The Conference of the Parties: The Role of the United States in Effectively Mitigating Climate Change post-Copenhagen

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Photo 1. "Hopenhagen: Earth's Body Guard" - Copenhagen, Denmark. December 2009

MAIN PAGE

The current global climate change crisis has prompted a worldwide initiative to combat the negative effects of industrialization on the environment. At the completion of the COP 15 in Copenhagen, progress towards drafting of a legally binding agreement is currently at a stand still. As we near the end of the first commitment period of the Kyoto Protocol, the task before the Parties is to draft a legally binding agreement that will take the world into a new era of climate change mitigation. Tensions are running high as many developing countries feel the tangible effects of climate change in the form of droughts, tropical storms and sea-level rise while some major industrialized countries hesitate to make substantive reduction commitments.

The purpose of this case study is to examine the role of the United States as a key player in the UNFCCC climate change negotiations. The United States is unique in that it is one of only a few UNFCCC members who have signed but not ratified the Kyoto protocol and whose economic and political influence is great enough to significantly affect the outcome or occurrence of any agreement on climate change mitigation and adaptation for the Kyoto post- 2012 commitment period. For these reasons, it is prudent to explore the United States' track record in negotiations as well as its own national legislation to determine how best to persuade active US participation in a global treaty post-Copenhagen (COP15).

The main page of this paper has been structured into six sections:

- The **first section** presents an introduction to the basic issues in the climate change debate including a glossary of useful terms.
- The **second section** presents a brief overview of the current climate science.
- The **third section** describes the UNFCCC system of negotiation.

- The **fourth section** reviews the United Nations Framework Convention on Climate Change, the Kyoto Protocol and the road to Copenhagen.
- The **fifth section** outlines the progression of US national and international climate policy leading up to the COP 15 in Copenhagen.
- The **sixth section** describes outcomes of the COP15 as well as possible avenues for further US involvement in climate change mitigation on a global scale.

1.-Introduction

The environment has no borders and environmental problems are trans-boundary by nature, affecting not only individual nations but also the global community as a whole. As of the Conference of the Parties 15 (COP 15) in Copenhagen in December 2009, no legally binding agreement has been reached for the post-2012 commitment period of the Kyoto protocol. While the United States negotiated the Kyoto Protocol and it at its adoption in 1997, it has, to date, not ratified Kyoto and so is not bound to the Annex 1 emissions reductions requirements under the protocol.

In countries where the effects of climate change are more visibly pronounced (for example, small island nations whose coastlines are eroding or land-locked countries in sub-Saharan Africa experiencing extreme droughts) the immediacy of the situation makes the push for binding commitments from the largest historical green house gases (GHG) emitters a top priority. In the US however, where the effects of climate change are, for the moment, less drastic, convincing policy makers and the voting public to agree to bind the US at the possible expense of economic prosperity is an extremely difficult task. It is for this reason that the United States initially declined to ratify the Kyoto Protocol and oblige itself to

defined GHG reduction commitments and this reason continues to motivate the United States' actions in continuing negotiations.

If the United States were to ratify Kyoto, in order to satisfy its obligations as an Annex I party and meet green house gas reduction targets, the United States would have to employ strong legislation that would directly regulate and limit how property owners could use their land and how corporations conduct their business within the United States. This is something that the US has historically been very reluctant to do and has colored the US approach to the COP15 negotiations and beyond.

As time ticks closer to the inevitable tipping point beyond which emissions reductions can not reverse the effects of climate change (see photo 2 below), developing countries who have not contributed to the climate crisis but who feel the brunt of its effects are quickly running out of options. Since no meaningful and effective agreement to reduce emissions can be reached without the United States and because the United States is widely perceived to be lacking in meaningful political action regarding climate change it is useful to consider the position of the United States in order to encourage its increased participation in the mitigation of the effect of climate change.

Climate change international law and policy, as its bacground science, and the need to cooperate at the global level to tackle with it have produced a "common language" which helps identifiying the different issues at stake. Table 1.1 below identifies the very basic list of terms and concepts. Please notice that in many cases the acronyms of the two or more worded terms are included. (GWP, UNFCCC, JI, LDC…etc). Usually it implies that they are very much used also as typical "climate change related jargon".

Climate Change Basics Glossary

Term	Explanation
Abatement	Reduction in the quantity of greenhouse gas emissions
Assigned Amount	The tons of greenhouse gases, in CO2 equivalents, that a country is allowed to emit during a commitment period (the first period is 2008-2012)
Additionality	Projects registered as carbon reduction projects under the Clean Development Mechanism and Joint Implementation Mechanism must cause a drop in emissions further to those which would have occurred in the absence of these mechanisms
Afforestation	Establishing and growing forests to remove greenhouse gases from the atmosphere on land which has not been forested in recent history.
Annex I Countries	The 40 countries plus the European Economic Community listed in Annex I of the UNFCCC that agreed to try to limit their GHG emissions. They are developed countries.
Avoided Emissions	Emissions that would have been emitted under a business as usual scenario but were avoided due to the implementation of an emission reduction project.
Baseline and Baseline Scenario	The baseline represents the forecast emissions of a company, business unit or project, using a business as usual scenario i.e. expected emissions if the firm did not implement emission reduction activities. This forecast incorporates the economic, financial, technological, regulatory and political circumstances within which a firm operates.
Cap and Trade	The Cap and Trade system involves trading of emission allowances, where the total allowance is strictly limited or 'capped'. A regulatory authority established the cap which is usually considerably lower than the historic level of emissions.
Carbon Dioxide Equivalent (CO_2eq)	The universal unit of measurement used to indicate the global warming potential (GWP) of each of the 6 greenhouse gases. It is used to evaluate the impacts of releasing (or avoiding the release of) different greenhouse gases.
Carbon Dioxide or CO_2	A naturally occurring gas that is a by-product of burning fossil fuels and biomass, land use changes and other industrial processes. Carbon dioxide is the reference gas against which other greenhouse gases are measured.

Carbon Sequestration	Projects that capture and store carbon in a manner that prevents it from being released into the atmosphere for a specified period of time, the storage area is commonly referred to as a carbon sink. Carbon Sequestration projects include: - Capture in forests - Land Conservation - Soil Conservation & Land Use - Waste CO2 Recovery and Injection into Deep wells
Carbon Sink	A carbon sink is a reservoir that can absorb or “sequester” carbon dioxide from the atmosphere. Forests are the most common form of sink, as well as soils, peat, permafrost, ocean water and carbonate deposits in the deep ocean.
Carbon Taxes	A surcharge or levy on the carbon content of oil, coal, and/or gas to discourage the use of fossil fuels, with the aim of reducing carbon dioxide emissions.
Certified Emission Reductions (CERs)	Annex I investors in Clean Development Mechanism (CDM) projects can earn Certified emission reduction units (CERs) for the amount of greenhouse emission reductions achieved by their CDM projects, provided they meet certain eligibility criteria
Chlorofluorocarbons (CFCs)	CFCs are organic compounds that contain carbon, chlorine, and fluorine atoms. They are widely used as coolants in refrigeration and air conditioners, as solvents in cleaners, and as propellants in aerosols. CFCs are the main cause of stratospheric ozone depletion. One kilogram of the most commonly used CFCs may have a direct effect on climate thousands of times greater than that of one kilogram of CO_2. However, because CFCs also destroy ozone - itself a greenhouse gas - the actual effect on the climate is unclear.
Clean Development Mechanism (CDM)	The CDM is a mechanism of the Kyoto Protocol for reducing emissions through implementing projects in developing countries. The CDM aims to meet two main objectives: to address the sustainable development needs of the host country, and to increase the opportunities available to reduce emissions
Climate Change	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 over comparable time periods

Commitment Period	The first commitment period of the Kyoto Protocol runs from 2008 to 2012 inclusive. It is planned to be followed by subsequent commitment periods.
Conference of Parties (COP)	The COP is the overall managing body of the United Nations Framework Convention on Climate Change (UNFCCC). The COP which consists of more than 170 nations that ratified or acceded to the Framework Convention on Climate Change is responsible for promoting and reviewing the implementation of the Convention.
Deforestation	Removing of forested areas through cutting or burning to provide agricultural land, residential or industrial building sites, roads etc., or harvesting trees for building or fuel.
Developed Countries	Industrialised countries (identified in Annex I and Annex B of the Kyoto Protocol).
Developing Countries	Countries in the process of industrialisation and have less access to resources for addressing economic and environmental problems.
Emissions Trading	A market mechanism that allows emitters (countries, companies or facilities) to buy emissions from or sell emissions to other emitters.
Fossil Fuels	Carbon-based fuels that include coal, petroleum, natural gas and oil.
Global Warming	The continuous gradual rise of the earth's surface temperature caused by the greenhouse effect and responsible for changes in global climate patterns (see also Climate Change).
Global Warming Potential (GWP)	An index that compares the relative potential of the 6 greenhouse gases to contribute to global warming The impact of all other greenhouse gases are compared with carbon dioxide (CO_2) i.e Carbon dioxide has a GWP of 1, Methane has a GWP of 23. The latest officially released GWP figures are available from the IPCC in their publication Climate Change 2001: The Scientific Basis.
Greenhouse Effect	The impact of human activities cause certain gases to be released and trapped in to the Earth's atmosphere. The gases absorb the sun's energy and cause the earth to warm at a faster rate than usual. It is named after the phenomena of glass trapping heat in a greenhouse.
Greenhouse Gases	Greenhouse gases are those air emissions that contribute to global warming including carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O)and other gases generated during industrial processes, including hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). These gases are measured in terms their global warming potential and are reported in tonnes of carbon dioxide

	equivalents (CO2-e) or million metric tonnes of carbon dioxide equivalents (MMTCDE). HFCs, PFCs and SF6 are the most heat-absorbent of the greenhouse gases listed above, with Global Warming Potentials of up to 11,700 for HFC-23 and 23,900 for SF6, implying that they trap 11,700 and 23,900 times more heat than carbon dioxide. The 100-year global warming potential for methane and nitrous oxide is 21 and 310 respectively.
Intergovernmental Panel on Climate Change (IPCC)	The World Meteorological Organisation (WMO) and the United Nations Environment Programme (UNEP) formed the IPCC in 1988. The IPCC represents the work of over 2,000 scientists, mainly in the atmospheric sciences, but also comprising social, economic and other environmental components potentially impacted by climate change. The IPCC doesn't conduct original research or monitors climate-related data, but its assessment reports and technical papers play an important role in the creation of climate change policies worldwide. The IPCC played a role in establishing the UNFCCC or the Convention.
Joint Implementation (JI)	A mechanism developed under the Kyoto Protocol (KP) designed to assist developed countries in meeting their emission reduction targets through joint projects with other developed countries
National Adaptation Programmes of Action (NAPA)	NAPAs (national adaptation programmes of action) provide a process for Least Developed Countries (LDCs) to identify priority activities that respond to their urgent and immediate needs with regard to adaptation to climate change.
Technology Transfer	The process by which energy-efficient or low emission intensive technologies developed by industrialised nations are made available to less industrialised nations. Technology transfer may occur through the sale of technology by private entities, through government programs, non-profit arrangements, or other means.
United Nations Framework Convention on Climate Change (UNFCCC)	The UNFCCC was established in June 1992 with the aim of stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic (man-made) interference with the climate system 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. The UNFCCC is the governing body for international negotiations.

Source: Climate Action Network International (www.climateactionnetwork.org)

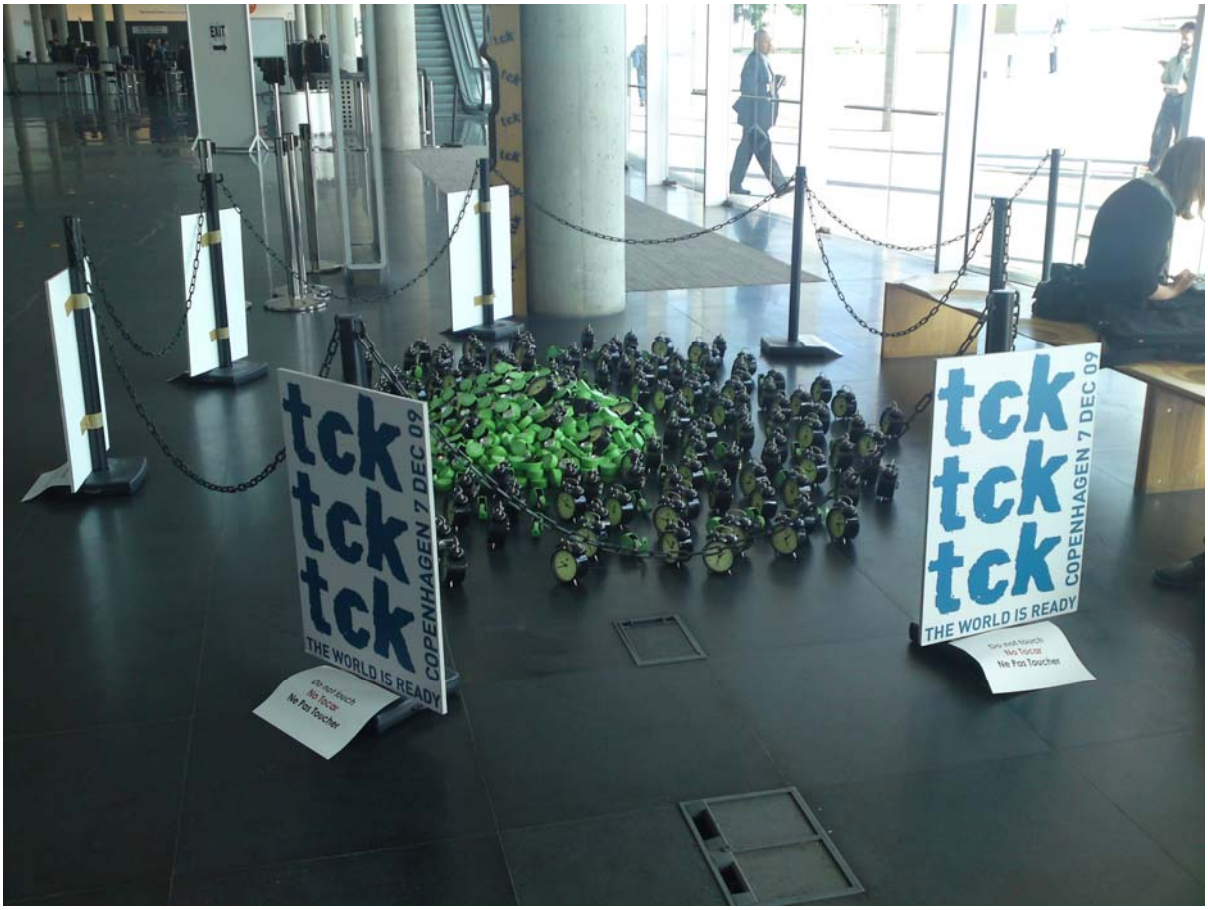


Photo 2. 'Tck tck tck the World is Ready' display. Barcelona Climate Talks. Oct 2009

2.- Climate Change Science

According to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), global green house gas (GHG) emissions have grown since pre-industrial times, with an increase of 70% between 1970 and 2004. Increased emissions of GHGs such as CO2, CH4, N2O, HFCs, PFCs, and SF6 from human activities have lead to this marked increase.

The reason GHGs warm the Earth's surface is because they act as a blanket that reabsorbs the Sun's radiation reflected off the Earth's surface; this phenomenon is known as the greenhouse effect. Human activities intensify the release of greenhouse gases and have consequently altered the chemical composition of the global atmosphere with substantial implications for the climate (see figure 0). The greenhouse effect has resulted in a general

warming of the Earth's climate and has resulted in the melting of snow and ice as well as the expansion of ocean waters as a result of heat absorption [see figure 1].

Figure 0

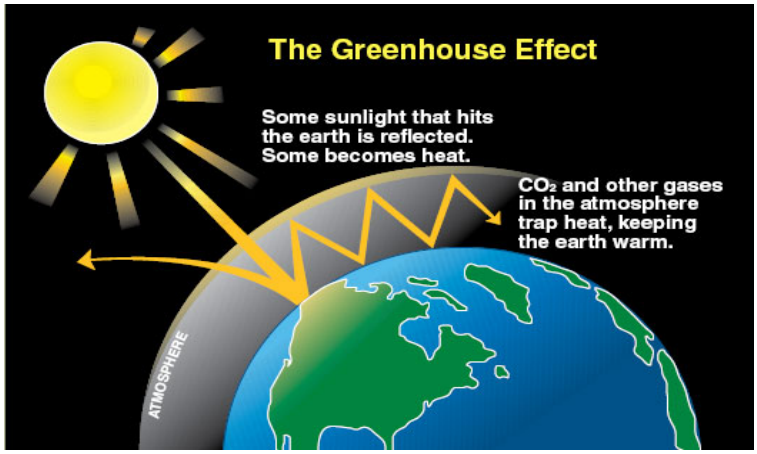


Figure 1

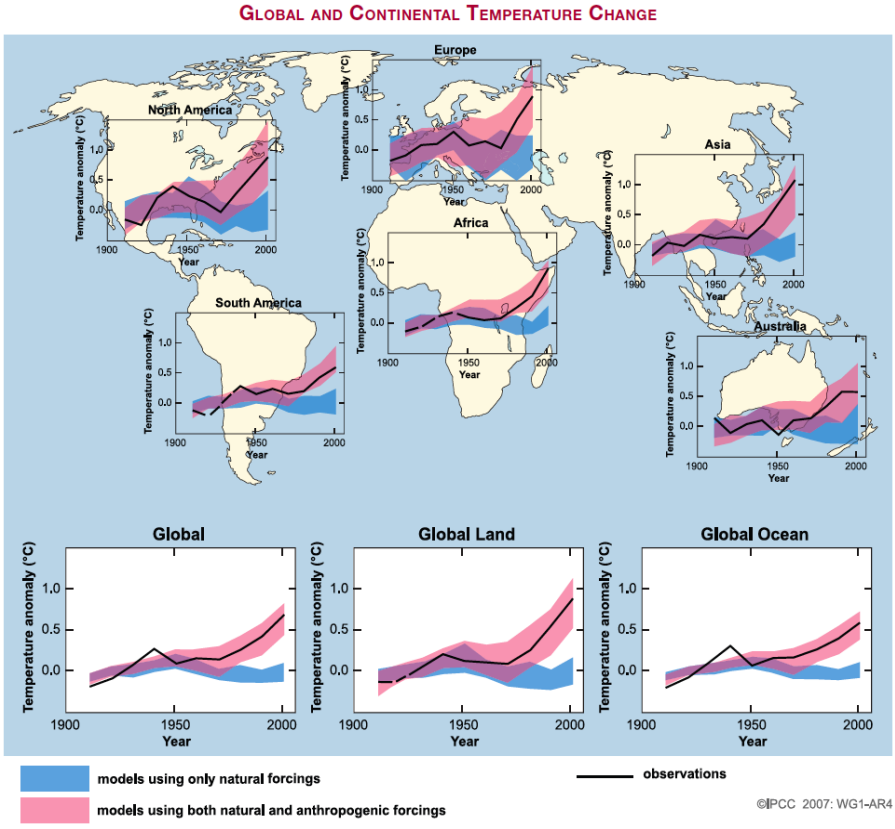


Figure TS.22. *Comparison of observed continental- and global-scale changes in surface temperature with results simulated by climate models using natural and anthropogenic forcings. Decadal averages of observations are shown for the period 1906 to 2005 (black line) plotted against the centre of the decade and relative to the corresponding average for 1901 to 1950. Lines are dashed where spatial coverage is less than 50%. Blue shaded bands show the 5% to 95% range for 19 simulations from 5 climate models using only the natural forcings due to solar activity and volcanoes. Red shaded bands show the 5% to 95% range for 58 simulations from 14 climate models using both natural and anthropogenic forcings. Data sources and models used are described in Section 9.4, FAQ 9.2, Table 8.1 and the supplementary information for Chapter 9. {FAQ 9.2, Figure 1}*

Source: IPCC Fourth Assessment Report, Figure 1

It is important to note that there are a number of physical factors that can force a net increase or decrease of heat in the climate system apart from human activities. This often makes assigning changes in climate specifically to human GHG emissions rather difficult. The El Niño-Southern Oscillation is an example of internal climate variability that makes it difficult to assign responsibility for the observed global warming to natural or man made forces. In order to determine which forces are creating the overall increase in global temperatures, scientist use records of various forces in a fingerprinting approach to identify which forces can account for the observed patters in climate change.

