has been signed by 175 countries so far, Turkey still has not signed it. Since 2001 Turkey has, however, continued to grow economically on an increasing pace and its advanced developing country status has been revealed in the reports of OECD and the World Bank. In parallel with this, GHG emissions of Turkey are expected to rise dramatically in the coming years which means that it might become necessary for Turkey to control its emissions in the post Kyoto era. However, Turkey, as the other developing countries, tries to maintain its right to pollute. Continuing to be a passive member of the regime, on the other hand, might become more costly for both developed and developing countries. Turkey is, therefore, likely to face punitive repercussions in the long run if it does not take part in the future climate regime. Moreover to achieve its economic and social development targets, Turkey needs to negotiate its position with the other parties.

As a matter of fact, Turkey's involvement in the climate change issue has been realized mainly through international efforts. Otherwise, Turkey would not have developed any policies concerning climate change given its attitude to scientific findings. Turkey has not been under the immediate threat of climate change contrary to some of the small island states and low lying countries or regions which are prone to the detrimental impacts of tornadoes or hurricanes. However, Turkey is not immune to the impacts of climate change. Droughts, changes in precipitation patterns and loss of biodiversity will definitely challenge social, economic and ecological resilience of Turkey. Some of these impacts are already visible and causing great pressure on the daily lives of the people in certain regions. Even so, climate change research has not fully developed yet. Until recently, it was not possible to talk about the existence of epistemic communities and NGOs in Turkey which focused mainly on climate change. At the government level, climate change was even not an issue of concern.

There were no units established for climate change and were no records about Turkey's emission levels. In a way, Turkey, at those years, was not prepared even to talk about the climate change issue leaving alone the negotiating base. This position constitutes the main argument of this thesis. It is argued, in this thesis, that if there had not been such an international effort on the subject, Turkey would not get involved in this issue; it might not even have prepared its GHG inventory. Therefore, as the regime theory recalls, international cooperation and the resulting regime have been very important in Turkey's involvement in the climate change issue as well as its climate change policy. Starting from the beginning, Turkey's official policy on climate change has been accepting to be a part of the climate change regime without bearing any responsibilities. It could be seen as a best policy option in the short run. However, this thesis has argued that such a view point was far from reality and in turn would bring unbearable consequences for Turkey in the near future.

Prior to the signing of the UNFCCC, Turkey has been invited to the negotiations to contribute to the draft convention. However, Turkey has not taken this opportunity to change its status within the UNFCCC at that time. At those years, climate change has not developed in Turkey as a policy area and consequently, there was a lack of personnel who were working on this subject. In addition to these, environmental matters were being perceived to be obstacles to economic growth and, therefore, considered to be low politics. Ever since that time, Turkey has been in a vicious circle. Following the opening of signature of the UNFCCC in 1992, Turkey has spent years to change its status from a developed to a developing country. While the other countries kept on moving forward on the issue through a learning process as being a part of the regime, Turkey lost its years in trying to convince the world that it was a developing country instead. During this period, climate change issue continued to be a low priority issue in Turkish political life, although the issue was keeping to move up the agendas of many countries. To sum up, until COP7, held in Marrakesh, in 2001, Turkey lost significant and very precious time trying to convince the world that it should not take commitments. During COP7, it was decided to delete the name of Turkey from the Annex II list to the Convention. According to this decision, Turkey would be an Annex I Party, however, with special circumstances that put Turkey in a different position from those of the other Annex I Parties. By this way, the Turkish dilemma has been, to a certain extent, resolved. Turkey has, partially, achieved its official policy on climate change, that is; to be involved in the process by not taking any responsibilities. Even though, Turkey has secured itself such a place within the climate change regime, it has still taken almost three years for it to ratify its membership to the UNFCCC. In addition to this, until the present day, Turkey has

