construindo juntos o nosso futuro comum

Simulação das Nações Unidas para Secundaristas

Guia de estudos
Introduction

As the 21st century arises, peoples, non-governmental organizations (NGOs), civil society around the world became increasingly concerned about the environmental issues. They demand actions, laws and suitable policies from governments in order to diminish the negative effects of the human action on the environment. This uneasiness is not exactly new, since it became visible during the early 90s, as the Cold War was over and when finally the international agenda has moved its focus away from military security issues.

By the time that the United Nations Framework Convention on Climate Change (UNFCCC) was being discussed, there was a perception that the anthropogenic interference, mainly through greenhouse gas emissions, might had been causing dangerous changes in the climate system1. This would require a multilateral approach of the environmental issue, because the main world polluters were not as vulnerable to the consequences of the climate changes as some other states.

However, it is important to stress that climate change was not a key issue in the international agenda until 2007, inasmuch as the health of economy was considered much more important. Many of the policies proposed or required to preserve the environment could slow down the economic growth.

It was during the RIO-92 that the concept of 'sustainable development2 was accepted once and for all. Many argue that this should be the kind of development that the developing countries should focus on, since the developed countries' one is not sustainable, because it is highly based on economic growth.

The Kyoto Protocol, produced during the Third Conference of the Parties to the Climate Change Convention COP 3, is the first international agreement with specific obligations for the mitigation of greenhouse gas emissions. It is based on the principle of common but differentiated responsibilities3.

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1 According to the UNFCCC usage, by 'climate change' is meant “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”. See IPCC Glossary (1995).

2 See more about this concept at the end of this guide.

3 See more about this concept at the end of this guide.
The climate change is already causing problems for many States, but some are more vulnerable to these changes than others. So, mechanisms are needed to enable the vulnerable ones to cope with the consequences of climate change. The adaptation measures are meant to improve the capacity to adapt to impacts, maybe even increase the ability to recover fast from future disturbances.

Clearly, only adaptation would not help to solve the problem, that is the reason why mitigation measures are needed. These are common responsibilities, since the reduction of greenhouse gas emissions is essential to stabilize the concentration of these gases in the atmosphere, although each state tackles the climate change problem according to its capacities and its contribution to the development of the problem, based on the idea of common but differentiated responsibilities.

The Kyoto Protocol has many flaws, but at least it set the framework for the climate change regime from 2008 to 2012. But what about afterwards? There is no guarantee that a new protocol is going to be produced, and even if it is, we cannot be sure it will be unlike the Kyoto one. However, there are efforts towards the implementation of a new international agreement on climate change.

The adoption of the Bali Roadmap for a future international agreement on climate change, during the COP-13, is a signal of those efforts. It is a two-year process and it is expected to come up with a new protocol in the COP-15, which must include as many countries as possible, mitigate the greenhouse gas emissions, combine “respect for the environment, living standards and long-term security of energy supply in the best way possible”.

**History of the Issue**

The global environmental problems first emerged on the international agenda with the United Nations Conference on the Human Environment (Stockholm), held in 1972. From that conference on, which was characterized by its pioneering initiative...
to deal with themes of "systematic and specific manner"\textsuperscript{11}, is that the International Environmental Law arises in fact.\textsuperscript{12}

Anyway, since the Middle Ages the environmental issue has been addressed by various treaties. Among them we can cite "the Royal Proclamation of 1306", of King Edward I, banning the use, in London, of coal furnaces: in case of violation, the responsible was required to pay a fine; in case of recurrence, the furnace would be destroyed; and if a third violation occurred, the responsible would have to pay with his or her life."\textsuperscript{13} It is important to note that the treaties are the main source of International Environmental Law, as they clearly or almost clearly determine, the rights and obligations of the contracting parties. More specifically, the environmental treaties can be categorized geographically in: global, regional, sub-regional or bilateral.\textsuperscript{14}

It is important to emphasize that, despite being the most difficult to be constructed, the global approach is the best to deal with environmental issues. After all, what a determined national policy adopts with regard to environmental issues has consequences for other nations of the globe.

Therefore, it can be assured that until the carrying out of the Stockholm Conference, the previous treaties and conferences were restricted to just a local problem (the majority of sub-regional range) and reflected, clearly, local economic concerns\textsuperscript{15}. Thus, the Stockholm Conference is characterized for being a basis for International Environmental Law, "because, despite the resistance at that time, has led to environmental protection to the center of international concerns"\textsuperscript{16} to address the issue at a global level.

Among the 26 principles contained in the Stockholm Conference Declaration,\textsuperscript{17} we can point its worldwide character through its concern about the preservation of natural resources, with the increasing of global pollution and the establishment of international cooperation to deal with issues of climate change, among others.