Fingerprint matching between climate forces and the observed climate change phenomena have confirmed that man-made (GHGs) have been the dominant force behind climate change over the past 200 years, in particular over las 150. Fingerprinting models have also shown that while oceans exhibit natural temperature cycles, the natural internal variability of the climate does not add any new heat to the ocean as a whole which allows for the conclusion that raises in ocean temperatures are a result of external, man-made climate forces as well.

While scientific understanding of the causes of climate change has advanced significantly in recent years, there is still inherent variability in the climate system that makes it difficult to assign the physical effects of climate change to a particular source. The fourth IPCC report, however, suggests that the evidence now available is substantially stronger than what was available previously. Confidence levels for the observation that the warming the climate is caused by human activities are extremely high (>95%) and it is extremely unlikely (<5%) that the global pattern of warming over the past fifty years can be explained without external forces and very unlikely that it is due to known natural forces alone. In light of these observation, the IPCC has concluded that global GHG emissions would have to peak in the next ten to fifteen years and, by 2050, global emissions would have to be reduced to less than

50% of the emissions recorded in 2000 in order to have a reasonable change of avoiding dangerous, irreversible warming (Barker 2007) [See Table 1] .

Table 1 (Table TS.2)

Table TS.2: *Classification of recent (Post-Third Assessment Report) stabilization scenarios according to different stabilization targets and alternative stabilization metrics [Table 3.5].*

Category	Additional radiative forcing (W/m^2)	CO_2 concentration (ppm)	CO_2-eq concentration (ppm)	Global mean temperature increase above pre-industrial at equilibrium, using "best estimate" climate sensitivity[a), b)] (°C)	Peaking year for CO_2 emissions[c)]	Change in global CO_2 emissions in 2050 (% of 2000 emissions)[c)]	No. of assessed scenarios
I	2.5-3.0	350-400	445-490	2.0-2.4	2000 - 2015	-85 to -50	6
II	3.0-3.5	400-440	490-535	2.4-2.8	2000 - 2020	-60 to -30	18
III	3.5-4.0	440-485	535-590	2.8-3.2	2010 - 2030	-30 to +5	21
IV	4.0-5.0	485-570	590-710	3.2-4.0	2020 - 2060	+10 to +60	118
V	5.0-6.0	570-660	710-855	4.0-4.9	2050 - 2080	+25 to +85	9
VI	6.0-7.5	660-790	855-1130	4.9-6.1	2060 - 2090	+90 to +140	5
						Total	177

Notes:

a) Note that global mean temperature at equilibrium is different from expected global mean temperatures in 2100 due to the inertia of the climate system.

b) The simple relationships $T_{eq} = T_{2xCO2} \times \ln([CO_2]/278)/\ln(2)$ and $\Delta Q = 5.35 \times \ln([CO_2]/278)$ are used. Non-linearities in the feedbacks (including e.g., ice cover and carbon cycle) may cause time dependence of the effective climate sensitivity, as well as leading to larger uncertainties for greater warming levels. The best-estimate climate sensitivity (3 °C) refers to the most likely value, that is, the mode of the climate sensitivity PDF consistent with the WGI assessment of climate sensitivity and drawn from additional consideration of Box 10.2, Figure 2, in the WGI AR4.

c) Ranges correspond to the 15th to 85th percentile of the Post-Third Assessment Report (TAR) scenario distribution. CO_2 emissions are shown, so multi-gas scenarios can be compared with CO_2-only scenarios.

Note that the classification needs to be used with care. Each category includes a range of studies going from the upper to the lower boundary. The classification of studies was done on the basis of the reported targets (thus including modelling uncertainties). In addition, the relationship that was used to relate different stabilization metrics is also subject to uncertainty (see Figure 3.16).

Source: IPCCC Third Assessment Report Table 3.5

2.1.- Sea Level Rise

Global average sea levels are rising and have been rising for quite some time. There is high confidence that the rate of sea level rise has increased between the 19th and mid 20th centuries as well as evidence for an increase in the occurrence of extreme high water worldwide that is related to the rise in mean sea level and variations in regional climate. Additionally, there is strong evidence that sea level will continue to rise at an even greater rate in this century. The two main causes of sea level rise are thermal expansion of the oceans and the melting of land-based ice. Both of these causes of sea level rise are a direct effect of

increased mean global temperature caused by climate change [See Figure 2 below].

Figure 2.

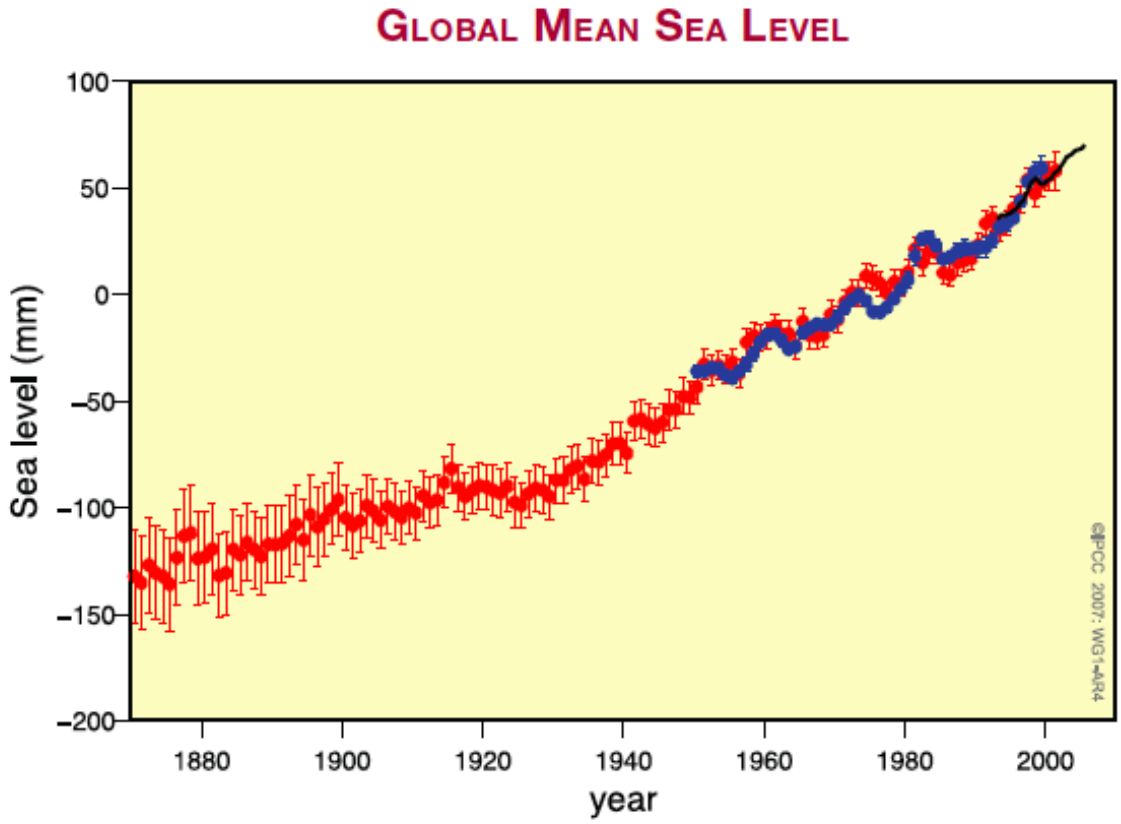


Figure TS.18. *Annual averages of the global mean sea level based on reconstructed sea level fields since 1870 (red), tide gauge measurements since 1950 (blue) and satellite altimetry since 1992 (black). Units are in mm relative to the average for 1961 to 1990. Error bars are 90% confidence intervals. {Figure 5.13}*

Source: IPCCC Fourth Assessment Report Figure 5.13

While sea levels rose by about 120 meters during the millennia following the end of the last ice age, evidence suggests that global sea level did not change significantly from then until the late 19th century, the beginning of the industrial revolution. While it is true that sea level is rising rapidly, it is not rising uniformly around the world. Some areas of the world are disproportionately affected by sea level rise with rates that are many times more than the global mean. The main areas of the world affected by these increased rates of sea level rise are the northeast Atlantic and small Pacific Islands.

Sea level rise caused by climate change threatens the survival of many small island states. Many low-lying states such as the Maldives, Kiribati, Tuvalu, and certain islands in the Bahamas are at risk due to the increased rate of sea level rise over the past decade. Each of these States would very easily be inundated by sea levels in excess of one meter above current levels. For other States, there is a great potential that their social-economic viability will be compromised by damage to coastal zones where the majority of their socio-economic infrastructure is located, saline intrusion that will negatively impact drinking water and agriculture, and the destruction of coral reefs and fisheries as a result of the warming and acidification of the ocean. Additionally, global warming caused by increased GHG emission is lined to the occurrence of stronger tropical storms that have the potential to be extremely destructive.

3.- UNFCCC Negotiation

The United Nations Framers of the Convention on Climate Change (UNFCCC) [later described] whose Secretariat seats in Bonn, Germany, is an international environmental regime put in place by the world community in 1992 (Rio Summit) in order to be able to manage climate change issues precisely at global level. The IPCC is not part (it is not integrated) of the regime as such part **@** external system UN and World Meteorological Organization (WTO) based. (About how international environmental regimes are established and how they function, see the Section on Works Cited and Additional, Enrique Alonso García, 2009, Chapter 2).

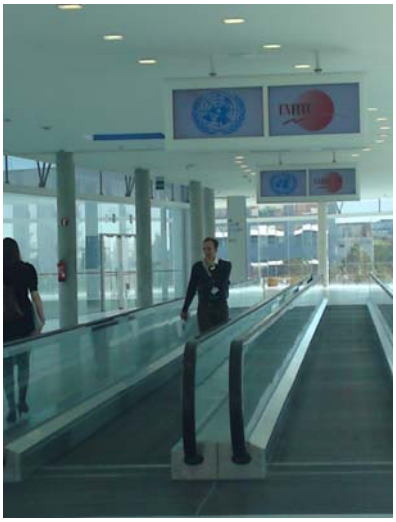


Photo 3. Barcelona Climate Change Talks, November 2009

The Conference of the Parties (COP) is the highest decision-making authority of the convention and is an association of all of the countries that are parties to the Convention. The negotiation process of the UNFCCC is carried out through yearly meetings of the Conference of the Parties to the UNFCCC (COP) that have the purpose of reviewing the implementation of the Convention. The COP adopts decisions and resolutions and then publishes these reports. The COP also serves as the meeting of the Parties to the Kyoto Protocol (CMP); the CMP is the supreme body of the Kyoto Protocol and serves as a venue for parties to negotiate and adopt decisions and resolutions for the implementation of the Protocol.

Protocols are additional treaties approved following the rules of the preestablished regimes (in this case the UNFCCC rules), which spell-out the binding rules under international law applicable to the solution of the problem as consensus unfolds through time (Enrique Alonso García, 2009, id)

Parties to the UNFCCC and Kyoto Protocol attend the Conference of the Parties; in addition, it is also attended by a large number of observer organizations, government representatives, civil society members and press. The COP presidency rotates among the five recognized UN regions-Africa, Asia, Latin America and the Caribbean, Central and Eastern

Europe, and Western Europe and Others. The venue for the COP also tends to rotate between these regions.

The UNFCCC has established two permanent subsidiary bodies, each with their own mandate, to give advice to the COP for the purpose of negotiation. These bodies are the Subsidiary Body for Scientific and Technological Advice and the Subsidiary Body for Implementation. Each of these bodies is open for participation from any Party and traditionally meet at least twice a year.

3.1.- UNFCCC Negotiating Process and Decision Making

Photo 4. COP 15 Opening Plenary Meeting , December 7, 2009; Copenhagen, Denmark.

UNFCCC parties continually participate in negotiations with the aim of reviewing the implementation of agreed upon commitments and addressing changing circumstances (Depledge, 2004 at 430). The manner in which parties negotiate these decisions is formally

laid out in the Convention's Rules of Procedure however, in practice, these rules are used mainly as guidelines.

In the first session of the COP, the parties drafted a set of rules to be used in further negotiations. The rules drafted at COP/1 could not be adopted due to disagreements regarding draft rule 42 which set out the rules of the decision-making process, specifically, the voting majorities necessary for the adoption of decisions. Because the rules could not be adopted by consensus, the draft rules are instead 'applied', with the exception of Draft Rule 42. Aside from the disputed Rule 42, the Draft Rules of Procedure are followed by the COP and serve to ensure that the negotiations are carried on in an orderly manner so that the right of delegations to explain their positions, submit proposals and participate in decision-making is safeguarded. In subsequent COP sessions there have been numerous attempts to resolve the disagreement over draft rule 42, with Tuvalu most recently taking on the task, but without success. As a result, decisions continue to be made by consensus, similar to the practice in the UN General Assembly (Depledge, 2004).

The meaning of 'consensus' is not specifically defined in Convention itself or within the draft Rules of Procedure. Generally however, the understanding is that 'consensus' is distinct from 'unanimity' and, in practice, consensus is reached when there are not stated objections to a decision (Depledge, 2004).

What consensus really is and what is the debate around Draft Rule 42 are addressed in the section on "Guiding Student Discussion".

3.2.- Parties and Negotiating Coalitions

The Parties to the UNFCCC, which include 191 states and 1 regional economic integration organization, the European Union, are organized into a number of groups and organizations based on region and political alliance. Major groups include the Group of 77

and China (G77), The African Group, The Alliance of Small Island States (AOSIS), the Least Developed Countries (LDC), the Umbrella Group (of which the United States is a member), and the European Union.

The purpose of negotiation coalitions in this respect seems to be linked to the necessity to align the interests of the parties in order to allow for multilateral cooperation. The formation of coalitions allows parties, especially smaller, developing states, to pool their resources and "negotiating clout" in order to have their views heard. As the number of negotiating parties has increased over the years the resulting complexity of the climate change negotiations created even greater incentives for countries to form negotiating coalitions making the conduction of business, which would otherwise have been logistically impossible, more convenient by streamlining the negotiation process and reducing transaction costs (Enrique Alonso García, 2009, pgs. 2-28 and ff)

The G77, for example, includes 130 countries and was established in 1964 by 77 developing countries signatories of the "Joint Declaration of the Seventy-Seven Countries" issued at the end of the first session of the United Nations Conference on Trade and Development (UNCTAD) in Geneva. The G77/China is the largest intergovernmental organization of developing states in the UN and represents the collective economic interests of its member states. The purpose of the G77 is to promote cooperation for development and is headed by a Chairman who acts as its spokesman as the highest political body within the organizational structure. The most influential members of the G77 tend to be Brazil China, India and Saudi Arabia. It is the negotiating positions of these countries that tend to dominate the group making it necessary for many smaller countries to also belong to other negotiating coalitions in order to have their positions heard (Depledge, 2004 at 39).

The African Group consists of fifty-three members and an extremely important vehicle for African countries, many who are also members of the G77, to express their views

on issues that may be different from that of the G77 as a whole (Depledge, 2004 at 39). Many of the common issues shared by African Group members include their particular vulnerability to extreme weather, poverty, and lack of resources to mitigate the effects of and adapt to climate change. These shared issues translate into an interest in ensuring that capacity-building, finance, and technology transfer are adequately discussed during climate change negotiations.

The Alliance of Small Island States (AOSIS) consists of approximately 43 low-lying and small island nations, many of whom are also members of the G77. The commonality between these countries is that they all are particularly susceptible to sea-level rise and so, in the interest of survival, take a common stance in UNFCCC negotiations in order to ensure that their interests are sufficiently represented. AOSIS has been extremely active in the climate change negotiations since the very beginning and was the first to propose a draft text during the Kyoto Protocol negotiations that called for CO2 emissions cuts of 20% from 1990 levels by 2005. The leading principles by which AOSIS negotiates include the ‘ the precautionary and polluter pays principles, equity, common but differentiated responsibilities, and a commitment to energy conservation and revewable engergy’. In practice, it has, over past COP negotiations worked diligently to srengthen industiralized country emission targets, strengthen monitoring and compliance procedures and establish channels for funding the costs of adaptation (Depledge, 2004 at 37).

The Umbrella Group usually comprises the United States, Australia, Canada, Iceland, Japan, New Zealand, Norway, the Russian Federation and Ukraine however there is no formal roster of its members. This group evolved from JUSSSCANNZ, a group that was active during the negotiation of the Kyoto Protocol. In 1997, the Umbrella group formed during the negotiation of the Kyoto Protocol in order to oppose the European Union’s attempt to restrict the use of flexibility mechanisms. While the Umbrella group works together and

shares information, its members do not necessarily vote together or share the same views on all issues. The general focus of the Umbrella group, however, has included issues beyond flexibility mechanisms such as LULUCF (land use, land use change, and forestry) and encouraging developing country commitments under Kyoto. While still a member of the Umbrella group, the United States has played a much less active role since its withdrawal from Kyoto (Depledge, 2004 at 45).

The Least Developed Countries are 50 countries grouped together by their economic status. This group regulary works together outside of the UNFCCC negotiations within the Wider UN systems and has become more and more active in climate change negotiations. Within the UNFCCC, the LDCs have worked together to defend their collective interests regarding their particular vulnerability to the negative effects of climate change as well as their need for effective and affordable methods for adaptation.

The European Union is the most Cohesive of all of the negotiating coalitions in the climate change regime. The 27 members meet privately to agree upon negotiating positions since the member states of the European Union have a history, and arguably a duty, to vote unanimously on international issues in order to present a unified face to the international community. The EU position has historically been based on a consensus between its twenty-seven member states, and so can be regarded as a compromiso point of view. The country that holds the EU presidency at the time of negotiation speaks for all of the other member-states. The European Union is an economic integration organization and thus is itself a party to the convention (Depledge, 2004 at 42).

3.3.- Observers and Civil Society

Left: Photo 5. Solar energy exhibition by GreenPeace. Right: Photo 6. Floor display by 350.org. Barcelona Climate Talks 2009

In addition to the Parties, a number of stakeholders and observer states are granted access to the meetings of the COP including non-governmental organizations (NGOs), inter-governmental organizations (IGOs), and UN bodies and specialized agencies. The number of NGOs participating in the COP meetings has steadily increased since the COP1 and, considering the scope of the climate change problem, the variety issues and stakes represented by these organizations has grown as well. While observers may not participate in the decision-making process, they may actively state their positions and influence delegates through side events, information booths and statements in plenary sessions.

With more than 1200 admited observer organizations, constituent groups help NGOs and IGOs communicate with the Secretariat in order to facilitate their participation in the UNFCCC process. There are currently nine main constituency groups to which observers may join, these include: environmental NGOs (ENGOs); Business and industry NGOs (BINGOs); Local government and municipal authorities (LGMAs); Indigenous peoples organizations (IPOs); Research and independent NGOs (RINGOs); Trade Union NGOs (TUNGOs); Farmers and agricultural non-governmental organizations (Farmers); Women

and gender NGOs (Women and Gender); and Youth NGOs (YOUNGO) (UNFCCC Constituencies Notice).

4.- The UNFCCC and the Road to Copenhagen

Photo 7. "Where is the Road to Copenhagen?" Avaaz Aliens at Barcelona Climate Talks

4.1.- Rio: The United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC, which entered into force in 1994, was adopted at the Rio Earth Summit in 1992 and sets an overall framework for intergovernmental efforts to deal with the global problem of climate change. Under the convention the 192 ratifying governments: 1) gather and share information on greenhouse gas emission, national policies and best practices; 2) launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and 3) cooperate in preparing for adaptation to the impacts of climate change (UNFCCC Fact Sheet 2009).

The UNFCCC embodies the commonly held viewpoints that climate change is the "common concern of mankind", that states should protect the environment for future generations, that action against climate change should take place now rather than upon full scientific certainty and that developed countries should lead the way in combating climate change and mitigating the negative effects while developing countries should be given 'full consideration' (Bodansky, 2001 at 207). Additionally, it was agreed that 'the extent to which developing countries meet their treaty obligations should depend on the extent to which developed countries provide finance and technology'. Accordingly, it was also agreed that 'economic and social development and poverty eradication are the first and overriding priorities of developing country parties'.

The purpose of the UNFCCC at its inception was to set up a framework within which to continuously address the climate change problem over time with the cooperation of the parties and the FCCC itself as a mechanism to facilitate progress. The convention sets up the infrastructure and mechanisms through which discussion and negotiation are possible without imposing strict obligations on individual parties. 192 parties have ratified the UNFCCC since it entered into force in 1994.