refrained from signing the Kyoto Protocol on the grounds that it would automatically become an Annex B Party under the Kyoto Protocol which would require the establishment of a quantified emissions reduction target. Although, its different position from those other Annex B Parties (since Annex B comprises of the Annex I Parties under the UNFCCC) countries have been underlined in Decision/CP.7, Turkey has not even made any attempts to see what kind of a deal would be possible if it decides to sign the Kyoto Protocol. It has taken it for granted that it would become an Annex B Party with binding responsibilities. As a result, it has stayed out of the real process, especially concerning the post-2012 negotiations. These negotiations have taken place in the AWG meetings under the Kyoto Protocol and Turkey has not been able to join these discussions as not being a Party to the Kyoto Protocol. Ironically, at present, the world has concentrated on the negotiations of the framework for the post-2012 period whereas Turkey has recently started the debate whether or not to sign the Kyoto Protocol.

It is worth stressing that Turkey has not achieved becoming an active or self motivated party to the climate regime so far although it is a party to the UNFCCC. The external factors in shaping its position towards international agreements still seem very prominent. In case its standing point does not change, it appears that Turkey will not be an active party in the future global climate regime, either. In order to achieve gains from the climate change regime and avoid the results of worst case scenarios, Turkey has to negotiate its position for the post-2012 period. However, to this end signing of the Kyoto Protocol seems a precondition for Turkey at the moment. It is evident that even if Turkey signs the Kyoto Protocol today, it cannot become a part of the first commitment period due to the long Kyoto process of taking decisions. Therefore, Turkey should focus on the post-2012 negotiations.

As a matter of fact, this is already what Turkey should do, that is to take its responsibility towards protecting the earth in an effort to leave a healthy world to the next generations. Turkey has to take the necessary steps for this end. What is more, Turkey is in the need of planning of a gradual transition to a low-carbon economy given its development targets. Searching for ways to support this transition financially is not an unethical move. The urgent priority at the present is the reduction of emissions through transition to a low-carbon economy rather than a strong revolution against the capitalist economic system. Utilizing the already existing financial mechanisms of the system would enhance and ease this transition to a great extent. Without this financial support, unfortunately, it cannot be possible to achieve such policies. However, the prerequisite of receiving such financial support is becoming an active part of the regime by first signing the Kyoto Protocol.

Through signing the Kyoto Protocol, Turkey can start negotiations for a loose target. According to some groups, commitment to a target might slow down Turkey's development and be very costly. Actually, such a target need not be seen as a negative development for Turkey. This target does not have to be a quantified emissions reduction target of the first commitment period compared to a base year. There are other types of targets which Turkey can choose among and negotiate for. Commitment to a target can have certain advantages for Turkey. First of all, such commitments help countries to take the issue more serious. This helps the country as well as the business firms to get organized to move towards that direction. Second, through the target, the active involvement of the country in the climate regime with goodwill is announced to the whole world. This enhances that Party's position in the international arena by providing it with a strong base in its foreign policy. Additionally, the existence of a target in a country provides the business community of that country with the indication of the direction that country is aiming at in the future. By this way, it becomes easier for business firms to see the kinds of investment opportunities they could realize in the near future. Besides, the target of a country provides the business community of that country with an assurance for the future related to their present investments.

Certainly, it is much easier for a country with a target to provide financial and technological support for achieving this target. Negotiation of a target requires the ratification of the Kyoto Protocol as a first step. After ratifying the Kyoto Protocol, commitment to a target opens the way for the utilization of the Kyoto Protocol's flexibility mechanisms; emissions trading, joint implementation (JI) and clean development mechanism (CDM). Through emissions trading, Turkey would have the chance of selling the extra carbon which has been obtained as a result of low-carbon investments. By this way, it would become possible for the Turkish companies to compensate for the investment costs. On the other hand, being a Kyoto Protocol Party would also open the way for either JI or CDM for Turkey according to its negotiations. CDM is the mechanism which can be used by the Non-Annex I Parties at the present. However, currently, Turkey is an Annex I Party. Although making the transition of a Party from one status to another easier is one of the topics in the post-2012 discussions, this is rather being planned for those who are willing to join the Annex I Parties by taking on commitments rather than vice versa. Nevertheless, since there is not enough time left until the beginning of the first commitment period in 2008, the involvement of Turkey in these mechanisms does not seem to be possible for the first commitment period.