In 1983, in contrast, with the apparent aim to show the world that the environment and development are interdependent, the World Commission on Environment and Development (WCED) was created, also known as the Brundtland Commission, which held audiences around the world that intended to produce a final report with their conclusions.\textsuperscript{18}

After three years of intense debates in various countries, the Brundtland Commission delivered its final report, entitled "Our Common Future" (1987), which

\begin{thebibliography}{99}
\bibitem{11} Available at DERANI, Cristiane; COSTA, J. A. Fontoura (Org.). Direito Ambiental Internacional. Santos, SP: Leopoldianum, 2001.
\bibitem{12} "International Environmental Law can be defined as the set of rules and principles that create rights and obligations of States for environmental intergovernmental organizations and individuals." Available at: SILVA, G. E. Nascimento. Direito Ambiental Internacional. Rio de Janeiro: Thex,1995.
\bibitem{13} Available at: SILVA, G. E. Nascimento. Direito Ambiental Internacional. Rio de Janeiro: Thex,1995
\bibitem{14} \textit{Ibidem}.
\bibitem{15} \textit{Ibidem}
\bibitem{17} See: \url{www.unep.org/Documents.Multilingual/Default.asp?DocumentID=97&ArticleID=1503}
\bibitem{18} Available at: \url{www.wwiuma.org.br/geo_mundial_arquivos/capitulo1.pdf}
\end{thebibliography}
defined the concept of sustainable development,\(^{19}\) as well as emphasized environmental problems (little studied at the time of its publication). The Brundtland Report suggested to the General Assembly of Organizations of the United Nations (UN), among other things, calling an international conference to assess the progress achieved, which effectively led to the Conference of Rio de Janeiro.

It is worth emphasizing that it was only at that time (the end of the 1980s) that the issue of climate change was definitely included in the agenda of the UN, especially after the creation of the Intergovernmental Panel on Climate Change (IPCC)\(^{20}\), designed by the United Nations Environment Program (UNEP)\(^{21}\) and the World Meteorology Organization (WMO). Formed by three working groups, the IPCC aims to, through the scientific assessment of climate change, estimate environmental and socioeconomic impacts and develop response strategies, seeking to anticipate the various challenges to be faced by humanity. The IPCC has been important to the dissemination of the dangers of climate change, despite the fact that not all countries agree with its reports or methods.

In 1989, the United Nations General Assembly adopted a resolution which stated the establishment of a Preparatory Committee (PrepCom),\(^{22}\) consisting of all Member States and with the participation of specialized agencies of the United Nations. The importance of the PrepCom was to organize five sessions that would prepare the projects of the documents to be submitted to the Conference of Rio de Janeiro, held between June 3rd and 14, 1992, in Rio de Janeiro\(^{23}\).

The first major result of the Rio Conference was the signing of two multilateral conventions: United Nations Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). Signed by 156 States and the European Union, the CBD is to the preservation of wildlife, plants and microorganisms in their natural habitat.

### Committee’s historic background

#### The United Nations Framework Convention on Climate Change

COPs (Conferences of the Parties) are annual meetings inscribed in the United Nations Framework Convention on Climate Change (UNFCCC). Basically, the UNFCCC aims to achieve cooperation among the countries that signed and ratified it in order to mitigate human’s interference in the process known as climate change. However, that

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\(^{19}\) “The development that meets the needs of present generations without compromising the ability of future generations to meet their own needs” (CMMAD, 1987).

\(^{20}\) See: www.ipcc.ch

\(^{21}\) “UNEP is the United Nations system’s designated entity for addressing environmental issues at the global and regional level. Its mandate is to coordinate the development of environmental policy consensus by keeping the global environment under review and bringing emerging issues to the attention of governments and the international community for action.” Available at: www.unep.org/PDF/UNEPOrganizationProfile.pdf


\(^{23}\) Among the various names by which the conference became known, we can cite: Rio Summit, Earth Summit (or, in Portuguese, Eco-92or Rio-92).
Convention is not by itself legally-binding\textsuperscript{24}, which means that the signatory countries are not obliged to curb greenhouse gas emissions, since it is considered that they only expressed their willingness to voluntarily struggle to reduce them. Nevertheless, the UNFCCC, which only came into force after being ratified\textsuperscript{25} by over fifty countries in 1994, forecasts mechanisms of obligations for the parties concerning the pursuit to prevent catastrophic climate changes. Those efforts would be met annually in the COPs after the convention had been come into force, and, the main devices the parties would have are the creation of protocols and, by their ratification, the establishment of binding responsibilities.

The COPs

The UNFCCC, during its creation, was supposed to be able to path the way for stronger actions on climate change by the annual meetings. It also established many of the guiding principles that would be followed, such as the protection of the global climate while maintaining sustainable development.\textsuperscript{26}

COP 1

The first Conference of the Parties was held in Berlin (March and April of 1995), and 117 countries attended to it.

After the UNFCCC came into force, nations agreed that real action should be taken in order to curb greenhouse gas emissions, and the best way to do that would be by establishing a protocol to be presented until 1997 (two years later). The principle of “common but differentiated responsibilities”\textsuperscript{27} was applied to it and characterized the first negotiations.