4.2.- Kyoto: The Kyoto Protocol

The Kyoto Protocol was adopted in Kyoto Japan at the COP 3, on December 11, 1997 and entered into force on February 16, 2005. Under the convention, the Kyoto protocol was adopted to "build on the general commitments set out in the Convention" and detailed specific obligations and mechanisms to the reduce GHG emissions of developed countries and set emissions targets for Annex I parties in order to reduce all developed country emissions by 5.2 percent below the 1990 base line during the commitment period, 2008-2012.

In order to achieve this, the Protocol sets binding targets for 37 industrialied countries and the European Union for reducing GHG emissions (see figure A below).

Within which its total reduction target –minus 8%- is distributed amongits member states –the so-called “EU bubble” (See figure B below.)

Figure A.- Annex I CO_2 emissions reductions targets.

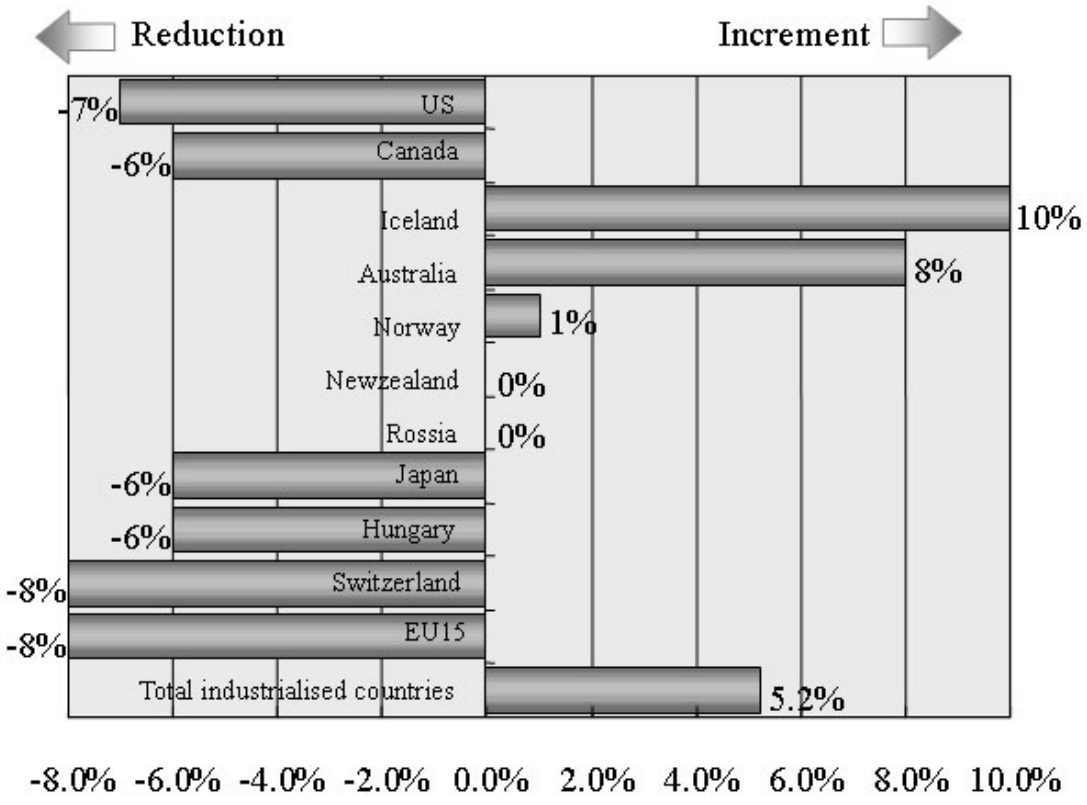
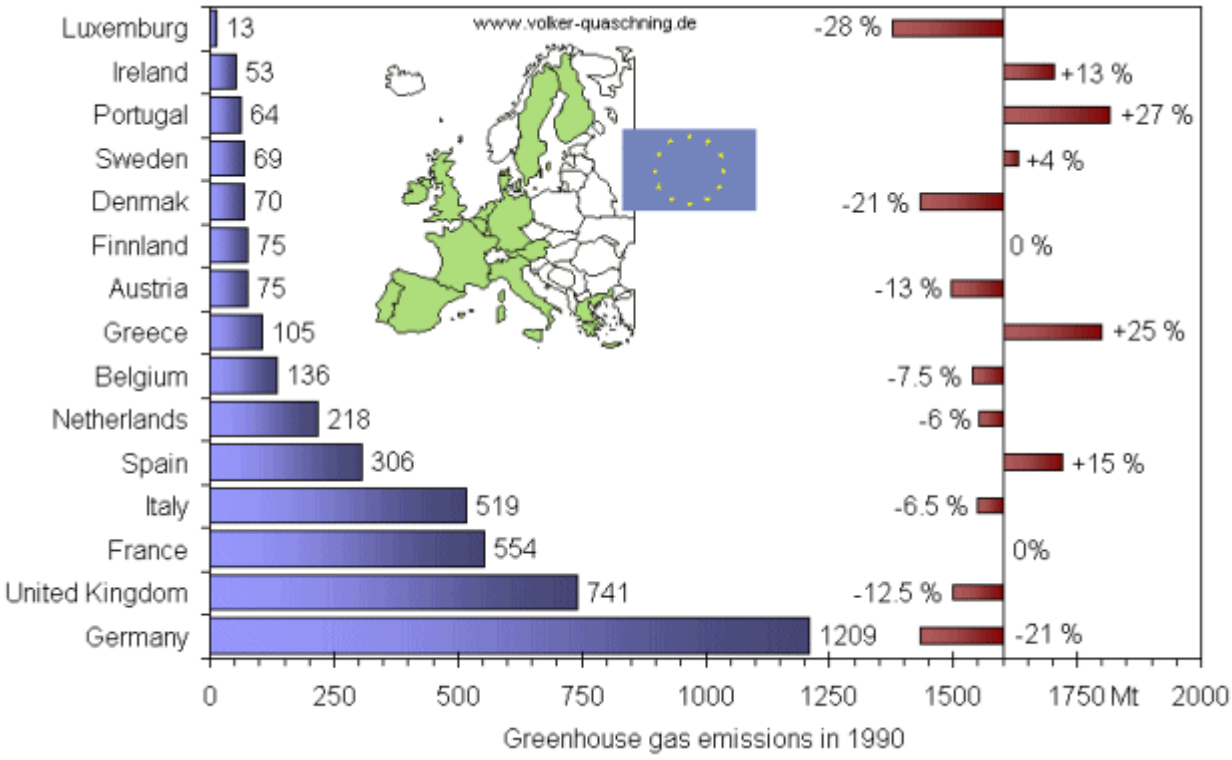


Figure B.- Original distribution of the EU -8% reduction target within "the EU bubble"



The main difference between the UNFCCC and the Kyoto Protocol is that the Convention encourages action by industrialized countries while Kyoto mandates it. The Kyoto Protocol "represents a progression in the climate change regime toward harder law, defining more precise commitments of developed countries…and suggesting the need for stronger compliance measures (Bodansky, 2001 at 204)". The rules for the implementation of the Protocol were adopted in Marakesh at the COP7 in 2001, and are known as the "Marrakesh Accords".

During the negotiation of the Kyoto Protocol, the United States was one of the main proponents of the inclusion of flexibility mechanisms that would allow Annex I parties to meet their obligations through means other than GHG emissions reductions in their own countries (Bodansky, 2001 at 204). Those flexibility mechanisms include the Joint

Implementation (JI) provisions, the Clean Development Mechanism (CDM) and International Emissions Trading, which are respectively found in articles 6, 12 and 17 of the Kyoto Protocol. According to the Protocol, all Annex I parties must be in full compliance with their commitments by the end of the first commitment period ending in 2012 (Carr et al., 2008 at 62).

In 2005, the first Meeting of the Parties to the Kyoto Protocol took place in Montreal, Canada. At the COP/MOP, the **Ad-Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP)** was established in order to consider Annex I parties' further commitments beyond the first commitment period.

4.3.- Bali: The Bali Action Plan

COP13 was held in Bali in December 2007 with a focus on long-term issues associated with the Kyoto Protocol. The Bali Action Plan, which was born out of this conference, responded to the findings of the Fourth Assessment Report of the Intergovernmental Panel on Climate change that 'warming of the climate system is unequivocal and that delay in reducing emissions significantly constrains opportunities to achieve lower stabilization levels and increases the risk of more severe climate impacts' by recognizing the need for significant global emissions reductions. In order to realize these emissions reductions, the Bali Action established the **Ad-hoc Working Group on Long Term Cooperation (AWG-LCA)**. The AWG-LCA focuses on four main elements of long-term cooperation, namely: mitigation, adaptation, finance and technology in the context of the climate change. The AWG-LCA was mandated to complete its work in 2009 and present the outcome of its work at the COP 15 (Decision/CP 13 Bali Action Plan 2007).

In Bali, the US delegation rejected EU proposals to require industrialized countries to cut emissions by 2020 to levels between 25-40 percent below 1990 levels, maintaining that

the proposed targets were unrealistic and unattainable and that any proposed reductions must include meaningful participation from upcoming industrializing countries like India, China and Brazil. In the end however, the United States did agree to the adoption of the Bali Action plan with the final compromise including provisions calling for developed countries 'to facilitate access to clean energy technology, to provide increased financial aid to developing countries in adapting to climate change, and to provide incentives and assistance to developing countries that preserve their tropical forests' (Crook, 2008). According to the under secretary of state resposible for environmental affairs for the United States, the key US considerations for a post-2012 framework are that such a framework must be "environmentally effective and economically sustainable" (Statement by Paula J. Dobriansky, Under Secretary for Democracy and Global Affairs, Befor the Senate Foreign Relations Committee (Nov. 13, 2007) *at* <htty://www.state.go/g/rls/rm/95130.htm>).

As Yvo de Boer (then Secretary General of the UNFCCC) expressed at a Working Breakfast organized in June 26th 2009 by the Real Instituto Elcano in Madrid, the situation iat that date, after delegates from 183 countries had met in Bonn on June 9-12 12 to discuss the key texts that would form the basis for an international climate change deal, to be finalized in Copenhagen in December 2009, but before the two final preparatory meetings (Bangkok and Barcelona), the situation could be summarized as tilting towards success or disaster pending on 4 very specific issues (see Enrique Alonso García 2009, pgs 5-37 and ff):

1.-An initial text of the Chair of the COP was approved as draft. There was an extensive 250 pages text for final negotiation. Too long for an agreement on a detailed text by December 2009 -but at least there is text-. There was also still the formal question of whether it will be a new treaty or protocol, an extension of the Kyoto Protocol or a COP Decision. Its legally binding force had been agreed and out of discussion (if political agreement was met in

Copenhagen, although the final exact wording of the text might be delayed and referred to an additional “technical meeting” later in 2010).

2.-Numbers are on the table but far from the minimum urged by the IPCC (50 to 85% reduction on 2000 levels by 2050.) The baseline seems agreed (the 1990 emissions level; although there is still some discussion) and the target varies: -15% Russia (its current level of emissions, more or less); -8% Japan (but exclusively in domestic reductions, without flexible mechanisms in the international arena); -20% the EU (maybe moving to -30%, depending of what others might decide); -14% the U.S. moving to -30%, depending of what others might decide); -14% the U.S. [During the campaign, the Obama-Biden plan pledged to reduce GHG emissions by 80% by 2050.]

3.-The main obstacle for a U.S. commitment is the bilateral situation vis a vis China (and the rest of the emerging economies). The question was whether these countries, and China in particular, could convince the U.S. that they had taken, or are taking, “meaningful participation” in the regime: e.g., measures to change their economies toward non-carbon development models (which is what the Byrd-Hagel Senate Resolution, which became the formal U.S. position, had formally asked from them when the U.S. rejected the Kyoto Protocol). This question was being approached bilaterally rather than multilaterally. The issue was then whether the U.S. Congress was taking seriously this task of assessing the statu quo of emerging economies concerning non-carbon based development. This was essential for the U.S. commitment that would need in Copenhagen a pre-backing by the Senate if the Obama administration did not want to create an internal disaster later in the process. Emerging economies had changed and they could de facto have it easy to reach a 17,5% reduction of the 1990 emissions, but they would probably never concede to it as legally binding commitment since the principle for them is that climate change should be solved by those who caused it: the already industrialized countries.

4.-There was no clear agreement of on the financing scheme promised to the developing countries in the UNFCCC regime and the Kyoto Protocol. The economic crisis and the focus on deficit reduction could make of this the main iossue blocking any result in COP 15 in Copenhagen.

4.4.- Barcelona: The Barcelona Climate Talks

Immediately preceding the COP15, preliminary negotiations took place in Barcelona from November 2-6, 2009 with the purpose of continuing the work of the AWG-KP and AWG-LCA that had begun, as mandated by the Bali Action Plan, in Bonn and Bangkok to enhance international climate change cooperation. The Barcelona Talks were the last round of negotiations before the COP15 and thus the last chance to nail down the details if any agreement was to be reached. The AWG-LCA continued its work on the issues of shared vision for cooperative action, adaptation, mitigation, finance, technology and capacity building, while the AWG-KP conducted contact groups and informal consultations dealing with Annex I emission reductions, among other things.

Progress towards an agreement for the post-2012 Kyoto commitment period moved extremely slowly and by the end of the Barcelona Talks, the general consensus among participants was that the likelihood of reaching a detailed legally binding agreement by the COP15 in December was very small.

Left: Photo 8. Plenary meeting, Barcelona Climate Talks; Right: Photo 9: Side Event, Barcelona Climate Talks

4.4.1.- Progress of the AWG-KP

During the fourth meeting of the 9th session of the AWG-KP, in Barcelona, its Chair uged that they close and solve issues there in Barcelona before reaching Copenhagen. It was his hope that the Working Group would be able to conclude on as many issues as possible and where not possible, to make two or three clearly framed options to facilitate decision making in Copenhagen. Examples of issues that needed special attention include: a means to reach emissions reduction targets as well as a proposal for amendments to the Kyoto protocol to be applied beyond 2012.

During the fourth meeting, Sudan, on behalf of the G77 and China, reiterated its grave concern that the Kyoto Protocol might come to an end in Copenhagen with the absence of any agreement to carry it forward. In response to a great deal of speculation that proposals from industrialized countries like the United States for non-legally binding Kyoto amendments and alternatives that may make the Kyoto Protocol redundant for a second commitment period, Sudan stressed that the Kyoto Protocol must continue to follow commitments beyond 2012 and that the G77 and China were ready to stand against any attempt to dismantle Kyoto. Grenada, on behalf of AOSIS, echoed the sentiment of the G77 and China by emphatically stating that it was against the ‘killing’ of the Kyoto Protocol.

A subsequent meeting of the AWG-KP Contact group on Annex I Parties' emissions reductions proceeded with the broad objective of resolving specific issues of parties including aggregate and individual emission reductions. During the meeting, a number of questions were raised regarding how to achieve this objective before the commencement of negotiations in Copenhagen, including: how to raise the level of emission commitments for Annex I parties from 16-23% to something more ambitious; the emissions pathways that parties are considereing when prosposing their levels of emission reductions and whether they are starting aggressively or conservatively; what annual rate of decline beyond 2020 is necessary to meet the emissions levels required by science; and how aggregate targets can be allocated amongst all parties.

4.4.2.- Progress of the AWG-LCA

During the AWG-LCA meeting in Barcelona, its Chair moved towards coming to solid conclusions to ensure that the text forwarded from the Barcelona meetings on to Copenhagen would have a logical flow and would be more than just a "wish list". According to the Chair, the language of the text was directional in nature but needed to be more action oriented. In response to this and in line with its historical reluctance towards binding action and preference for aspirational text, the United States countered that the text ought to be directional in nature and not derived from textual proposals but rather from policy statements from earlier submissions. According to the United States, 'shared vision' should be a concise statement containing reference to a long term goal and taking from the four stated building blocks but not actional in itself. In addition, the United States added that the 'shared vision' needed to recognize the urgency of the issue of climate change, the rapid growth of scientific evidence, the need for a truly global approach, the importance of comprehensive strategies at national and global levels and the recognition of the evolution of global economies.

Moving forward in the discussion of shared vision, Ambassador Lumumba of Sudan, on behalf of the G77 and China expressed his concern that the focus on the contact group's main three elements, shared vision, long term cooperative action, and goals to achieve, be accelerated and that articles 4.1, 4.2, 4.3, 4.4 and 4.7 be the focus of discussion going forward. Additionally, the goals to be achieved in Copenhagen should be discussed in greater detail since a shared vision without these constitutive elements would be meaningless. Fully supporting the statement made by Sudan, Saudi Arabia emphasized that clear goals must be set and that a determination must be made regarding the commitment of developed countries in terms of finance in order to ensure that some countries do not pay more than their fair share. Saudi Arabia continued by communicating that the UNFCCC Process had been in place for some 15-20 years and unless there are specific finance, adaptation and technology transfer subset goals, the the larger goal may or may not be achieved.

Midway through the Barcelona talks the AWG-LCA chair briefed the civil society on the status of negotiations and projections for Copenhagen. During his briefing, the chair stressed the great sense of urgency felt by all parties to create a substantive text that could be negotiated in Copenhagen. He emphasized that what was needed from Copenhagen was something that should be both ambitious and backed by more money and technological support that would ensure that rules would be drawn up but that also would convey a political message to parties and to the outside world. He stated that a decision would be necessary; that should give rise to immediate action and that should not be contingent on other things to happen at a later date. This decision could include an agreement that the content of the outcome should be translated into a legal treaty, a ratifiable legal instrument. He added that while such a treaty would not be ready for adoption by the end of the COP15 on December 18th 2009, a decision should be made to make such a treaty possible at a later date.

Q&A Session between Michael Zammit Cutajar, the Chair of the AWG-LCA and the Civil Society

November 3, 2009, Barcelona Climate Talks

C.S.: What are the Differences on the views of the purpose of the Convention?

M.Z.C: The Convention is a framework convention which permits the framework to be filled with subsequent decisions, or a protocol as in Kyoto. The convention does permit construction; never the less, it is guided by certain principles and basic provisions. Essentially, the issue is what is common and what is differentiated.

C.S.: There is a concern that the Bali Action Plan will not actually be delievered. The general consensus is that there will be no legally binding agreement in Copenhagen. Can you expand on this?

M.Z.C.: Where in the Bali Action Plan do we even see the words legally binding agreement? Spirit is one thing; letter is another. There are conflicting opinions about what is expected in Copenhagen. We are not necessarily talking about post-Kyoto. There is a lot of loose language of that sort at the moment. All that we produced in Bali was an agreed outcome. No consensus on a treaty, not asked for explicitly by Bali, and no time in which to do it.

C.S.: What about the possibility for the UNFCCC negotiations to complete?

M.Z.C.: The body ends its life in 2009 and can go on to the 25 December, but not much longer than that. The COP could of course agree to either extend the LCA or set up something to continue. However, I do not think that would be wise. Once that moment passes I don't think we will have that same political climate to really continue. People will think we have failed and then the pressure will really be off.

M.Z.C.: The US is a very important player in this negotiation. Without the US there is no deal. We are all uncertain of what the US will bring to Copenhagen. The US does not want to repeat a Kyoto situation where the administration was not able to present the result of its work for ratification and then the subsequent administration dismissed it. In a domestic context, healthcare is a more immediate issue in that country. It does put us in a very difficult situation. What I have in mid is more achievable given that uncertainty with the US. At the same time, I don't think that I can say that a few more months will make a difference in Washington. I'm not sure that Washington is driven by external deadlines.

C.S.: If there is a decision in Copenhagen to encompass all that is agreed what is going to be the process for synthesizing all of the non-papers and when will we see a result?

M.Z.C.: I have encouraged all of the co-chairs and facilitators to push on the non-papers and really boil them down so that we have, at the end of this very short week, not a coherent restructuted document, but a much more focused complilation of those papers. A proper, translated document, no longer 'non-papers'. The objective of the exercise is not only to secure agreement but also to boil down the places where there is disagreement so that we can whittle down the options. Where there is no agreement we are looking for a much clearer idea of what the outcome could be.

C.S.: It is disturbing that we are saying tht we are ruling out the creation of a legally binding document. We have enough material in the non-papers to construct something if needed if we have enough pressure.

M.Z.C.: We are counting on the political pressure in Copenhagen to seize the moment and seal the deal if there is consensus, but there is not a consensus at this point.