The present negotiations are aimed at going one step further by enhancing international cooperation for stronger collaboration in the second term. This requires deeper

commitments on the part of the industrialized countries as well as the somehow actual involvement of developing countries in the collective effort. To be able to achieve more contribution, alternative kinds of targets are being discussed. The Russian Federation has even proposed the adoption of voluntary commitments to be able to get the developing world involved in the process. Within such an atmosphere, if Turkey tries to continue with its old policy; that it cannot take on any targets since it is a developing country rather than a developed one, it cannot get international support for such a policy anymore for the post-2012 period and lose time as has happened since 1992. By this way, it would lose its chance of negotiating a suitable position for itself in the post-2012 framework as well. Whereas this period, until 2009 is when the negotiations of a post-2012 framework is expected to be realized, therefore, it is a very important and advantageous period for Turkey. Within this period, Turkey can urgently ratify the Kyoto Protocol and start negotiating its place. Certainly, Turkey is still not in a position to share the commitments of the industrialized Annex I countries since it keeps developing with high growth rates. Due to this reason, for the second commitment period, it should take its chance to negotiate for such a status that would allow the utilization of CDM projects by Turkey. Eligibility for CDM projects should be seen as an important factor for Turkey's achievement of its sustainable development goals.

On the other hand, starting from the 60s, Turkey has been pursuing an official goal of becoming a member of the EU. Over the years, Turkey has achieved many reforms and taken many decisions in an effort to become eligible for EU membership. Concerning the climate change issue, climate change is a priority area for the EU. Until the present, the EU has acted like a leader in the climate change negotiations. Its important place within the global climate change regime of the present goes without saying. In January 2007, the EU has announced its important decision and dedication of achieving an industrial revolution within the EU by transforming its economy to a low-carbon one. In parallel with this goal, the EU has announced its decision to unilaterally reduce its GHG emissions by 20% until 2020. The EU further proposed to increase this commitment to 30% if the international community joins in this effort. In March, it has announced the plans for a common energy policy to be effective as of 2009. Turkey has not been able to take place within the industrial revolution of the 18th century together with the European countries, since then, it is trying to catch up with the developed and industrialized countries in developmental and economic terms. This time, Turkey should try its best to take its place within this revolution and should perceive climate change as an opportunity to join this revolution together with the European countries.

Otherwise, it might become a convenient market for the old technologies of the European countries.

Therefore, these recent decisions of the EU have important implications for Turkey. The EU; which Turkey has been trying to become a member of, is the strongest supporter of an urgent, comprehensive and bold framework of measures for the post-2012 period. The EU has demonstrated this in the past and has put ambitious goals for the future. Accordingly, as a candidate country, Turkey is already required to ratify the Kyoto Protocol as being part of the Acquis Communautaire. The other Accession and Candidate countries are all Kyoto Protocol Parties.

There are already signals that the ratification of the Kyoto Protocol might become a benchmark issue for the opening of negotiations on the environment chapter. Turkey should not face such a reaction. Turkey is an advanced developing country and it continues to develop, hence, its emissions are expected to rise rapidly. Knowing this, Turkey needs to act in a responsible manner towards the next generations to come. There are arguments in Turkey that the industrial countries of the present day was able to develop without taking into account the consequences of their industrialization on the atmosphere, therefore, the developing countries of the present should also be able to emit as much as they wish while continuing to industrialize. Although this argument sounds right at the first instance, it does not reflect scientific certainty since the effects of excess GHGs on the atmosphere were not known at those years. However, presently, it is a reality faced by every nation and every individual. Under these circumstances, for the protection of a collective good, these countries should continue with their development and industrialization in a low-carbon manner. For this to happen, the responsibility of the industrial world should be to provide financial and technical support to those countries in this respect rather than to watch them emit GHGs on an increasing pace while they keep on getting industrialized. Since this is what the developing countries will be compelled to achieve in the coming years, taking the initiative from the very beginning would be much more beneficial both for them and for the earth. Otherwise, new investments will be made using old technologies with high emitting potentials and then a few years later, these will require new investments for transition to a low-carbon economy, which would result in the inefficient and useless expenditure of funds.