C.S.: Do you have any comments on the current negotiations on technology and its role in the Copenhagen negotiations as a potential centerpiece in the outcome?

M.Z.C.: Technology is the area where we have the most potential to improve on current performance, which has not been impressive. There is potential here for cooperative development of shared technology and there is possibility of addressing diffusion and transfer of existing technology in a more meaningful way than has been done before. I am encouraged by the Montreal Protocol; although, the scope is very narrow compared to climate. I hope that there will be a substantial difference in the way we deal with technology in this convention as a result of Copenhagen.

Left: Photo 10. Avaaz.org 'Don't Collapse Copenhagen' Display. Right: Photo 11. The author of this case study and the "Countdown to Copenhagen" at the Barcelona Climate Change Talks, November 2009

4.5.- The stakes leading up to Copenhagen

Leading up to the COP 15 in December, concrete decisions about whether to continue to mitigate and adapt to climate change using the Kyoto framework or whether to pursue an entirely different vehicle to address the issues of Climate Change were still under debate. The United States held strong to its position that it would not and could not ratify Kyoto and bind itself to mandatory emissions reduction targets while other large non-annex-1 countries like India and China were not required to reduce their emissions and instead stressed its preference for more flexible, voluntary commitments. The combined emissions from the northeastern US states and California are alone the sixth-largest global emitter of carbon dioxide. Without the United States onboard, only 32 percent of the 1990 emissions are included in the Protocol where 65 percent of 1990 emissions would have been included had they not withdrawn from ratifying Kyoto. This means that even if the current Protocol were extended with all ratifying Parties continuing at current reduction rates, without US cooperation, these would have little impact on climate change (Dordhaus, 2007). For these reasons, getting the United States on-board for the post-2012 commitment period and preventing industrialized countries from 'killing Kyoto' in favor of less stringent voluntary commitments was paramount for developing countries.

5.- US National and International Climate Policy

5.1.- Property Rights, Climate Change and Kyoto

In a country steeped in the notion that personal property rights are the foundation of individual freedom, the regulation of individual land use has proven to be

an extremely difficult and sensitive issue. Americans have historically been wary of government infringement on personal liberty and many see any type of legislative effort to impose restrictions on land use as a violation of the rights that accompany land ownership. These ingrained notions about property rights have colored past attempts by the US to regulate emissions in an effort to tackle the problem of climate change and present the main stumbling block for instituting policy that will line up with the emissions reductions targets necessary to match other Annex I nations' reductions under Kyoto and beyond.

Under the Kyoto Protocol, although reductions of emissions are assumed by states, it is unvavoidable, for such states, to transfer and reallocate those reductions to the private sector, which is the real GHG producer. This means strict untervention and regulation of many sectors: energy, transport, agriculture, etc.

Although in the New Deal and during the so-called "environmental decade" (l970s) the US people accepted strong intervention to achieve environmental quality standards, the tide turned again with President Reagan in the l980s towards a totally liberalized non-regulated economy. This tide, which is the traditional US approach to regulation (see Thomas K.McGraw, l986) still makes it very difficult to accept a "cap and trade" emissions system (a system in which facilities are granted –or have to buy from the Government- a limted tied amount of emissions in which farther –below the cap- reductions of CO2 outputs, are considered property rights of the emitter-saver who can trade it to others who are either in need of rights to emmit beyond their cap or newcomers to the market).

In order to satisfy its obligations under Kyoto as an Annex I party and meet GHG reduction targets, the United States would have to employ strong legislation that would directly regulate and limit how property owners could use their land and their

industrial facilities.

However, despite this aversion to regulation of property rights, state and federal legislatures, executives, and judiciaries have successfully taken steps towards incorporating environmental considerations into the traditionally individualistic American understanding of property rights by balancing the need for governmental limitations with the maintenance of traditional notions of personal liberty through the introduction of a number of global warming bills aimed at the reduction of the use of fossil fuels generally and increased GHG standards for motor vehicles rather than specifically limiting land use (Lucero, 2007).

Property Rights restrictions have historically played a rather minor role in American law with the American private property tradition instead preferring to take a more individualistic and unregulated path. The American idea of property underlying the property rights law system, as opposed to other more community oriented ideas of property, prefers private ownership, the right to exclude others, transferability of property rights, and the reasonable expectation of gain from property (Butler, 2000). Additionally, it has long been decided that the government cannot take control of personal property without just compensation (See, e.g., *Nollan v. California Coastal Comm'n,* 483 U.S. 825 (1987); *Kaiser Aetna v. United States,* 444 U.S. 164 (1979); *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419 (1982)). This understanding of property has colored the way Americans have used land since the arrival of the first settlers and has lead to a culture where property owners are left to do as they please with little interference from the government or other private individuals (Butler, 2007). During the 19th Century industrial protection was based even on a more strict concept of private property. These ideas about property rights and individual liberty are inherent in capitalistic American ideology and help to explain the resistance

that the Clinton Administration faced after signing the Kyoto Protocol in 1997.

During the negotiation of the Kyoto Protocol, as a result of the Byrd-Hagel Senate resolution that directed the President not to sign any emissions reduction agreement that did not also require developing countries to reduce or limit emissions (see box in next pages), the delegation for the United States proposed to "commit to the binding and realisting target of returning to emissions of 1990 levels between 208 and 2012" a well as "embrace flexible mechanisms for for meeting these limits" with significant efforts expected from developing countries as a condition to U.S. participation (Royden, 2002 at 6). Unfortunately, while the Clinton Administration was eager to sign the treaty, the political climate at home was not conducive to ratification.

To meet its Kyoto commitments the U.S. would have to institute significant legislation and the Administration faced a hostile Congress that was concerned that the Clinton Administration may have been moving to fast (Royden, 2002 at 10). Skepticism about the validity of climate science and the attributability of climate change to human actions may have made acceptance of climate policy by the the American people and their congressional representatives especially difficult. Despite the United States heavy invlolvement in the negotiation of the Kyoto Protocol under the Clinton administration, the Bush administration in 2001 decided to decline to ratify the Protocol and instead act as observers. Bush deemed the Protocol a 'failed effort' and instead favored voluntary actions to mitigate climate change such as increased scientific research and market mechanisms (Crook, 2008 at 164).

S.RES.98
Title: A resolution expressing the sense of the Senate regarding the conditions for the United States becoming a signatory to any international agreement on greenhouse gas emissions under the United Nations Framework Convention on Climate Change.
Sponsor: Sen Byrd, Robert C. [WV] (introduced 6/12/1997). Cosponsors (64)
Related Bills: H.RES.211
Latest Major Action: 7/25/1997 Passed/agreed to in Senate. Status: Resolution agreed to in Senate without amendment and with a preamble by Yea-Nay Vote. 95-0. Record Vote No: 205.
Senate Reports: 105-54

Calendar No. 120
105TH CONGRESS
Report
SENATE

1st Session

105-54

--CONDITIONS REGARDING U.N. FRAMEWORK CONVENTION ON CLIMATE CHANGE

July 21, 1997- Ordered to be printed
Mr. HELMS, from the Committee on Foreign Relations, submitted the following
REPORT

[To accompany S. Res. 98]

The Committee on Foreign Relations having had under consideration a resolution expressing the sense of the Senate regarding the conditions for the United States becoming a signatory to any international agreement on greenhouse gas emissions under the United Nations Framework Convention on Climate Change, reports favorably thereon, and recommends that the resolution do pass.

I. BACKGROUND AND PURPOSE

In May 1992, the United States Senate gave its advise and consent to the ratification of the United Nations Framework Convention on Climate Change. The treaty, which was intended to address the global emission of greenhouse gases, was signed by President Bush at the Rio Earth Summit. Under that treaty the United States, like other developed countries, committed to a non-binding target of containing emission levels at 1990 rates by the year 2000. The treaty entered into force in March, 1994 and is not fully implemented.

Soon after entry into force Parties began preparing for the First Conference of the Parties (COP-1) in Berlin, Germany, and began drafting of a new legal instrument to address emissions reductions beyond the year 2000. At COP-1 in March 1995, the `Berlin Mandate' was adopted by the Parties. That document set the broad framework for negotiations to follow, including a decision that no commitments would be included in a new agreement for countries with developing economies, as defined in the Framework Convention. Countries that would not incur new commitments include China, Brazil, Mexico, and India. The COP-1 also established the Ad Hoc Group on the Berlin Mandate (AGBM), which was tasked with developing the text of a new agreement.

The Second Conference of the Parties (COP-2) in Geneva, Switzerland, in July 1996, took an additional step in negotiations, calling for `legally binding' commitments that could have significant impact on many world economies. Specifically, Parties agreed to work toward establishing emissions reduction commitments requiring specific, legally binding emissions limits and policies for the period beyond 2000. The `Ministerial Declaration' issued at COP-2 called for accelerated negotiations on the elements of a new legal instrument that would limit emissions of greenhouse gases. That legal instrument continues to be under negotiation on a timetable to be opened for signature at the Third Conference of Parties in Kyoto, Japan, in December 1997.

The next round of negotiations is scheduled for July 1997 in Bonn, Germany. At this round of negotiations members will have for the first time a full negotiating text with submissions from all parties. The Clinton administration submissions include the following key elements: 1) the target for reduction of greenhouse gas emission levels should be binding; 2) the target should focus on the years 2010 to 2020; and 3) countries should have flexibility nationally in implementation of the new commitments.

Other U.S. proposals include: 1) the creation of an `emissions budget' which would allow nations to `trade' emissions in order to meet targets, and `bank' emissions for future years, and `borrow' from future years (with a penalty); 2) establishment of procedures to ensure reporting, measurement, review and compliance of emissions standards; 3) involvement of developing countries (without requiring binding emission reductions), including graduation requirements for developing countries; and 4) provision for `joint implementation,' which would permit parties to assume reductions through activities in other countries.

Resolution 98 was introduced by Senators Byrd and Hagel and has more than 50 cosponsors. Supporters believe that the resolution sends a clear and unambiguous signal as to the basic conditions that must be met if the United States is to accept legally binding commitments to reduce greenhouse gas emissions. In addition, the resolution recommends that a bipartisan group of Senators be appointed by the Majority and Minority Leaders of the Senate to monitor the status of negotiations on climate change and report periodically to the Senate. This degree of oversight is unusual and serves to emphasize the high level of member interest in ensuring that the United States ratify a treaty only if U.S. interests are adequately protected.

The attached appendix is an expansive compilation of the testimony of Senators, administration officials, economists, scientists, and U.S. industry and labor. A thorough reading of the testimony indicates that the issues are complex, both in terms of the scientific data that exists on global warming and the potential impact on the U.S. economy if certain proposals are implemented in the United States.

II. COMMITTEE ACTION

The Subcommittee on International Economic Policy, Export and Trade Promotion held two public hearings on June 19 and June 26, 1997. The hearings were chaired by Senator Chuck Hagel. The Committee on Foreign Relations considered Senate Resolution 98 on July 17, 1997, and ordered the resolution favorably reported by a voice vote.

III. SECTION BY SECTION ANALYSIS

Section One of Senate Resolution 98 has two parts. The first paragraph specifies two key conditions that the Senate expects to see included in any international agreement that the United States signs related to reducing greenhouse gas emissions.

This section states that it is the sense of the Senate that any agreement that the United States signs that would impose additional legal commitments on the United States related to the United Nations Framework Convention on Climate Change should include commitments for countries with developing economies (termed non-Annex I countries under the existing U.N. Framework Convention), and should not result in serious harm to the economy of the United States. The section makes clear that these requirements apply to any agreement reached during scheduled negotiations in Kyoto Japan in December 1997 or any agreement reached thereafter.

The second paragraph states the sense of the Senate regarding the materials that must be included in the transmittal documents that would accompany any agreement that is submitted to the Senate for its advice and consent to ratification. Such transmittal documents should include: 1) a detailed explanation of legislation or regulations that would be required to implement the agreement; 2) a detailed analysis of the financial and economic costs to the United States incurred by implementing the agreement submitted to the Senate.

5.2.- The Obama-Biden Commitment

Climate change has been a top prority of the Obama administration. During the 2008-2009 presidential campaign, Obama stressed responsible energy policies that would 'recognize the relationship between energy, the environment, and the American economy' as well as 'leverage American ingenuity to put people back to work, fight global warming and increase energy independence'.

In order to achieve these goals, Obama proposed a number of solutions to the current environmental crisis. The first solution was a comprehensive plan to adopt alternative and renewable energy sources with the end result of ending US dependence on foreign oil as well as 'addressing the global climate crisis' by adopting greener energy practices. Obama proposed to begin generating 25% of the energy consumed by the American people through renewable sources by 2025 as well as to invest over $150 billion over 10 years in solar, wind, biofuels, and geothermal power.

The Obama-Biden campaign recognized that global warming is a real phenomenon and that it is happening as a result of human activities. According to Barack Obama and Joe Biden's statements on the issue, they believe that 'we have a

moral, environmental, economic and security imperative to tackle climate change in a serious sustainable manner'. In order to combat global warming, the Obama Administration supports the implementation of a market-based cap-and-trade system to reduce carbon emissions by 8 percent by 2050, the amount scientists hade said was necessary. In order to achieve these reductions the Administration had stated that it would 'establish strong annual reduction targets' as well as 'implement a mandate of reducing emissions to 1990 levels by 2020'.

Barack Obama and Joe Biden also stressed the importance of energy efficiency in the fight to reduce emissions. By educating the public on the importance of reducing energy consumption, the Obama Administration hopes to arm the American people with the tools they need to 'begin reducing their energy consumption and energy bills' by setting national building efficiency goals, establishing grant programs, and giving incentives to energy utilities. In addition to incentivizing energy efficiency in the home, the Obama-Biden campaign promised to invest in advanced vehicle technology, expand consumer tax incentives on automobiles and increase fuel economy standards.

Perhaps the most important promise from the Obama-Biden campaign was its commitment to re-engage with the UNFCCC in order to work constructively towards reaching a solution to climate change. Prior to the beginning of the COP15, UNFCCC delegates were hopeful that the newly elected Obama Administration would inject life into the negotiations so that real substantive decisions could be made for the post-2012 commitment period (BarackObama.com/ Policy Issues).

Like the Clinton Administration in 1997, the Obama Administration recognized the importance of addressing climate change and came into the UNFCCC negotiations with full intentions to reach a substantive agreement. However, the domestic realities in the United States at the time of the COP 15 were not conducive to making binding

emissions reductions commtments. Domestic issues in the United States during the time surrounding the COP 15 included massive disagreements over health-care reform and the global economic crisis. Additionally, the majority of the US public did not recognize the urgency of climate action and were suspicious of climate science due to the partisan politics surrounding the issue and conflicting evidence presented in the media. This meant that the US delegation was not in a position to make any kind of legally binding commitments unless it wanted to deal with the same opposition felt by the Clinton Administration after signing Kyoto.

5.3.- The American Clean Energy and Security Act (Waxman-Markey)

One promising indicator of America readiness to tackle the climate change problem was the passage of the American Clean Energy and Security Act (Waxman-Markey Bill). On June 26, 2009 the United States House of Representatives passed the Act by a narrow vote of 219 to 212 and contains five titles: clean energy, energy

efficiency, reducing global warming pollution, transitioning to a clean energy economy and agriculture and forestry related offsets.

This comprehensive piece of legisation, if passed by the Senate, would establish a national greenhouse gase cap-and-trade system as well as lay out necessary measures to address the climate change problem. There is strong Democratic Party support for the bill and the bill needs 60 out of 100 votes in order to pass in the Senate. At the time the bill was passed in the House there were 58 democrats and 2 independents in the Senate; however, the number of Democratic seats in the senate is likely to change as a result of the mid-term elections on November 2, 2010.

Final passage of this legislation will signal that the United States has the congressional backing and legislative framework to institute stronger climate change policy as well as allow for the possibility for the United States to come to the table with GHG emissions reductions commitments at the COP 16 in Cancún (Mexico) in early December 2010 (COP16 was scheduled to take place from November 29 to December 10).

6.- **Copenhagen Outcomes**

6.1.- Outcome of the work of the AWG-LCA under the Convention

According to the Bali Action Plan, which created the AWG-LCA, it should have achieved its purpose of coming to presenting the results of its work to the COP 15. Since that work has yet to be completed, the AWG-LCA decided to extend its mandate so that it might continue its work and present the outcome of its completed work at the COP 16 in Cancún in December 2010.

6.2.- The Copenhagen Accord

At the end of the COP 15 in Copenhagen, there was no legally binding agreement on the post-2012 Kyoto commitment period; however, countries did come to an agreement known as the Copenhagen Accord (see box below). The Copenhagen Accord was neither adopted nor endorsed by the Conference of the Parties, but rather, was taken note of. This means that the agreement does not have any legal standing within the UNFCCC process even if parties decide to associate themselves with it. The Copenhagen Accord is a political agreement and not a treaty that can be signed and put into force (UNFCCC Clarification). What it is, however, is an expression of the willingness of countries to make significant steps towards reaching a solution to the climate change problem.

The key elements of the Copenhagen Accord are included in the box below (for a detailed account of the content and implications of each of the items, see Robert N. Stavins and Robert C. Stowe, 2010, 9 ff), and its actual text follows at the end of this section.

Photo 12. COP 15 Copenhagen, Denmark 2009

THE COPENHAGEN ACCORD

The **Copenhagen Accord** is a document that delegates at COP 15 agreed to "take note of" at the final plenary on 18 December 2009.

The Accord, drafted by, on the one hand, the United States and on the other, in a united position as the BASIC countries or G4 (China, India, South Africa, and Brazil) a bloc of the said four large developing countries formed by an agreement on 28 November 2009 and which committed to act jointly at COP15, including a possible united walk-out if their common minimum position was not met by the developed nations.

This emerging geopolitical alliance, initiated and led by China, brokered the final Copenhagen Accord with the United States. Subsequently, the grouping is working to define a common position on emission reductions and climate aid money, and to try to convince other countries to sign up to the Copenhagen Accord. In January 2010, the grouping described the Accord as merely a political agreement and not legally binding, as is argued by the US and Europe.

The current understanding today is that the Copenhagen Accord is not legally binding and does not commit countries to agree to a binding successor to the Kyoto Protocol, whose present round ends in 2012.

CONTENT OF THE ACCORD

- Endorses the continuation of the Kyoto Protocol
- Underlines that climate change is one of the greatest challenges of our time and emphasises a "strong political will to urgently combat climate change in accordance with the principle of common but differentiated responsibilities and respective capabilities"
- To prevent dangerous anthropogenic interference with the climate system, recognizes "the scientific view that the increase in global temperature should be below 2 degrees Celsius", in a context of sustainable development, to combat climate change.
- Recognizes "the critical impacts of climate change and the potential impacts of response measures on countries particularly vulnerable to its adverse effects" and stresses "the need to establish a comprehensive adaptation programme including international support"
- Recognizes that "deep cuts in global emissions are required according to science" (4^{TH} Report of the IPCC) and agrees cooperation in peaking (stopping from rising) global and national greenhouse gas emissions "as soon as possible" and that "a low-emission development strategy is indispensable to sustainable development"
- States that "enhanced action and international cooperation on adaptation is urgently required to... reduc[e] vulnerability and build.. resilience in developing countries, especially in those that are particularly vulnerable, especially least developed countries (LDCs), small island developing states (SIDS, under the AOSIS coalition) and Africa" and agrees that "developed countries shall provide adequate, predictable and sustainable financial resources, technology and capacity-building to support the implementation of adaptation action in developing countries".