As has been emphasized in the famous Stern Review, postponing action to a future date would be much more costly than what is required at the present. Today, the world can spend both on mitigation and adaptation. The industrial world can support action in the developing world. However, in the coming years, when the impacts of climate change start to

be observed more dramatically, more investment will be needed for adaptation purposes. Therefore, mitigation measures should be taken in every country varying according to their development levels and national capabilities.

Under these circumstances, it seems not realistic for Turkey to continue its development free from any measures. Instead, Turkey should continue its development together with transition to a low-carbon economy. Moerover Turkey's position in the global negotiations has to be formulated to support this new development pattern. For this end, Turkey should search for support concerning its investments, not for a right to emit freely on an increasing pace due to its continuing development. Certainly, Turkey would be able to find funding in return for its efforts both from the EU and from the other leading industrialized countries as well as the UNFCCC and Kyoto mechanisms together with other international institutions like the World Bank. This would further fasten economic growth, open new investment opportunities as well as leading to energy efficiency which would decrease the price and increase the security of energy in the Turkish market. All of these would create a healthier environment which would all be to the benefit of the Turkish people together with the whole world. Apart from all these, it would lead to the elimination of an important topic from the agenda of the accession negotiations. Besides, it would strengthen the interdependence which already exists between Turkey and the EU that can be seen as an advantageous issue concerning accession negotiations.

If Turkey does not take the initiative within this time period until 2009 and does not negotiate its status, it might again be forced to take place as an Annex I country within an arrangement which it cannot accept. Like the regime theory explains, it might even be left out of the regime or might face forceful measures to comply. These might have heavy consequences for Turkey. Even if Turkey decides to join the international effort after 2009, it would not be able to negotiate with the terms of the present. Today, the framework is under construction. Turkey has the opportunity of shaping its future. However, once the framework is constructed and ratified, the deal will be closed, and it will be very hard to change it if that can be possible anyhow. The negotiating atmosphere will also come to an end. Turkey has experienced this rigidity of international agreements in the past during its UNFCCC ratification deal. Taking lessons from the past, it should not let the same thing happen and it should take the initiative to get involved urgently by first ratifying the Kyoto Protocol. Since the negotiations are continuing at the present, Turkey then would have the chance of raising its voice together with those countries who share similar circumstances which are the advanced developing countries. Through taking place in one of these groups of similar

countries or forming a new one rather with more recent similar needs, negotiations can be handled on a stronger basis.

Today, Turkey faces different conditions. At those years, Turkey did not have much information about climate change and its impacts. There were no units at the state level which worked on the issue. Turkey has lost years being a passive member of the climate regime. It was a passive member of the regime because it was neither able to benefit from the mechanisms that Annex I countries had benefited as a result of their being Annex B countries under the Kyoto Protocol nor able to benefit from the mechanisms which the Non-Annex I or the Non-Annex B countries under the Protocol were able to utilize. Turkey was accepted to have special circumstances. Since Turkey has never initiated negotiations on these circumstances, presently, these circumstances have still not been clarified officially; therefore Turkey is neither like an Annex I country or a Non-Annex I country. As a result, by not being able to utilize any mechanisms of the system, it could only become a passive member of the regime. For Turkey to become an active member of the climate regime, it first needs to ratify the Kyoto Protocol and then, negotiate its special circumstances. Obviously, these circumstances are related to its developing status. Only then Turkey would be able to fully integrate the climate change regime and benefit from its mechanisms.