- About mitigation agrees that developed countries (Annex I Parties) would "commit to economy-wide emissions targets for 2020" to be submitted by 31 January 2010 and agrees that these Parties to the Kyoto Protocol would strengthen their existing targets. Delivery of reductions and finance by developed countries will be measured, reported and verified (MRV) in accordance with COP guidelines.
- Agrees that developing nations (non-Annex I Parties) would "implement mitigation actions" (Nationally Appropriate Mitigation Actions) to slow growth in their carbon emissions, submitting these by 31 January 2010. LDS and SIDS may undertake actions voluntarily and on the basis of (international) support.
- Agrees that developing countries would report those actions once every two years via the U.N. climate change secretariat, subjected to their domestic MRV. NAMAs seeking international support will be subject to international MRV
- Recognizes "the crucial role of reducing emission from deforestation and forest degradation and the need to enhance removals of GHG emission by forests", and the need to establish a mechanism (including REDD-plus) to enable the mobilization of financial resources from developed countries to help achieve this
- Decides pursue opportunities to use markets to enhance the cost-effectiveness of, and to promote mitigation actions.
- Developing countries, specially these with low-emitting economies should be provided incentives to continue to develop on a low-emission pathway
- States that "scaled up, new and additional, predictable and adequate funding as well as improved access shall be provided to developing countries... to enable and support enhanced action"
- Agrees that developed countries would raise funds of $30 billion from 2010-2012 of new and additional resources.
- Agrees a "goal" for the world to raise $100 billion per year by 2020, from "a wide variety of sources", to help developing countries cut carbon emissions (mitigation). New multilateral funding for adaptation will be delivered, with a governance structure.
- Establishes a Copenhagen Green Climate Fund, as an operating entity of the financial mechanism, "to support projects, programme, policies and other activities in developing countries related to mitigation". To this end, creates a High Level Panel
- Establishes a Technology Mechanism "to accelerate technology development and transfer...guided by a country-driven approach"
- Calls for "an assessment of the implementation of this Accord to be completed by 2015... This would include consideration of strengthening the long-term goal", for example to limit temperature rises to 1.5 degrees

After almost a year countries representing over 80% of global emissions have engaged with the Copenhagen Accord once the initial 31 January 2010 deadline set under the Accord for countries to submit emissions reductions targets was clarified in the sense that it was a "soft deadline" By UNFCCC Secretary Yvo De Boer. Both Annex and non Annex 1 countries apledgeinghttp://unfccc.int/home/items/5262.php

While still reluctant to make a legally binding commitment, the United States has shown itself more inclined to participate in voluntary actions that do not oblige the US to implement stringent regulations at the expense of the US economy, as evidenced by its strong support of the Copenhagen Accord. The United States, as a UNFCCC party, regardless of whether or not it commits itself to any legally binding agreement inside or outside of Kyoto, has an obligation to attempt to mitigate the effects of climate change to some degree and is currently attempting to fulfil this obligation through the voluntary commitments outlined in the Copenhagen Accord.

In his speech at the closing of the COP15, US President Barack Obama outlined his sentiments and support for the Copenhagen Accord by stating the United States' commitment to cut emissions by 17 percent by 2020 and by more than 80 percent by 2050. Obama stressed the need for all major economies to put forward decisive national actions to reduce emissions as well as the need for a mechanism to review whether countries are keeping up with their commitment and to exchange that information in a transparent manner while still respecting state sovereignty.

UNITED NATIONS

UNFCCC Framework Convention on Climate Change

Distr.
LIMITED

FCCC/CP/2009/L.7
18 December 2009

Original : ENGLISH

CONFERENCE OF THE PARTIES
Fifteenth session
Copenhagen, 7–18 December 2009

Agenda item 9
High-level segment

Draft decision -/CP.15

Proposal by the President

Copenhagen Accord

The Heads of State, Heads of Government, Ministers, and other heads of delegation present at the United Nations Climate Change Conference 2009 in Copenhagen,

In pursuit of the ultimate objective of the Convention as stated in its Article 2,

Being guided by the principles and provisions of the Convention,

Noting the results of work done by the two Ad hoc Working Groups,

Endorsing decision x/CP.15 on the Ad hoc Working Group on Long-term Cooperative Action and decision x/CMP.5 that requests the Ad hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol to continue its work,

Have agreed on this Copenhagen Accord which is operational immediately.

1. We underline that climate change is one of the greatest challenges of our time. We emphasise our strong political will to urgently combat climate change in accordance with the principle of common but differentiated responsibilities and respective capabilities. To achieve the ultimate objective of the Convention to stabilize greenhouse gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, we shall, recognizing the scientific view that the increase in global temperature should be below 2 degrees Celsius, on the basis of equity and in the context of sustainable development, enhance our long-term cooperative action to combat climate change. We recognize the critical impacts of climate change and the potential impacts of response measures on countries particularly vulnerable to its adverse effects and stress the need to establish a comprehensive adaptation programme including international support.

2. We agree that deep cuts in global emissions are required according to science, and as documented by the IPCC Fourth Assessment Report with a view to reduce global emissions so as to hold the increase in global temperature below 2 degrees Celsius, and take action to meet this objective consistent with science and on the basis of equity. We should cooperate in achieving the peaking of global and national emissions as soon as possible, recognizing that the time frame for peaking will be longer in developing countries and bearing in mind that social and economic development and poverty eradication are the first and overriding priorities of developing countries and that a low-emission development strategy is indispensable to sustainable development.

3. Adaptation to the adverse effects of climate change and the potential impacts of response measures is a challenge faced by all countries. Enhanced action and international cooperation on adaptation is urgently required to ensure the implementation of the Convention by enabling and supporting the implementation of adaptation actions aimed at reducing vulnerability and building resilience in developing countries, especially in those that are particularly vulnerable, especially least developed countries, small island developing States and Africa. We agree that developed countries shall provide adequate, predictable and sustainable financial resources, technology and capacity-building to support the implementation of adaptation action in developing countries.

4. Annex I Parties commit to implement individually or jointly the quantified economy-wide emissions targets for 2020, to be submitted in the format given in Appendix I by Annex I Parties to the secretariat by 31 January 2010 for compilation in an INF document. Annex I Parties that are Party to the Kyoto Protocol will thereby further strengthen the emissions reductions initiated by the Kyoto Protocol. Delivery of reductions and financing by developed countries will be measured, reported and verified in accordance with existing and any further guidelines adopted by the Conference of the Parties, and will ensure that accounting of such targets and finance is rigorous, robust and transparent.

5. Non-Annex I Parties to the Convention will implement mitigation actions, including those to be submitted to the secretariat by non-Annex I Parties in the format given in Appendix II by 31 January 2010, for compilation in an INF document, consistent with Article 4.1 and Article 4.7 and in the context of sustainable development. Least developed countries and small island developing States may undertake actions voluntarily and on the basis of support. Mitigation actions subsequently taken and envisaged by Non-Annex I Parties, including national inventory reports, shall be communicated through national communications consistent with Article 12.1(b) every two years on the basis of guidelines to be adopted by the Conference of the Parties. Those mitigation actions in national communications or otherwise communicated to the Secretariat will be added to the list in appendix II. Mitigation actions taken by Non-Annex I Parties will be subject to their domestic measurement, reporting and verification the result of which will be reported through their national communications every two years. Non-Annex I Parties will communicate information on the implementation of their actions through National Communications, with provisions for international consultations and analysis under clearly defined guidelines that will ensure that national sovereignty is respected. Nationally appropriate mitigation actions seeking international support will be recorded in a registry along with relevant technology, finance and capacity building support. Those actions supported will be added to the list in appendix II. These supported nationally appropriate mitigation actions will be subject to international measurement, reporting and verification in accordance with guidelines adopted by the Conference of the Parties.

6. We recognize the crucial role of reducing emission from deforestation and forest degradation and the need to enhance removals of greenhouse gas emission by forests and agree on the need to provide positive incentives to such actions through the immediate establishment of a mechanism including REDD-plus, to enable the mobilization of financial resources from developed countries.

7. We decide to pursue various approaches, including opportunities to use markets, to enhance the cost-effectiveness of, and to promote mitigation actions. Developing countries, especially

those with low emitting economies should be provided incentives to continue to develop on a low emission pathway.

8. Scaled up, new and additional, predictable and adequate funding as well as improved access shall be provided to developing countries, in accordance with the relevant provisions of the Convention, to enable and support enhanced action on mitigation, including substantial finance to reduce emissions from deforestation and forest degradation (REDD-plus), adaptation, technology development and transfer and capacity-building, for enhanced implementation of the Convention. The collective commitment by developed countries is to provide new and additional resources, including forestry and investments through international institutions, approaching USD 30 billion for the period 2010 – 2012 with balanced allocation between adaptation and mitigation. Funding for adaptation will be prioritized for the most vulnerable developing countries, such as the least developed countries, small island developing States and Africa. In the context of meaningful mitigation actions and transparency on implementation, developed countries commit to a goal of mobilizing jointly USD 100 billion dollars a year by 2020 to address the needs of developing countries. This funding will come from a wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance. New multilateral funding for adaptation will be delivered through effective and efficient fund arrangements, with a governance structure providing for equal representation of developed and developing countries. A significant portion of such funding should flow through the Copenhagen Green Climate Fund.

9. To this end, a High Level Panel will be established under the guidance of and accountable to the Conference of the Parties to study the contribution of the potential sources of revenue, including alternative sources of finance, towards meeting this goal.

10. We decide that the Copenhagen Green Climate Fund shall be established as an operating entity of the financial mechanism of the Convention to support projects, programme, policies and other activities in developing countries related to mitigation including REDD-plus, adaptation, capacity-building, technology development and transfer.

11. In order to enhance action on development and transfer of technology we decide to establish a Technology Mechanism to accelerate technology development and transfer in support of action on adaptation and mitigation that will be guided by a country-driven approach and be based on national circumstances and priorities.

12. We call for an assessment of the implementation of this Accord to be completed by 2015, including in light of the Convention’s ultimate objective. This would include consideration of strengthening the long-term goal referencing various matters presented by the science, including in relation to temperature rises of 1.5 degrees Celsius.

APPENDIX I

Quantified economy-wide emissions targets for 2020

Annex I Parties	***Quantified economy-wide emissions targets for 2020***	
	Emissions reduction in 2020	Base year

APPENDIX II

Nationally appropriate mitigation actions of developing country Parties

Non-Annex I	***Actions***

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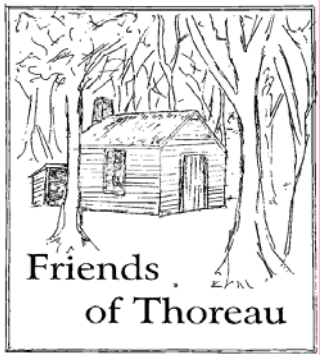

The Conference of the Parties: The Role of the United States in Effectively Mitigating Climate Change

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SCHOLARS' DEBATE

Since the United States has made it clear that it does not, in the foreseeable future, intend to legally bind itself to Kyoto emissions reductions targets, but has expressed a willingness to align itself with voluntary efforts as evidenced by the Copenhagen Accord, new avenues must be explored in order to facilitate the United States' efforts to mitigate the effects of climate change. Technology transfer has been required by both the UNFCCC and the Kyoto Protocol to encourage parties to promote and cooperate in the development, diffusion, and transfer of technologies that control,

reduce or prevent GHG emissions. These sentiments have also been reiterated in the Copenhagen Accord. For the United States, a country that has already expressed its preference for flexible mechanisms in the original negotiation of the Kyoto Protocol, a voluntary mechanism that would enable it to actively participate in the mitigation of GHG emissions without binding itself to specific reductions would be an ideal way to meet its UNFCCC obligations. For this reason, a properly constructed technology transfer mechanism as well as further involvement in the current flexibility mechanisms, concentrating specifically on REDD, have the potential to significantly increase the United State's active involvement in GHG emissions reduction and mitigation of their impact.

In conjunction with the technology transfer and REDD mechanisms, there have been a number of recent developments regarding the use of carbon as a commodity as well as the emergence of regional carbon markets within the US, namely, the CCX, RGGI and WCI. If the US decides to enter a post-Kyoto agreement, these regional carbon markets could either be utilized to fit into an international scheme or stand on their own as part of a single US market.

1.- Technology Transfer

UNFCCC

Article 4.- Commitments.

1.- . All Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, shall: … (c). Promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors;
…
5. The developed country Parties and other developed Parties included in Annex II shall take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties, particularly developing country Parties, to enable them to implement the provisions of the Convention. In this process, the developed country Parties shall support the development and enhancement of endogenous capacities and technologies of developing country Parties. Other Parties and organizations in a position to do so may also assist in facilitating the transfer of such technologies.

Article 4, sections 1.c) and 5 1, of the UNFCCC establishes the commitments concerning the technologies applicable to climate change policies. See box above.

Decision 1/CP.13 of the Bali Action Plan decided to address "enhanced action on technology development and transfer to support action on mitigation and adaptation, including, inter alia, consideration of: (i) Effective mechanisms and enhanced means for the removal of obstacles to, and provision of financial and other incentives for, scaling up of the development and transfer of technology to developing country Parties in order to promote access to affordable environmentally sound technologies; (ii) Ways to accelerate deployment, diffusion and transfer of affordable environmentally sound technologies; (iii) Cooperation on research and development of current, new and innovative technology, including win-win solutions; and (iv) The effectiveness of mechanisms and tools for technology cooperation in specific sectors."

Previously Decision 4/CP.7 had approved a country-driven, integrated approach, in which five key themes and areas were identified for meaningful and effective actions, technology transfer mechanisms to increase the transfer of and access to environmentally sound technologies and know-how being one of them (the rest were technology needs and needs assessments; technology information; enabling environments; and capacity-building.)

[See http://unfccc.int/ttclear/jsp/Framework.jsp]

In the United States, private corporations own the majority of environmentally sound technologies (ESTs) and in order to encourage US corporations to independently participate in climate change technology transfer, intellectual property rights (IPRs) for investors of technology must be safeguarded and strengthened beyond what has been

laid out by the current TRIPS agreement [Trade Related Aspects of Intellectual Property Rights, see below item 1.2, a side agreement to the WTO -World Trade Organization- creation treaty of 1995, which attempts to narrow the gaps in the way these rights -copryrights, trademarks, geographical indications, industrial designs, patents and petty pattents, trade secrets and layout designs (topographies) of integrated circuits…- are protected around the world and, in particular, by each one of the WTO member states [See http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm7_e.htm]

Additionally, the role of the public sector must be thoroughly contemplated since technology transfer is not an automatic or costless process and relevant policy incentives will be necessary in order to stimulate consistent ans significant participation in technology transfer (International Centre for Trade and Sustainable Development, 2008).

Intellectual property rights (IPRs) can either facilitate or hinder technology transfer depending on the relative strenth of the IP protections and there is a notable divide between IPR holders and technology receivers regarding the appropriate strength of IPRs in technology transfer schemes. In order to come to an agreement on a technology transfer mechanism some middle ground must be found that will both protect IP holders and sufficiently take into consideration the needs of developing countries.

An effective technology transfer protocol should provide individual incentives for tech transfer participation, especially in the form of tradable emissions credits, for participating corporations. From a policy perspective, both the United States and developing countries would benefit from programs, similar to the Kyoto Joint implementation and the Clean Development Mechanism (see the flexible mechanisms in the next item of this same section on “Scholars Debate”) that encourage voluntary

participation in technology transfer by rewarding both technology investors with marketable emissions credits and technology receivers with development aid. However, in order to be effective, the proposed program should operate outside of Kyoto and take into consideration the IPR interests of investing counties and corporations and balance developing county interest while having the overall effect of decreasing net GHG emissions over time and producing tangible rewards for investors.

In order for American corporations to participate in technology transfer, participation must make good business sense, have tangible benefits and be relatively low risk. That means that there must be a clearly defined rules that lay out exactly which types of projects qualify, be it licensing, direct investment, joint ventures or some other transfer of environmentally sound technology, as well as a system that reliably assigns emission credit values to the investment projects. Overall, developed countries and corporations have an incentive to participate in flexible mechanisms like Joint Implementation (JI) and the Clean Development Mechanism (CDM) if, in return for their participation, they receive incentives that outweigh the costs of participation. For UNFCCC members like the United States who are not parties to Kyoto, the incentive must go beyond meeting commitment reduction targets; the incentive must be economic.

1.1.- Intellectual Property Rights and Technology Investment

Adequate protection of the IPRs is a prerequisite to any technology transfer system without which, no investor would participate regardless of the offered incentives.

Since private corporations own the majority of ESTs, in order for any kind of technology transfer system to work effectively there must be support from the private

sector. In order to obtain this support, IPRs must be safeguarded. The difficulty however, is maintaining strong IPRs while promoting the public welfare objective of technology transfer to developing countries. Currently, despite the efforts of various international organizations, ESTs are still not being transferred to developing countries rapidly enough and this lack of forward movement in the realm of technology transfer is heavily related to the lack of certainty associated with IPRs in developing countries (Littleton, 2009; World Bank, 2008).

The relevant forms of IP for the purposes of technology transfer are patents, copyrights, and trade secrets. For investors, the main barrier to technology transfer is the danger of losing control of their IP. Because IP is territorial by nature, and IPR held in one jurisdiction is not necessarily recognized in another, it has, historically, been difficult to encourage IPR holders to invest in foreign jurisdictions whose IP systems may not be established and where IP holders' inventions may inadvertently become a part of the public domain. Due to these risks, investors must have concrete assurances that they will maintain control over their intellectual property before they will consider participating in any type of venture.

Technology investors favor strong intellectual property rules that place the rights of IPR holders over the needs of technology receivers. For corporations, the purpose of investing in the research and development of technology is to increase market competitiveness and profit from the limited monopoly gained as a result of the exclusivity rights granted to them by patents and copyright protections. In a business as usual scenario, investment policy barriers, limited market size, high transactions costs, and, most importantly, fear of losing control over technologies discourages many corporations from investing in developing countries. Moreover, when these firms do decide to invest, they generally prefer to maintain the most control over their investment

as possible by engaging in foreign direct investments. Unfortunately, direct investment can have numerous negative impacts on host country markets. Because the goal of technology transfer is both to mitigate GHG emissions as well as to enable developing countries to develop in a sustainable way, direct investment that undercuts domestic businesses' ability to effectively compete and that may drive those domestic competitors completely out of the market, defeats the sustainable development purpose of technology transfer completely (Littleton, 2009).

In other situations, when a receiving country may have an IPR system that is established enough for private firms to consider licensing technology rather than engaging in direct foreign investment [A technology licensing agreement allows the 3rd party licensee to use the technology under certain agreed terms and conditions. www.wipo.int/sme/en/ip_business/licensing/technology_license.htm], new barriers present themselves. Firms that would otherwise be able to receive technology licenses without investors running the risk of their intellectual property entering the public domain as a result of insufficient IP protection often have little to offer in return for new technologies and additionally lack the capital, infrastructure, and general know-how to fully implement the technology on their own. For all of the reasons stated above, a mechanism that focused on joint ventures might make the transfer of technologies more feasible from both an investor and receiver standpoint by allowing investor control of technologies while ensuring that the receiving countries are able to implement those technologies as well as ensuring that the competitiveness of local corporations involved in technology transfer is preserved so that domestic industry is not driven out of the market.

In order to reach a mutually beneficial outcome, a successful technology transfer mechanism must protect IPRs so as to encourage innovation but also acknowledge the

legitimate interests of receiving countries. Strong IPRs are preferable to technology investors while flexible IPRs are preferable to technology receivers. One solution to this problem that draws upon treaties already in place would be to require all developing countries on the receiving end of technology transfer to also be members of the WTO and the parties to the TRIPS agreement. Compliance with TRIPS would provide minimum standards for IP receivers that would inject certainty into the technology transfer equation while still safeguarding host country interests. TRIPS currently addresses many of the IP issues that are currently of utmost importance for both technology investors and technology receivers and establishes a baseline that can be built upon in order to appropriately suit the needs of all parties.

1.2.- The TRIPS Agreement

The World Trade Organization's Trade-Related Aspects of Intellectual Property Rights Agreement (TRIPS) provides for a number of general standards that WTO members must comply with and members must create their own standards in compliance with TRIPS. With the exception of the least-developed countries that must comply with TRIPS standards by 2013, all WTO members must comply with TRIPS as of the date of their membership in the WTO. This is significant since all parties to the Kyoto Protocol are also WTO members or observers (Halvorssen, 2008). The TRIPS agreement requires that current and future members of the WTO adapt and enforce strong, non-discriminatory minimum standards of intellectual property protection (Maskus 1998).

The most important IPRs covered by the TRIPS agreement for the purposes of technology transfer are patents. A patent is an exclusionary right granted to an inventor that prevents others from making, using, selling, or offering for sale a patented

invention (Littleton, 2009). Patents are territorial and are only valid in the granting territory. Other jurisdictions need not recognize outside patents so having a patent in one jurisdiction does not have an automatic effect for the same invention in any other jurisdiction. This means that in a territory that does not have an established patent system, such as in many of the least developed countries, otherwise 'patented' information is in the public domain and is readily available for use without the consent of the technology owner.

While the TRIPS agreement establishes a number of standards that ratifying countries must meet, thereby protecting IPR holders, it also carves out a number of exceptions to those IP protections that may be used under limited circumstances to further the interests of technology receivers. TRIPS allows for the limitation of IPRs through measures such as exemptions to patentability, exceptions to patent rights, and compulsory licenses (Littleton 2009 at 239). There is still a great deal of uncertainty under TRIPS due to the fact that it calls for each country to enact affirmative policies to implement the agreement this means that there may be little unity in IP legislation from country to country and that many developing countries will be tempted to adhere only to the minimum standards of IP protection, discouraging IP holders from taking the risk to invest in those countries. For these reasons, it would be unwise to presume that the TRIPS agreement on its own is sufficient to address the concerns of potential corporate investors in a technology transfer scheme.

In order to be attractive to US corporations, there must be some degree of uniformity across all participating countries in their treatment of intellectual property rights. Both technology investors and receivers benefit from certainty; the wrinkle however, is determining the compromise between strong IPRs and host market sustainability and development. A technology transfer mechanism that, as a condition of

participation would mandate and provide specific and unified IP standards would be mutually beneficial to both investors and receivers. Areas especially in need of clarification and unification include, for example, under what circumstances compulsory licensing may be utilized by host country governments as well as discrete patentability criteria establishment to minimize fraudulent or frivolous patents (Littleton, 2009 at 240).

1.3.- Funding

According to Article 4.3 of the UNFCCC, developed country parties are required to provide the financial resources needed by developing country parties to meet the agreed full incremental costs of implementing their obligations, including for the related transfer of technology. Technology transfer can be funded by individual national subsidies, tax breaks or other fiscal incentives (Littleton, 2009 at 241). However, the determination of how much is reasonable for developed countries to pay to compensate for the climate-related damage that they have caused inhabitants in developing countries has been difficult to determine (Stage, 2010).

A voluntary technology transfer mechanism should not require large capital investments from individual governments but rather, should comprise an international funding mechanism similar to the Global Environment Facility [or GEF, a partnership of 182 member governments and other international institutions, NGOs, and the private sector, to finance projects to developing countries and countries with economies in transition that address global environmental issues. See www.thegef.org/gef/whatisgef] that would distribute the initial costs of the program evenly across all participants rather than allowing free-riders to benefit without making adequate contributions. Ideally, this would only require developed countries to contribute fiscally in the initial

stages of the mechanism and would eventually phase out after consistent participation has been established. Another option would be for governments to offer tax credits to corporations participating in eligible projects. These initiatives would bridge the gap for first-time participants and offset the risks and costs inherent in technology transfer until the financial benefits of access to the for-profit emissions cap credit market became a reality.

But, what if the TT Mechanism under the UNFCCC does not go so far? Would TT from the US not take place?

2.- Flexibility Mechanisms

Under the Kyoto Protocol, a number of flexibility mechanisms have been put into place to encourage technology transfer for both climate change adaptation and climate change mitigation while offering, as advantage for those who use them, the possibility of not having to reduce CO_2 emissions as committed under the Kyoto Protocol. These mechanisms include: Joint Implementation, the Clean Development Mechanism (CDM) and Emissions Trading, also known as the 'carbon market'.

2.1.- Joint Implementation

Joint implementation refers to the investment in 'climate-friendly activities by one country in the territory of another'(Forsyth, 1998 at 40). Since it does not matter in what region GHG abatement takes place, so long as aggregate GHG emissions are reduced, Joint Implementation allows for GHG emission reductions to be taken in places where such reductions are the cheapest. For this reason, many private sector investments from developed countries have concentrated on the use of joint implementation and activities implemented jointly (Forsyth, 1998 at 18). However,

Joint Implementation has been criticized for giving developed countries the incentive to implement the cheapest and most flexible projects, such as carbon sinks and sequestration projects related to forestry, rather than technology transfer (Forsyth 1998). While carbon sinks do help to mitigate GHG emissions by removing carbon dioxide from the atmosphere, they do not effectively encourage the climate-friendly development of host countries (Lubowski et al, 2006).

2.2.- The Clean Development Mechanism

The Clean Development Mechanism (CDM) is a market mechanism that allows industrialized countries with official Kyoto GHG emissions reductions targets to achieve their targets through sustainable development targets, usually in non-annex 1 countries. Through the CDM, Annex 1 parties invest in GHG reducing projects within the borders of host countries that need not be developing countries (Van der Gaast et. al., 2009). The CDM does not stipulate what kind of projects or investments are necessary for credit beyond the requirement that that the project achieve actual GHG emission reductions. This has led to a preference for investing countries and organization to choose projects that are relatively easy to show a reduction in GHG emissions from a business as usual scenario such as landfill gas capture projects and other projects that can be tracked easily but have little developmental benefits for host countries (Van der Gaast et. al., 2009). Especially since there is no requirement that the projects be instituted evenly across developing countries, many CDM projects have been concentrated in areas that offer more certainty and stability for investors while leaving other countries that would otherwise benefit from such investment entirely out of the equation (Forsyth, 1998).

Although the CDM does not mention the word “sinks”, and so does not make relatively cheap projects like carbon sequestration a viable option for gaining emissions credits, there is still no incentive for investors to choose projects that would have the effect of supporting developing economies since investors get the same emissions credit benefits regardless of where they institute their projects. Because of this, the main draw back of CDM is that its projects are located in only a few concentrated developing countries, mostly in Asia and the Pacific (Forsyth, 1998).

A TYPICAL CDM PROJECT

Greenhouse gas reduction specialist AES AgriVerde, subsidiary in Kuala Lumpur of AES Corporation, the US global power company with generation and distribution businesses will invest US$100million on biodigester facilities in agricultural plantations and livestock farms in Malaysia and neighboring countries to help reduce global warming. In particular, one of the projects is the AES and Sarawak-based Rimbunan Hijau Sdn Bhd which could be the first Sarawak’s Clean Development Mechanism (CDM) project at Rimbunan’s oil-palm estate near Long Teru in interior Miri, where a biodigester was set up by AES to trap greenhouse biogas emitted by rotting oil-palm waste.

The CDM project is expected to reduce carbon dioxide emission by 25,512 tonnes annually.

Nevertheless the very strict control that accreditation as CDM project implies (see Enrique Alonso García, 2009, at 5-22 ff) it has allowed for a state of the art facilities to be located in developing countries due to the fact that lower costs, added to the maintenance of CO_2 emissions in places where emitting facilities would have to be shut down –territories of Annex I countries- seem to be providing adequate or, at least, minimum incentives.

[Projects submitted for accreditation and already accredited can be consulted in http://cdm.unfccc.int/index.html]

But, since the United States is not a party of the Kyoto Protocol, …are US corporations looking technological ground since their investment in CDM technologies abroad does not offer them, as compensation, credits that would allow them not to close or refurbish facilities whose CO2 emissions need to be mandatorily reduced?

Summing up, does it make sense for a US corporation to invest in a CDM project (see box above) if it gets no CERs (see next section 2.3)?

2.3.- Emissions Trading

Under Kyoto, Parties who have made reduction commitments have a specified level of emissions that they are allowed to make while still meeting their accepted targets. These allowed emissions are then divided into "assigned amount units" (AAUs) that can be traded if they are not used. This provides an incentive for countries who are most capable of reducing emissions to do so while allowing other countries who are less able to reduce emissions to buy allowances. Under this system, carbon is traded as a commodity in the form of emmission reductions.

Emissions trading allows for more than just the trading of actual emmission units. Other units which may be traded on the carbon market include: Land

use, land-use change and forestry removal units (RMUs), Emissions Reduction Units (ERUs) created through Joint Implementation projects, and Certified Emission Reduction (CERs) created from CDM activities. According to the UNFCCC, emissions trading schemes may be established at both the national and regional levels. The European Union emissions trading scheme (which allows for emissions trading by entities from EU member states) is currently the largest in operation; however, the United States is beginning to follow suit and has introduced a number of regional schemes of its own, although totally outside the context of the Kyoto Protocol.

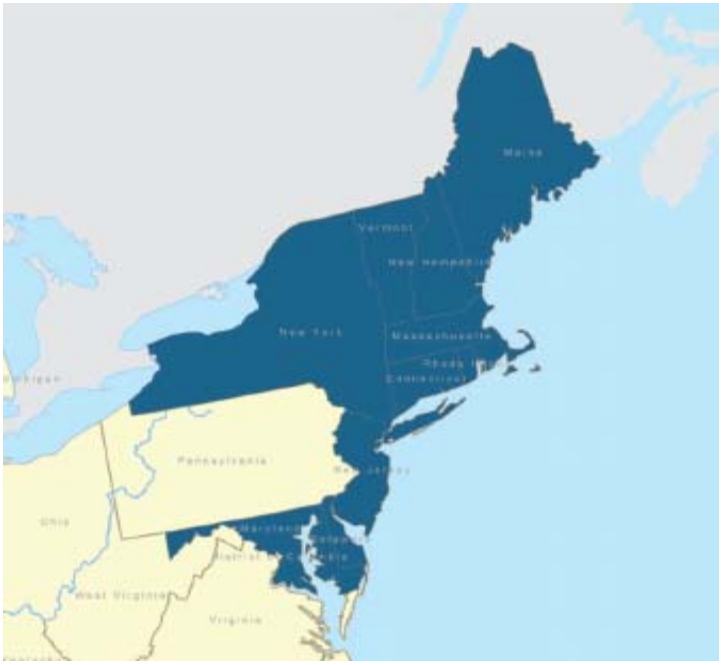
3.- The US Carbon Market

The "US Carbon Market", as such, does not currently exist. It is, rather, a collection of independent efforts at the state and regional level that has the potential to move the United States in the right direction in the fight to mitigate GHG emissions. The development of these individual cap-and-trade schemes in the US do, however, signify a readiness to commitment in a short term to reducing emissions on a state-by-state basis that may eventually be able to be replicated on a national level and, in the medium or short term, at the international level within a post-Kyoto arrangement.

Presently, state legislation that offers incentives for energy efficiency seems to be much more palatable to the American people than mandatory federal initiatives. For this reason, the goal of significantly reducing GHG emmisions may better be achieved by encouraging States and individuals to independently employ environmentally friendly practices, rather than by regulating national land use restrictions with a firm hand as would be required if the United States commited to Kyoto reductions wholesale. (see, in general, Michael B.Gerrard, 2008)

3.1.- The Regional Greenhouse Gas Initiative of the Northeast and Mid-Atlantic States

The RGGI is a regional cap-and-trade program established between ten participating US States with the objective of capping carbon dioxide emissions from power plants within each state and allowing for the trading of emission allowances. Participating States include Connecticut, Delaware, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Rhode Island, and Vermont (see map below). The program began by capping emissions to current levels in 2009 and intends to achieve a 10% reduction in emissions by 2018. CO_2 emmission allowance auctions are held quarterly and the majority of the proceeds from these auctions are re-invested in consumer benefit programs that fund energy efficiency, renewable energy and direct energy bill assistance (see Eleanor Stein, 2008 at 321 ff).



Map of the geographical scope of the RGGI

In essence, the RGGI caps the emissions of regional power companies thereby forcing high-polluting companies to purchase pollution vouchers for lower-

polluter companies. The benefit here is two-fold. High-polluters have an incentive to reduce their emmissions in order to avoid the expense of vouchers and the money gained from pollution vouchers is redirected into the community. Additionally, The RGGI also allows companies to offset their emmissions through GHG reduction and carbon sequestration projects outside of the energy sector.

Since its inception, the RGGI has held nine successful CO_2 auctions. The success of these auctions is aided in large part to the RGGI's CO_2 Emission and Allowance Tracking system (RGGI COATS). RGGI COATS ensures that emissions are tracked accurately and enables the precise allocation of pollution vouchers.

While the RGGI has been functioning for only two-years, it is a model of the significant progress and potential of State-level GHG reduction initiatives and, if it is successful in the long-run, it may provide a model for a future national cap-and-trade scheme (Dennis Hirsch, Andrew Bergman, and Michael Heintz at 659)

3.2.- The Western Climate Initiative

The Western Climate Initiative (WCI) is another regional effort aimed at mitigating climate change by setting carbon emission limits, utilizing offset credits and implementing other complimentary policies. Unlike the RGGI, the WCI is not only comprised of a number of US states, but also includes Canadian provinces as partners to the program. The WCI is a flexible, market based, regional cap-and-trade program that aims to 'reduce GHG emissions by 15% below 2005 levels by 2020, spur investment in and development of clean-energy technologies, create green jobs, and protect public health' (see Eleanor Stein at 320 ff).

The WCI program covers emissions from wide array of CO_2 and other GHG

sources and is designed to be integrated into or used in conjunction with whatever federal programs eventually come form the United States and Canadian governments. Additionally, it has been designed to minimize the cost of reducing emissions to companies and consumers through allowances banking, offsets and gradual compliance over time.

As a WCI partner, California has proposed the Global warming solutions act (AB 32). This act aims to reduce California GHG emisions to 1990 levels by the year 2020 and will detail a cap-and-trade program that encompasses 85% of California's emissions. The proposed program would start setting caps on electricity and large industrial facilities in 2012 and distributors of transportation fuels, natural gas and other fuels in 2015.

Map of the geographical scope of the MCI

Unfortunately, AB 32 will likely be costly to both businesses and consumers and it is still uncertain how this act will affect California's poorest citizens. Cutting emmissions will disproportionally affect those in the lowest income brackets as these individuals will likely be the most affected by increases in energy costs. Lowest income residents tend to have the most energy inefficent technologies in their homes, cars with

higher than average emmissions, and homes that are structurally less energy efficient. While the wealthy often adopt new, more efficient and beneficial technologies, lower-income families are less able to afford such upgrades, especially since these upgrades require a large injection of money in the short-term and the savings to be gained from energy efficient technologies are often only seen over the long-term (Motsinger et.al, 2010).

According to the chairman of the Chicago Climate Exchange, "a self-regulatory organization that administers a voluntary, legally-binding GHG reduction and trading program involving multiple industrial sectors" (Dennis Hirsch, Adrew Bergman, and Michael Heintz, at 666), there will be continued interest in voluntary carbon markets and regional cap-and-trade initiatives in the United States even without federal legislation. However, since the Copenhagen Accord did not include mandatory emissions targets, it is unlikely that law-makers will agree to a binding emissions cap, especially in the current political climate (Stoddard, 2010).

3.4.- Alternative Options for Individuals

The issues generated by the need to address anthropogenic climate change at the global level should not lead to the understanding that nothing can be done at the state or local level although those actions might be disconnected from the Kyoto Protocol commitments. (See section on "Guiding Students Discussion item 4)

Not only public policies at a lower level but also private law (such as the Chicago Climate Exchange mentioned above) have articulated in many cases comprehensive emission reduction of GHG mitigation schemes.

Many of them such as the use of civil remedies adapted to climate change related events (see Bradford C. Mank at 183 ff), corporate disclosure issues (see Jeffrey Smith

and Matthew Morreale at 453 ff), insurance law (see Gary S. Guzy at 541 ff), duties of corporate officers vis a vis share-holders and the markets of securities (see Jeffrey Smith and Matthew Morreale at 497 ff), or the voluntary corporate or NGO efforts (see Tom Kerr at 591 ff) are a clear example of how global problems are tackled with at the local level.

Climate change issues can easily reach the ordinary citizen. A clear example are household energy devices.

In order to encourage independent action, property owners must be free to employ more energy efficient means of using their homes. This can best be achieved through zoning laws and legislation limiting the restrictions that homeowners associations can put on individual property owners through restrictive covenants. The increase in common-interest housing developments has made it increasingly more difficult for individuals to find housing not bound by restrictive covenants. This creates a problem for encouraging individual property owners who want to practice energy efficiency and reduce their personal carbon emissions because these covenants often contain clauses that bar the use of certain energy efficient devices such as solar panels and clothes lines due to concerns that non-homogeneity in the outside appearance of homes will drive down home values in the entire development (Salemme, 2007).

In the past several years, many states have enacted legislation barring community associations from restricting “the use of energy-saving devices like solar panels” and thereby effectively prohibiting property owners from using energy saving mechanisms that are beneficial to the environment and that help to reduce CO_2 emissions (Salemme, 2007; 204 Ariz. 238, 240). While the American legal system has always stood on the side of upholding the right to contract, and restrictive land use covenants in general, when the trend in housing is as it is today and seems to be

continuing to move towards more and more common-interest developments, ‘take it or leave it’-type contracts of adhesion that prevent homeowners from living environmentally efficient lifestyles should not be allowed to effectively rob individuals of their right to cut energy costs if they want to.

Should climate change amend this basic principle of US law (freedom of contract)?

State and local land use and zoning initiatives can also have a real effect in combating climate change. Again, by instituting policies that promote efficient land use by, for example, preserving wildlife areas, planning ‘urban styles of development’ that reduce emissions by concentrating living areas and reducing driving, or providing tax incentives for certain energy efficient activities, the United States can effectively reduce its carbon footprint and contribute to the fight against climate change without unnecessarily infringing on property rights (Salkin, 2009). Sustainability practices such as these have been instituted by State and local governments and represent the United States’ best option for reducing emissions on an individual level and may be used in conjunction with an eventual national cap-and-trade system.

4.- Reducing Emissions from Deforestation and Degredation (REDD)

According to the IPCC, “reducing deforestation and preventing the release of carbon emissions into the atmosphere is the mitigation option with the largest immediate carbon stock impact in the short term per hectare and per year globally”. In order to combat this, a proposed REDD scheme would credit reduced emissions gained by “avoided deforestation” and allow these credits to be sold on an international carborn market. This would effectively create incentives for forest conservation and allow nations to conserve their forests without suffering major economic losses. The main

challenges to the implementation of such a scheme are ambiguities in measuring emissions reductions, determining which countries should be compensated and for how much, ensuring that corruption does not cause forests to be destroyed after payments have been made and determining which countries should fund the scheme (CIFOR 2009).

The United States has taken the position that broad sustainable forest management should be extensively employed to reduce emissions that occur from land degradation rather than focusing purely on mitigating deforestation itself. To this end, the US supports forest conservation that is congruent with an individual country's low-carbon strategy. This means that mitigation efforts should be implemented on a case-by-case basis incorporating 'nationally-specific factors' (Little REDD Book, 2006).

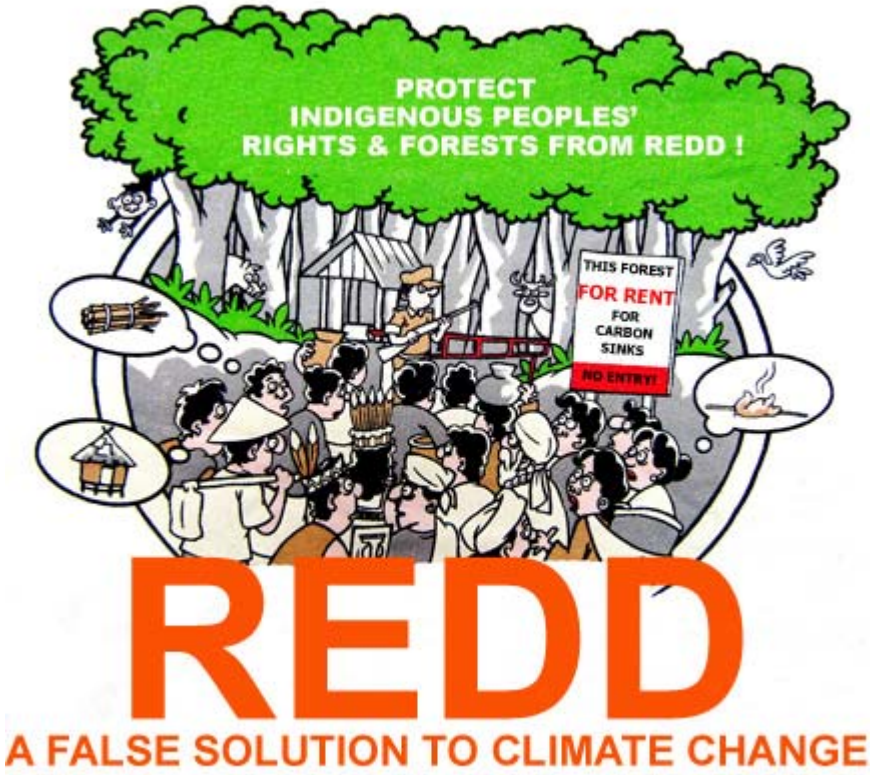
In accordance with these beliefs, the United States recently signed a voluntary Memorandum of Understanding with Brazil outlining its intention to cooperate with the Brazilian government with the purpose of working together to: implement the UNFCCC; exchange experiences, strategies and domestic policies, including carbon markets, to address climate change; join efforts on research, development, deployment and dissemination of technologies for combating climate change; adapt to climate change, coorperate on scientific research and build capacity in sectors related to climate change.