The above mentioned arguments have all comprised the international dimension of the climate change policy of Turkey. However, as has been emphasized by Putnam's two-level metaphor, the international and domestic dimensions of climate change policy interact to produce state behavior. Therefore, the domestic capabilities of Turkey are certainly the important factors of a successful climate change policy. Starting from 2001, when Turkey's name has been deleted from the Annex II list of the UNFCCC, attention paid to climate change has increased both at the state level as well as at the civil level. The Climate Change Coordination Committee established under the Ministry of Environment and Forestry has designed the preparation of reports in various sectors concerning climate change. The activities of the environmental NGOs have also increased leading to a substantial increase in public awareness. Today, global warming and climate change have become headlines in the media that the Turkish people are getting exposed to almost every single day.

At the beginning of 2007, the preparation of the First National Communication of Turkey is a major milestone for Turkish climate change policy. With the help of this report, it has become possible for the Turkish Government to see what Turkey can offer to do to control its emissions during the negotiations. Through this report, the policy makers now have a source to base their alternative policy offers in certain sectors. With such alternatives

based on quantified data, together with educated personnel who follow the international developments on climate change within the ministries, the international negotiations of a suitable status for Turkey in the post-2012 period will be much easier and efficient when compared to the years of the preparation of the UNFCCC.

Climate change is a complex and cross-cutting issue which affects policy decisions in many areas like agriculture, energy, industry and trade. Due to this reason, climate change requires an integrated approach by many sectors. On the international arena, climate change policy should be seen as part of Turkey's foreign policy. The international negotiations should not be seen as only an environmental issue but rather should be worked out at a broader foreign policy context encompassing Turkey's relations with the EU as well as energy, security, trade and investment issues.

Hence, the international and domestic dimensions of Turkey's climate change policy affect each other. They are interrelated. Therefore, looking at the issue from only one of these perspectives would be to the disadvantage of Turkey. Due to this interrelatedness, to be able to see the picture as a whole, they should be evaluated together. The successful evaluation of Turkey's national capabilities in taking measures against climate change is a prerequisite for the negotiation of a suitable status for Turkey in the post-2012 climate change regime. At the same time, the successful negotiations at the international level are also a prerequisite for Turkey to achieve its goals at the domestic level. Only through the negotiation of a suitable status at the international level, can Turkey be able to take part within the international climate change regime and achieve sustainable development through transforming its economy to a low-carbon one by not slowing down its high rates of growth in the years to come. Turkey is not in a vacuum to make its policies of climate change, it needs to reconcile the international and domestic dimensions of climate change for the formulation of a successful future climate change policy.

ANNEX 1

FCCC/CP/2001/13/Add.4
English

Decision 26/CP.7
Amendment to the list in Annex II to the Convention

The Conference of the Parties,

Welcoming the intention expressed by Turkey to accede to the Convention,

Recalling Article 4, paragraph 2(f), of the Convention,

Recalling further its decision 15/CP.4,

Recalling also the conclusions of the Conference of the Parties as agreed at its fifth session and the first part of its sixth session, in the light of the new request by Turkey,[1]

Recalling also the amendments proposed by Azerbaijan and Pakistan concerning the deletion of the name of Turkey from the lists in Annexes I and II to the Convention,

Taking note of the information contained in documents FCCC/CP/1997/MISC.3 and FCCC/CP/2001/11,

Underlining that Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities,

Having considered the request put forward by Turkey, in particular the new proposal presented at the first part of the sixth session of the Conference of the Parties, that its name should be deleted from Annex II to the Convention,

1. **Decides** to amend the list in Annex II to the Convention by deleting the name of Turkey;

2. **Notes** that the entry into force of this amendment to the list in Annex II to the Convention shall be subject to the same procedure as that for the entry into force of annexes to the Convention in accordance with Article 16, paragraph 3, of the Convention;

3. **Invites** the Parties to recognize the special circumstances of Turkey, which place Turkey, after becoming a Party, in a situation different from that of other Parties included in Annex I to the Convention.

8th plenary meeting

9 November 2001

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