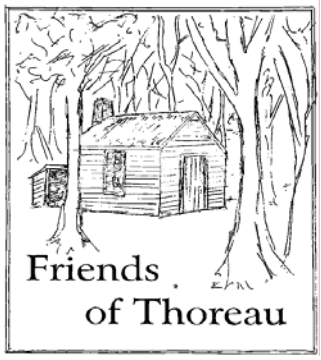
This memorandum is an important step for the United States and is a necessary prelude to a national carbon market. US involment in REDD initiatives signifies an overwhelming willingness to participate internationally in technology transfer, carbon markets and capacity building. In conjunction with regional cap-and-trade initiatives, the United States' partnership with Brazil may provide the framework and experience that would convince legislators to approve the implementation of a national cap-and-

trade system and carbon market.

But…, aren´t these bilateral actions not undermining the effectiveness of a stricter more efficient global regime?

See the cartoon below. Why is REDD considered by some groups as “false solution to climate change?





The Conference of the Parties: The Role of the United States in Effectively Mitigating Climate Change

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GUIDING STUDENTS' DISCUSSION

1.- Is consensus decision making under the UNFCCC the best way to make progress on climate change?

The spirit of the United Nations is rooted in the sovereignty and equality of the nations of which it is compromised. However, in the interest of practicality, consensus voting has proven to be largely ineffective. Reconsideration of the Draft Rules is necessary in order to ensure that both aims of negotiation, sovereign equality and progress, are accomplished within the UNFCCC.

Rule 42

[1. Alternative A
The Parties shall make every effort to reach agreement on all matters of substance by consensus. If all efforts to reach consensus have been exhausted and no agreement has been reached, the decision shall, as a last resort, be taken by a two-thirds majority vote of the Parties present and voting, except:
(a) as otherwise provided by the Convention, the financial rules referred to in Article 7, paragraph 2 (k) of the Convention or the present rules of procedure[.] [;]
[(b) for a decision to adopt a proposed protocol, which shall be taken by [consensus] [a three-fourths majority of the Parties present and voting][.] [;]
[(c) for decisions under paragraph 3 of Article 4 and paragraphs 1, 3 or 4 of Article 11 of the Convention, which shall be taken by consensus.]

1. Alternative B
Decisions on matters of substance shall be taken by consensus, except that decisions on financial matters shall be taken by a two-thirds majority vote.

2. Decisions of the Conference of the Parties on matters of procedure shall be taken by a majority vote of the Parties present and voting **[except that adoption of a motion or proposal to close or limit debate or the list of speakers shall require a two-thirds majority vote of the Parties present and voting]**.

3. If the question arises as to whether a matter is one of a procedural or substantive nature, the President shall rule on the question. An appeal against this ruling shall be put to the vote immediately and the President's ruling shall stand unless overruled by a majority of the Parties present and voting.

4. If, on matters other than elections, a vote is equally divided, a second vote shall be taken. If this vote is also equally divided, the proposal shall be regarded as rejected.

5. For the purposes of this rule, the phrase "Parties present and voting" means Parties present at the meeting at which voting takes place and casting an affirmative or negative vote. Parties abstaining from voting shall be considered as not voting.**]**

Discuss the implications of the alternatives discussed in Draft Rule 42 above versus the current consensus system of decision-making. What are the advantages and disadvantages of

each? Does the urgency of the climate change situation outweigh the safeguards that a consensus system offers?

Within the UNFCCC, equity considerations are paramount to effective dispute resolution and moving forth agendas to the satisfaction of each party. In the General Assembly of the United Nations, equity is accomplished by allowing individual nations to have their own vote and make decisions by consensus, effectively giving every nation the veto power. In contrast with the UNFCCC, the General Assembly can only pass resolutions or recommendations for action and cannot produce legally binding text. While these resolutions may have a tangible effect on the behaviors of individual nations, these resolutions do not carry the weight of enforceability and are generally more politically than practically motivated. The purpose of the UNFCCC, however, is to produce strong and relevant legally binding text in order to set an international plan of action to mitigate the effects of and adapt to climate change.

Consensus voting within the UNFCCC often leads to extended negotiations as individual parties often object to propositions and in order to pass by consensus are severely diluted. While these final agreements are unanimous and hard-won, they are also substantively ineffective. A related danger of unanimous voting is that it allows individual parties to control the pace and tenor of negotiations by holding up consensus indefinitely. The problems that comes with a system in which each individual nation has the power to hold up progress and effectively water down a resolution are not nearly as worrisome in a “politically binding” agreement, such as a General Assembly resolution, as they would be if the goal were to create a legally binding text.

The difference between the approach to reaching General Assembly Resolutions and UNFCCC binding texts is the desired outcome at inception. When faced with an immediately pressing global issue like climate change, neither the United Nations nor individual states can afford to paint with a broad brush and only produce only amorphous declarations of intent or indefinite and unenforceable plans of action. All countries may agree by resolution that a

general problem exists, but in order to effectively map out a concrete and enforceable plan to address that problem, a different approach is necessary. In the interest of the well being of all parties involved, individual states should not be able to arbitrarily hold up negotiations or block progress when situations call for immediate action such as in the case of the climate change crisis. This however presents a serious dilemma.

Ensuring equality between the developed and developing countries within the negotiations is one of the main obstacles within the climate change negotiations with divisions between developed and developing countries the most visible (Wiegandt, 2001 at 128). Inherent in the text of the UNFCCC is the notion that there is a special obligation for developed countries to take responsibility for their contributions to the climate crisis by lowering emissions and funding technology trade in developing countries most effected by the effects of climate change. With developed countries facing the brunt of the burden to mitigate the effects of climate change by cutting carbon emissions and taking other actions, persuading these countries to make solid commitments, often against their own economic interests, is very difficult. Especially considering the unequal power among state actors in international politics, larger developed countries such as the United States and Canada are more capable of pushing their agendas than other smaller, less influential parties. Countries with so much political power can often persuade individual states not to veto change and it is this manipulation of the inequalities in power that often affects the outcomes of international negotiations (Grundig et al, 2001 at 155).

The purpose of consensus voting is to prevent powerful coalitions from stifling the views of weaker, less politically and economically powerful countries. The fear is, however, that the decisions of the group will be dragged down to the ‘lowest common denominator’ in the interest of consensus (Depledge 2004 at 34). Maintaining consensus ruling within the negotiations and within the UN General Assembly protects the sovereign equality of each individual state while preventing less politically or economically powerful states from being

steamrolled; but, “by placing a veto in the hands of each party, it effectively ensures that the convoy advances at the pace of the slowest vessel” (Depledge, 2004 at 445).

But consensus is not unanimity. So,… does consensus allow one single state to block entirely common actionto which the rest of the world community agrees?

In order to answer this question, students should read the opinion of the Under-Secretary-General for Legal Affaires, and legal Counsel of the United Nations, about what consensus v. unanimity means.

LEGAL OPINION OF THE LEGAL COUNSEL OF THE UN

UNITED NATIONS NATIONS UNIES

17 June 2002

Dear Mr. Zedan,

This is with reference to your letter of 6 June 2002 requesting our advice on three legal issues arising out of the Conference of the Parties to the Convention on Biological Diversity held in The Hague on 7-19 April 2002. In particular, you seek our legal opinion on the following three questions:

1. What is the legal interpretation of the term “consensus”?

In United Nations practice, the concept of “consensus” is understood to mean the practice of adoption of resolutions or decisions by general agreement without resort to voting in the absence of any formal objection that would stand in the way of a decision being declared adopted in that manner. Thus, in the event that consensus or general agreement is achieved, the resolutions and decisions of United Nations meetings and conferences have been adopted without a vote. In this connection, it should be noted that the expressions “without a vote”, “by consensus” and “by general agreement” are, in the practice of the United Nations, synonymous and therefore, interchangeable.

Adoption in this manner does not mean that every States participating in the meeting or conference is in favour of every element of the resolution or decision. States participating have the opportunity, both prior to and after the adoption, to make reservations, declarations, statements of interpretation and/or agreements of position. In so doing, a State may:

- disassociate itself from the substance or text of parts of the document;
- indicate that its joining in the consensus does not constitute acceptance of the substance of text of parts of the document, and/or
- present any other restrictions on its Government’s position on substance or text of parts of the document.

Provided that the State concerned does not formally object to or challenge the existence of consensus or call for a vote on the resolution or decision, it is understood that consensus or general agreement is preserved.

2. What is the effect of a formal objection on “consensus”?

By definition, as explained above, where there is a formal objection, there is no consensus.

3. What is the legal status of the decisions adopted by the Conference of the Parties on "Alien species that threatened ecosystems, habitats or species"?

The relevant facts are contained in the report of the sixth meeting of the Conference of the Parties (UNEP/CBD/COP/6/20) as follows. As indicated in paragraphs 303 and 313 of the report, the representative of Australia explicitly rejected the opportunity to make a reservation and formally objected the adoption of the decision on "Alien species that threatened ecosystems, habitats or species". Despite of foregoing, in paragraph 316 of the report, the Chairman declared that the Conference of the Parties would proceed to adopt the decision and that the formal objections of dissenting Parties would be reflected in the report of the meeting. Following adoption, the representative of Australia reiterated Australia's view that consensus was adoption without formal objection and questioned the ability of the Conference of the Parties to adopt a decision to which he had formally objected (paragraph 318). When he took the floor again (paragraph 321), he reiterated that his delegation had grave concerns about of the legality of the adoption procedures for the draft decision and the precedent itself; he stated that, "in the event of the President's decision that the text had been adopted, Australia wished the inclusion of a detailed statement in the report..."; and he entered Australia's "strong reservation" about the adoption of the Guiding Principles in their current form. In response to the statement by Spain on behalf of the European Community characterizing Australia's statement as a reservation (paragraph 322), he clarified that he had only made the reservation on the basis of the procedure used in ruling that the draft decision had been adopted, and added that the report should record that he had earlier expressed a formal objection to the draft decision (paragraph 323). Argentina, Canada and Spain also made reservations regarding the procedure of proceeding to a consensus decision in the face of formal objection to the decision (paragraph 319, 320 and 324).

In the face of the fact that Australia clearly and explicitly expressed a formal objection prior to adoption, the Chairman should not have proceeded to declare the decision adopted by consensus. By doing so, he clearly acted contrary to the established practice.

Despite the serious flaws in the procedure, however, once the Chairman declared the decision adopted, the representative of Australia did not formally object to the adoption or seek to nullify or void the decision itself. He merely stated that "in the event of the President's decision that the text had been adopted", the report should include a detailed statement of Australia's "strong reservation" and record that he had earlier expressed a formal objection. Thus, while the representative of Australia questioned the legitimacy, and even expressed grave concerns about the legality of the procedure, his post-adoption position concerned a reservation about the procedure rather than an objection to, or an attempt to nullify or void the decision itself. While Argentina, Canada and Spain also made reservations regarding the procedure, not a single

delegation contented the fact that the decision had indeed been adopted. Thus, unless the Conference of the Parties decides otherwise, it is our considered view that the decision on "Alien species that threatened ecosystems, habitats or species" may stand as adopted at the sixth meeting.

Yours sincerely,

Hans Corell
Under-Secretary-General for Legal Affairs
The Legal Counsel

2.- Are UNFCCC negotiations still a viable way of dealing with the climate change problem? Are there other alternatives outside of the UN system?

Photo 13. Green Peace Display in Nyhavn Harbor. Copenhagen Denmark 2009

Many AOSIS, African Group, and G77 and China members have been disproportionately affected by climate change and are bearing the costs of the actions of historically high GHG emitters such as the United States and other industiralized countries.

Although these Parties have been diligent in cooperating with the UNFCCC system thus far, they have yet to see many of the benefits of their cooperation. Time is running out for these Parties and they no longer have the luxury to wait patiently for high emitters to voluntarily take responsibility for their actions. Should those countries who have not contributed to the climate change problem but whom are most vulnerable to the effects of climate change continue to participate in a process that may be too slow moving to adequately prevent the climate from reaching the point of no return? For many of the most influential players in the UNFCCC negotiations, economics is the main concern while for the least influential parties, the concern is survival.

What would be the outcome if aggrieved countries took their case to court against emitters who refused to adequately mitigate their GHG emissions? What would be their claim? What would be the proper venue for such a law suit? What kind of remedy could be sought? Is it fair to hold emmiters liable for harms caused by actions done before the correlation between GHG emissions and the effects of climate change was discovered?

2.1 Discussion

The main goal of AOSIS members in litigating their positions is to provide redress for the damages that they have already suffered by way of damaged infrastructure and lost coastlines and to obtain injunctive relief to prevent further damage from sea level rise as a result of climate change. These are tasks that the court is equipped to address. The most efficient route to achieve these goals is through a public nuisance claim (Grossman, 2009).

The International Court of Justice (ICJ)

The most likely venue for AOSIS members to bring a claim against the United States for damages resulting from US failure to regulate its GHG emissions is the International Court of Justice (ICJ). Only countries may bring suits against other countries before the ICJ and additionally only countries that are parties to the Statute of the ICJ may appear before the

Court. The Charter of the United Nations provides that all its members members are *ipso facto* parties to the ICJ Statute, and since AOSIS is a group consisting of countries that are members of the United Nations Framework Convention on Climate Change, and so must be members of the United Nations, AOSIS members may file suit with the ICJ. The United States is also a UN and UNFCCC member may also appear before the ICJ.

According to the principle of state sovereignty, jurisdiction of the ICJ must be based upon the consent of states. According to Article 36(2) of the ICJ Statute, in order to manifest its consent, a State may either agree with opposing parties to refer a matter to the Court, prospectively enter a declaration accepting compulsory jurisdiction of the Court, or have specifically provided for dispute resolution before the Court in a treaty that is in effect between the parties (Strauss, 2009).

The United States is a party to the Statute of the ICJ but, today, it does not recognize its jurisdiction without special agreement, in relation to any other state accepting the same obligation (Article 36 paragraph 2 of the Statute of the International Court of Justice.). Additionally, there are no treaties between the United States and AOSIS members prescribing that disputes be settled before the ICJ. This means that in order for the United States to be sued in the ICJ the US must first voluntarily submit to its jurisdiction in the matter. In this case, it is unlikely that the United States would agree to have a claim brought by AOSIS members regarding its failure to deal sufficiently with its emissions of greenhouse gases adjudicated by the ICJ (Strauss, 2009).

US Federal Courts

Since the United States will not likely submit it self to the Jurisdiction of the International Court of Justice, the next and most appropriate option for AOSIS members is to file a claim against those individual US industries and industrial consumers responsible for the damaging effects of climate change. In this case, the plaintiff class would be AOSIS

members who have not contributed significantly to the climate crisis by being major GHG emitters and have been negatively impacted by the effects of climate change (i.e. sea level rise, coastal erosion). The appropriate defendant class should include those entities whose actions have contributed significantly to the climate change problem and who are in the best position to bear the costs of the damages (Grossman, 2003). The United States coal, oil and chemical industries as well as auto-manufacturers are the most likely defendants in this case.

United States federal courts have diversity jurisdiction over cases between foreign states and citizens of the United States. This means that AOSIS members may appropriately bring their case against United States corporations, considered legal persons, in federal district court so long as the amount in controversy, in this case the damages sought, are over $75,000 and they have standing to bring such a claim (US CONST. art. III § 2, cl. 1; 28 USC § 1332(a) (2), (a) (4) (2001).

AOSIS members would like to pursue a public nuisance claim against the defendant class of US industry members because the underlying basis for such claims is “to protect the public from lawful and even productive activities that are substantially incompatible with the public’s common rights” (Grossman 2003). In order to do this, AOSIS must first establish standing by showing that it has suffered a concrete and particularized injury that is actual or imminent and not conjectural or hypothetical, the injury is fairly traceable to the challenged action of the defendant, and that it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision (Grossman 2009; *Friends of the Earth v. Laidlaw Envtl. Servs.*, 528 U.S. 167, 180-81 (2000) (citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992)).

The concrete and particularized injury suffered by AOSIS members is the present loss of coastal land and infrastructure as a result of rising sea levels. This is a present injury that is currently affecting many AOSIS members and will continue to affect AOSIS members if the problem is not addressed. AOSIS members are not petitioning to keep US industries from emitting GHGs to prevent yet to be seen, hypothetical damages, rather, the effects of the

defendant class's emissions can readily be seen in AOSIS countries like Tuvalu and Kiribati, today.

The Supreme Court recently addressed some of these issues of standing in *Massachusetts v. EPA*. In that case, twelve states and a number of cities and nongovernmental organizations petitioned against ten other states and nineteen industry and utility groups with the U.S. Environmental Protection Agency (EPA) serving as respondents (Osofsky 2009). [The plaintiff class sued the EPA for refusal to regulate greenhouse gas emissions from new motor vehicles inder the Clean Air Act]. The Supreme Court did not require much of the plaintiffs in order to establish standing and the standard used was far less demanding than that necessary to establish tort causation. The court noted that "[t]he harms associated with climate change are well recognized," it also noted that "the accelerated rise of sea levels," and the fact that "climate-change risks are 'widely shared' does not minimize Massachusetts' interest in the outcome of this litigation (Grossman 2009)."

The important fact to note here is that the Supreme Court did not require the plaintiffs in this case to establish with scientific certainty that the defendant's actions and the defendant's actions alone caused the precise harm suffered by the plaintiffs, rather, the Supreme Court ourt was satisfied the requirement that an injury be fairly traceable to a defendant *(PIRG v. Powell Duffryn Terminals,* 913 F.2d 64, 72 (3d Cir. 1990)). While the climate science may not be one hundred percent certain, the Supreme Court has allowed the use of climate science to establish the causation requirement for standing purposes.

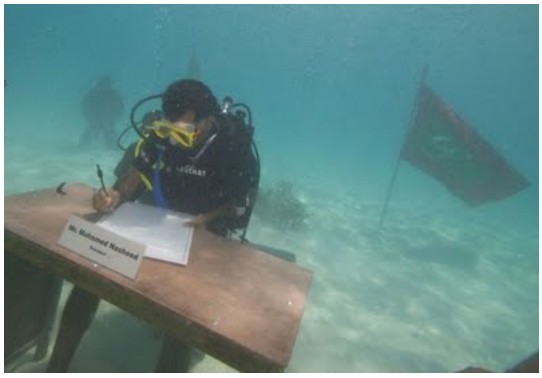
See box in next page

For AOSIS, this means that it may rely on the climate science linking greenhouse gas emissions to sea level rise to establish their injury is fairly traceable to the actions of the defendant coal, oil, chemical, and automobile industries.

Finally, in order to establish standing, AOSIS must show that it is likely that their particular injury will be redressed by a favorable decision. Sea level rise in AOSIS countries has resulted in the erosion of miles of coastline, damage to coastal lands, buildings,

infrastructures, and agriculture. Additionally, while there has been a significant amount of damage already done, AOSIS members must also takes steps to prevent further damage and adapt to the realities of climate change (Grossman 2003). By seeking monetary damages as well as injunctive relief, AOSIS members will be able to pay to repair infrastructure, relocate buildings, and build sea walls to mitigate future harms.

Once standing has been established, the most difficult hurdle AOSIS will have to clear will be proving the case on the merits. In order to prove all of the elements of a public nuisance claim, AOSIS members must show that the activities of the defendants are an unreasonable interference with a right common to the general public. AOSIS will need to argue that its members, as sovereign states, have a right not to be unreasonably affected by the effects of climate change in the form of land loss and the destruction of infrastructure caused by the defendant class's GHG emission



The Maldives holds an underwater cabinet meeting to raise awareness of the danger climate change and rising seas pose to the low-lying island nation.

Next, AOSIS will have to prove causation to a preponderance of the evidence.

In another recent climate change based litigation, plaintiffs who had had their homes destroyed in Hurricane Katrina sued the oil industry for its contribution to climate change and the subsequent hurricanes and tropical storms that resulted. In that case, no decision was made on the merits; however, the judge presiding in the case did express his concerns that proving causation would be difficult due to the uncertainty within climate change science:

> "Without in any way expressing an opinion on the merits of the plaintiffs' claims against these defendants, I will observe that there exists a sharp difference of opinion

> in the scientific community concerning the causes of global warming, and I foresee daunting evidentiary problems for anyone who undertakes to prove, by a preponderance of the evidence, the degree to which global warming is caused by the emission of greenhouse gasses; the degree to which the actions of any individual oil company, any individual chemical company, or the collective action of these corporations contribute, through the emission of greenhouse gasses, to global warming; and the extent to which the emission of greenhouse gasses by these defendants, through the phenomenon of global warming, intensified or otherwise affected the weather system that produced Hurricane Katrina. This is a task that the plaintiffs are free to undertake if that is their intention, and I am confident that due consideration will be given to the requirements of Rule 11, F.R.Civ.P. *(Comer v. Nationwide Mut. Ins. Co.*, 2006 U.S. Dist. Lexis 33123 (S.D. Miss. 2006)."

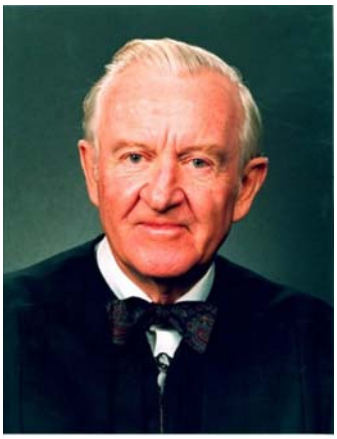
Since any climate change lawsuit is necessarily linked to the science of global warming, to successfully show current harms or causation, plaintiffs must rely on the scientific evidence of climate change in order to prove causation and current and future damages. In Comer v. Nationwide Ins., the plaintiffs attempted to find a causal link between GHG emissions and increased hurricane and tropical storm activity and the presiding judge in his opinion expressed his concerns that it would be difficult to meet the burden of proof for causation. This causal chain, that climate changed caused and increase in the number and severity of tropical storms and specifically, caused Hurricane Katrina as a result of the defendant's GHG emissions, is much more convoluted than the causal chain between GHG emissions and sea level rise.

Rising sea-levels are one of the most certain consequences of global warming caused by climate change and despite the uncertainties inherent in climate science, the "overwhelming scientific consensus is that anthropogenic global warming is occurring and that increased carbon dioxide concentrations are one if its major causes" (Grossman 2003). This sentiment was echoed by the Court in *Massachusetts v. EPA*, when it stated in its opinion that:

> "The rise in sea levels associated with global warming has already harmed and will continue to harm Massachusetts. The Risk of catastrophic harm, though remote, is nevertheless real. That risk would be reduced to some extent if petitioners received the relief they seek. (*Massachusetts v. EPA*, 549 U.S. 497, 546.)"

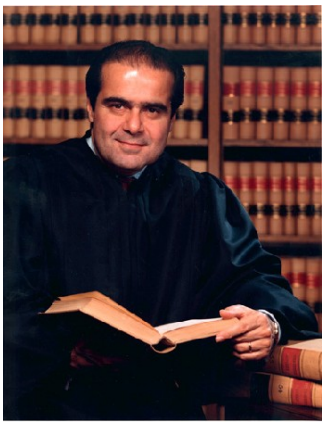
Massachusetts v. EPA, 549 U.S. 497 (2007)

Justice Stevens **wrote the majority opinion joined by Justices Souter, Breyer, Ginsburg and Kennedy:** "***A well-documented rise in global temperatures has coincided with a significant increase in the concentration of carbon dioxide in the atmosphere . . . EPA has offered no reasoned explanation***"



Justice Stevens

Justice Scalia **wrote the dissenting opinion (joined by Chief Justice Roberts and Justices Alito and Thomas):** "***The Court's alarm over global warming may or may not be justified, but it ought not distort the outcome of this litigation. This is a straightforward administrative-law case, in which Congress has passed a malleable statute giving broad discretion, not to us but to an executive agency. No matter how important the underlying policy issues at stake, this Court has no business substituting its own desired outcome for the reasoned judgment of the responsible agency.***"



Justice Scalia

For this reason, paired with the Supreme Court's recent acceptance of the science of climate change as a basis upon which to argue the merits of a claim, it seems reasonable to expect the court to be sympathetic to AOSIS member's claims against the defendant fuel and auto industries, since the departing point is now clear: a majority of the Supreme Court has declared "the harms associated with climate change…serious and well recognized." *Massachusetts v. EPA*, 127 S. Ct. at 1442

3.- Do rich countries owe poor countries a climate debt?

Photo 14. Actionaid Demonstration, COP 15 Copenhagen Denmark

While there does not seem to be any objection to the fact that climate change is a direct result of human activities, there is a huge divide in opinions as to whether historical emitters owe a debt to developing countries for their part in adding to the problem. Many large industrialized countries benefited during the industrial revolution from emitting large amoungs of green house gases and have only recently been made aware that their past actions had serious effects on the environment. Today, the majority of these industrialized countries have made tremendous strides in reducing their GHG emissions but, in some cases, the damage has already been done and many developing countries are already feeling the negative effects of climate change.

Should countries pay reparations for actions committed before there was a real understanding of the consequences?

> "I actually completely reject the notion of a debt or reparations or anything of the like," "For most of the 200 years since the Industrial Revolution, people were blissfully ignorant of the fact that emissions caused a greenhouse effect. It's a relatively recent phenomenon."
>
> —Todd Stern, US Special Envoy for Climate Change. Dec 9, 2009

How would you respond to this comment made by Todd Stern, US Special Envoy for Climate Change? Do you agree or disagree? Why?

Because the main effects of climate change are of anthropogenic origin, it makes sense that, if the Case Theorem is followed, that the cost of the damage resulting from climate change is assigned to the least-cost-avoiders. In the climate change arena, there is an uneven distribution of the cost of the harms produced by GHG emitters with small, localized groups bearing the brunt of the damage and contributing the least to the overall problem (Grossman 2003). From an economic perspective, the best allocation of the cost of the damage resulting from the man-made causes of climate change is the one that best reduces the cost of climate change "accidents" (such as, for example, the damaging effects of climate-related incidents such as the destruction of buildings and infrastructure as a result of sea level rise or increased tropical storms).

Leaving the costs of climate change to be born by the victims and potential victims, who are reliant on fossil fuels and who are generally uninformed about the effects of the use of fossil fuels, results in higher accident costs (Peñalver 1998)

Industrialized countries have the resources and expertise understand the influence GHG emissions have on climate change and the costs that these emissions have on society as well as a greater capacity to deal with the cope with the effects of climate change and change

their practices to avoid these costs. Placing the responsibility for the effects of climate change on these actors could minimize the overall "accident" cost of climate change by making it more cost effective to reduce GHG emissions than to pay out damages to injured parties.

THE COASE THEOREM

In law and economics, the Coase theorem, attributed to 1991 Nobel Prize winner Ronald Coase, describes the economic efficiency of an economic allocation or outcome in the presence of externalities. The theorem states that when trade in an externality is possible and there are no transaction costs, bargaining will lead to an efficient outcome regardless of the initial allocation of property rights. R, with other words, bargaining between agents can achieve a socially optimal outcome with respect to external damages caused by economic activity as long as property rights are well defined, meaning the responsible party is clearly liable for the damages [R. H. Coase, "The problem of social cost·, in the Journal of Law and Economics, Vol. III, 1960, pp. 1-44.]

As Wikipedia says, "Coase developed his theory when considering the regulation of radio frequencies. Competing radio stations could use the same frequencies and would therefore interfere with each others' broadcasts. The problem faced by regulators was how to eliminate interference and allocate frequencies to radio stations efficiently. What Coase proposed in 1959 was that as long as property rights in these frequencies were well defined, it ultimately did not matter if adjacent radio stations interfered with each other by broadcasting in the same frequency band. Furthermore, it did not matter to whom the property rights were granted. His reasoning was that the station able to reap the higher economic gain from broadcasting would have an incentive to pay the other station not to interfere. In the absence of transaction costs, both stations would strike a mutually advantageous deal. It would not matter whether one or the other station had the initial right to broadcast; eventually, the right to broadcast would end up with the party that was able to put it to the most highly valued use. Of course, the parties themselves would care who was granted the rights initially because this allocation would impact their wealth, but the end result of who broadcasts would not change because the parties would trade to the outcome that was overall most efficient. This counterintuitive insight – that the initial imposition of legal entitlement is irrelevant because the parties will eventually reach the same result – is Coase's invariance thesis."

Can this reasoning be applied to climate change negotiations?

[See http://wileyeconomicsfocus.wordpress.com/2009/12/07/bringing-the-coase-theorem-to-copenhagen/]

3.- US citizens and the climate change

Recently, in April 2010, the Friends of Thoreau Program of the Benjamin Franklin Institute of the University of Alcalá and the Foundation for Research on Law and Business (Fundación para la Investigación sobre el Derecho y la Empresa, FIDE) hosted one of the executive directors of one of the largest UE environmental NGOs -1.3 million members-, the Sierra Club.

Bruce Hamilton surprised the audience with the assertion that the Sierra Club had decided to concentrate all its energies and resources allocated to central headquarters on climate change policy issues.

Does this decision really reflect a change on the approach of US people to climate change?

4.- State and local action

But, independently of their attitudes toward climate change, citizens are mostly affected by political entities closer to them. Beyond regional US markets (see section on Scholar´s Debate, item 3), are states as sovereign entities (within the limitations of the US Constitution) entitled to put in place climate change mitigation or adaptation policies?

Have in mind that, as Al Gore`s "An Inconveniet Truth" showed, the impact of climate change may affect the US territory very differently (see box below).

Effect of a 8-meter hurricane storm surge on the Manhattan area, well within the realm of possibility

Courtesy of Free Geography Tools: Exploring the world of free tools for GIS, GPS, Google Earth, neogeography, and more.

Even in July 2006 “every state in the country had adopted some sort of law or policy to address climate change” (David Hodas at 343). Actions beyond climate change plans may include, for example, the regulatrion of the carbon-based energy sector; the approval of renewaable energies portfolio standards; the establishment of public benefit funds; the use of externalities adders to “force” the internalization of external damages caused by residual CO2 emissions; net metering; green pricing or the establishment of state appliance efficiency standards…(David Hodas, 354-370).

Students should review the 50 State Survey done by Pace Law School Center for Environmental Legal Studies (see section on “Works Cited”) and evaluate which state they consider to have the most comprenhensive policies.

The same could be said about local policies. The following figure (Enrique Alonso García, 2009, at 5-32) is a matrix with examples of US cities and climate change policies by them implemented.

	Agriculture and Forestry (politica agricola y forestal)	Commercial (sector commercial)	Cross-Sectoral Climate Change Initiatives or Programs (politicas integrales y transversales de cc)	Industrial	Power Generation (generacion –y distribucion- de electricidad)	Residential	Transportation	Waste (gestion de residuos)
California : Los Angeles	●	—	●	┐	●	┌	●	●
Colorado : Denver	·	—	●	┘	●	●	●	┘
Florida : Miami-Dade	┌	—	●	┐	●	●	●	●
Massachusetts : Brookline	●	●	●	┘	●	●	●	●
Massachusetts : Cambridge	●	—	●	┐	●	┌	●	●
Massachusetts : Medford	┌	—	●	┐	●	●	●	●
Massachusetts : Somerville	●	●	●	┘	●	●	●	·
Michigan : Ann Arbor	·	—	●		●	·	●	●
New York : Tompkins	└	·	●	┘	●	└	●	┘
Oregon : Portland	●		●	╵	●	●	●	●
South Carolina : Charleston	·		●	╵	●	●	●	●
Texas : Austin	●			╵	●	╵	●	●
Vermont : Brattleboro	●	●	●	┐	●	●	●	●
Vermont : Burlington	●	●	●	●	●	└	●	●
Wisconsin : Madison	●	—	┐	●	●	┌	●	●

The details of the most relevant ones, such as energy-efficient buildings; local transportation; solid waste; zonning iniciatives and land use policies; plantings and urban forestry; renewable energy; or procurement strategies,… could be seen at J.Kevin Healy, at 421-432)

Some of them obey to collective iniciatives, sich as those designed by the "U.S. Mayors Climate Protection Agreement" (Id., at 432) or even worldwide iniciatives, such as those agreed within the International Council for Local Environmental Initiatives, ICLEI (see id at 433 and www. iclei.org).

The students can also analyze the survey of the "most active" U.S. local governments (Portland, Oregon; California Bay Area; Seattle, Washington; Austin, Texas; Salt Lake City, Utah; San Diego, California; and Town of Greenburgh, New York) and assess which on of all those cities has the most comprehensive policy (see J.Kevin Healy, pgs. 435-450).

Of course, both state and local action can be preempted by federal action, in particular after the U.S. Supreme Court mandated the EPA to engage in action under the Clear Air Act (see Massachusetts v. EPA, previously discussed in this same section).

Students should visit and surf the EPA web page on climate change (www.epa.gov/climatechange) and evaluate whether the listed actions. Are all that the Federal Government could engage in?

For additional descriptions of detailed actions by the Federal Government on subsidies, tax policy and technological innovation, see Roberta Mann, pgs. 565 ff)

5.- A final effort: students should prove their skills in international negotiations analysis and in the evaluation of U.S. opening positions and assessment of what the U.S, achieved in the global context.

In the World View column of the 25 November 2010 issue of *Nature,* Yvo de Boer, former Secretary General of UNFCCC, analyses the two main causes of the Copenhagen failure and the six areas in which the Cancún summit should focus and be practical on in order to ensure success, and a final promising comment on emissions trading.

1.- Copenhagen analysis:

“There are many good reasons why that climate conference last year proved so difficult, and delivered what it did (or did not). Two should be borne in mind.

First, there was no shared understanding of what the conference was supposed to deliver. The 2008 Bali Action Plan, the document that underpinned the process intended to culminate in Copenhagen, spoke of decisions being taken. But what decisions? Some countries argued that the world needed to adopt a new legal treaty under the United Nations Framework Convention on Climate Change, which would set a series of binding targets for industrialized countries and herald the demise of the Kyoto Protocol. Others expected agreement on a second period under the Kyoto Protocol and a new legal arrangement largely directed at the United States. Still more nations sought only an operational step towards a legal instrument or instruments. In the weeks before the Copenhagen meeting, a growing number of world leaders expressed the need for a political declaration as the best outcome. In the end, that is what the conference delivered.

The **second** reason is the widespread fear that ambitious climate-change policy will damage economic growth. Concerns over energy prices, energy security and material scarcity in the face of a ballooning world population have done much to drive global desire for a greener, leaner and meaner economic model. Although many nations pay lip service to this green growth model, most of them, deep in their hearts, are still unsure. In fact, many developing nations fear that the intent of the West is to use climate as an excuse to keep developing nations poor and maintain the current economic status quo.”

2.- Lessons for Cancún:

The lessons for Cancún therefore seem obvious: keep it practical, keep it simple and don't overreach. The negotiations must explore ways for all nations, especially those in the developing world, to consider the merits of green growth. No sensible country will accept a new legal agreement if the economic consequences remain unclear.

I believe that this requires a practical framework in each of the following six areas. Only then will countries responsibly be able to decide whether a new legal instrument is the proper route to take global climate action forward.

First, we need a mechanism that helps developing countries to assess their green growth potential, develop a clear strategy and access international financial support to implement it. The 'prompt start' finance that was promised in Copenhagen offers a foundation to develop that strategy. Long-term financial commitments and a widened range of market-based mechanisms will be crucial to its implementation.

Second — and essential — is an increased capacity to assess and plan the probable national responses to a changing climate, especially in the smaller and poorer developing nations. We need a capacity-building programme driven by institutions that can deliver the required hard economic analysis.

A **third** critical element for success in Cancún is to strike a better balance when considering climate adaptation and mitigation. The lack of attention to adaptation is one of the main shortcomings of the Kyoto Protocol.

A **fourth** point would be to ensure that the delivery mechanism helps to push key technologies into developing economies. Private-sector investment must be mobilized to drive innovation and to lower the cost of generic but essential technologies, such as renewable-energy equipment.

Fifth, an agreement to reward action to combat deforestation and forest degradation would offer a real premium for countries with no other significant mitigation potential, and would help to limit the cost of future action on emissions.

Sixth, a robust framework to monitor, report and verify both action and support will ensure that nations pull their weight.

You will notice that more ambitious targets are not on my list. The realist in me suggests that we need to work with what we have, in the same way as President Mohamed Nasheed of the Maldives accepted the Copenhagen Accord — not because he liked it, but because he realized that it was the best he could get. Am I selling the climate short? Yes. The approach I outline here will not be enough to limit temperature increase to a maximum 2 °C rise, and I would happily trade any of my six points for a stronger outcome.

3.- Note on emissions trading:

Experience with sulphur dioxide trading in the United States and carbon trading in the European Union suggests that a modest start can be an effective way to get the ball rolling and to 'learn by doing'. The Copenhagen Accord's promise to review action in 2015 at least offers the chance to reconsider our ambition once we have a clearer picture of the tools that will be available. Above all, I hope that the lack of a shared sense of direction will not bedevil the talks in Cancún as it did last year. Those familiar with the rules of football will know that many people issued the UN climate process in Copenhagen the equivalent of a cautionary yellow card. It should tread carefully to avoid the unfortunate consequences of a second.

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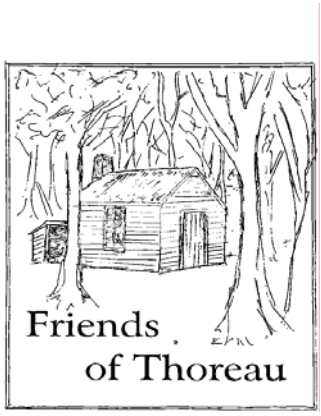
The students should analyze what was the official position of the U.S. toward the Cancún meeting and if the COP 16 Summit achieved any target in the said six issue



The Conference of the Parties: The Role of the United States in Effectively Mitigating Climate Change post-Copenhagen

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Benjamin Franklin Institute of North American Studies

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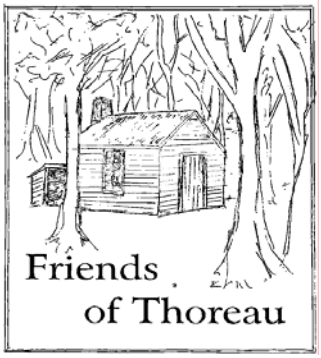

The Conference of the Parties: The Role of the United States in Effectively Mitigating Climate Change

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LINKS TO ONLINE SOURCES

International Organizations:

International Pannel on Climate Change (IPCC): www.ipcc.ch

United Nations Framework Convention on Climate Change (UNFCCC): www.unfccc.int

Intergovernmental Organizations:

World Intellectual Property Organization (WIPO): www.wipo.int

World Trade Organization (WTO): www.wto.org

Non-governmental Organizations:

Climate Action Network: www.climatenetwork.org

350.org: www.350.org

The Pew Center on Global Climate Change: www.pewclimate.org

US Governmental Organizations:

Environmental Protection Agency (EPA): www.epa.gov

United States Department of State: www.state.gov

Climate News

ECO-Daily NGO Newsletter: www.climatenetwork.org/eco

Earth Negotiations Bulletin: www.iisd.ca/climate

Third World Network: www.twnside.org.sd

REDD

The Little REDD Book: www.littleREDDbook.org

The Global Canopy Programme: www.globalcanopy.org

Carbon Markets

The International Carbon Action Partnership: www.icapcarbonaction.com

The Chicago Climate Exchange: www.chicagoclimatex.com

The Western Climate Initiative: www.westernclimateinitiative.org

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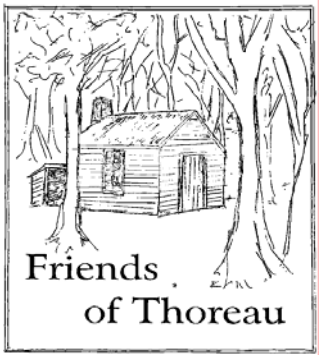
Free Geography Tools: Exploring the world of free tools for GIS, GPS, Google Earth, neogeography, and more: http://freegeographytools.com/2007/sea-level-rise-storm-surge-and-flooding-effects-using-3dem



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ACKNOWLEDGEMENTS

The Benjamin Franklin Research Institute of North American Studies of the Universidad de Alcalá and its Friends of Thoreau Program are extremely grateful for the courtesy and support of the many people and institutions cited below: as well as their staff who so generously donated their time to help the authors find the adequate sources.

Special Thanks to the Fundación Nueva Cultura del Agua for sponsoring my accreditation to attend the UNFCCC meeting in Barcelona and Copenhagen.

Thanks to Climate Action Network Internations for permission to reprint the Climate Change Basics Glossary.