COP 2

It was held in Geneva (Switzerland) in July 1996, and the negotiations were based on the reports presented by the IPCC, accepting its scientific findings and urging for “harmonized policies” among nations.\textsuperscript{28}

COP 3

In December 1997, the Japanese city of Kyoto hosted it, which became famous for naming the protocol that was adopted after tough discussions, mainly between the European Union and the United States. The EU countries sought ways to improve flexible mechanisms as supplementary to domestic actions, whereas the United States were concerned about the costs of compulsory cuts and other obligations, which were not addressed to developing but big polluter countries, such as China, India and Brazil.\textsuperscript{29} The Protocol was finally adopted consensually, but the ratifications required to put it into force took years to come.

\textsuperscript{24} See more about this concept at the end of this guide.
\textsuperscript{25} See more about this concept at the end of this guide
\textsuperscript{26} See www.pewclimate.org/docUploads/PEW_Pocantico_Report05.pdf
\textsuperscript{27} See more about this concept at the end of this guide.
\textsuperscript{28} See http://www.livingonearth.org/shows/shows.htm?programID=96-P13-00030
\textsuperscript{29} See http://www.iisd.ca/climate/COP6/side/22_wednesday.html
The Kyoto Protocol\textsuperscript{30}

A preliminary treaty was signed in December 1997, but several questions remained to be negotiated, which was the basis of the discussions that only finished in November 2001. Most countries ratified the treaty during 2002, but the treaty only came into force in 2005, after the Russian ratification, satisfying the necessary conditions of at least 55 ratifying countries, which should account for at least 55% of the world’s total carbon dioxide emissions in 1990.

Developed Countries (Annex I) are required to reduce greenhouse gas emissions (compared to the levels of 1990) by differentiated targets by the 2008 – 2012 period, whereas developing countries were not obliged to any cuts, but could engage in the process by the Clean Development Mechanisms, as well as in the other flexible mechanisms (Emissions Trading and Joint Implementation), which are supposed to allow Annex I countries to achieve their cutting-goals.

A new negotiation round started in 2005 in order to set further targets for the post-2012 period. However, there seems to be any kind of consensus on points such as the inclusion of developing countries on binding reductions, what kind of penalties would be imposed on parties that do not achieve their goals on the first commitment period (2008 – 2012), how could the United States become part of a new agreement, among others.

\textbf{COP 4}

In November 1998 the parties met again, in Buenos Aires. They attended to it willing to tackle with unsolved problems concerning the Kyoto Protocol, but, since it was a harsh task and no agreement was achieved, a Plan of Action\textsuperscript{31} was adopted in order to present, in the year 2000, the main rules and technical and political questions that were harming its full implementation.

\textbf{COP 5}

The matters concerning the implementation of the Buenos Aires Plan of Action were in the center of discussions at this meeting, held in Bonn in October and November 1999. Land use, land use change and forestry were discussed, as well as the condition of developing countries, seeking for solutions just one year before the meeting that would present the results of the Plan of Action.

\textbf{COP 6}

Thus, in The Hague (Netherlands), the parties would convene to find solutions for those matters that were impeding the adoption of the Kyoto Protocol in November 2000. However, after strong disagreements among countries (mainly between the European Union and the United States), which made the discussions no more fruitful, this conference was suspended.

\textbf{COP 6 bis}

The conference was resumed in Bonn (Germany) in July 2001, without the presence of the US delegation (that was acting as an observer, since the newly elected

\textsuperscript{30} See http://unfccc.int/essential_background/kyoto_protocol/items/1678.php

\textsuperscript{31} See http://unfccc.int/resource/docs/cop4/16a01.pdf
President George W. Bush had rejected the Kyoto Protocol. Important advancement was achieved and many important problems were solved, including the adoption in the Protocol of four key issues: flexible mechanisms, carbon sinks, compliance and financing.\(^{32}\)

**COP 7**

The most important issues discussed in Marrakech (Morocco) in October and November 2001 concerned the outstanding questions related to the Buenos Aires Plan of Action to the Kyoto Protocol. Finally, the process of ratification of the Protocol could now start to take place, and a deadline was set out (September 2002) so that the agreement would come into force. The United States of America were absent of the discussions, and, again, just acted as observers, despite many countries had urged for its participation.

**COP 8**

It was held in New Delhi (India) in October and November 2002. Outstanding matters were again discussed, but political achievements were not reached, despite the fact that many non-governmental organizations, the civil society and the private sector expressed intentions of taking part of the process outlined by the Kyoto Protocol, defending its ratification and presenting projects related to the mechanisms of flexibilization.

**COP 9**

Milan hosted the ninth Conference of the Parties in December 2003. The parties sought solutions for technical matters concerning measurement of CO\(_2\), mechanisms of clean development, carbon quotas trade and how to put together all of those efforts.

**COP 10**

The tenth Conference was held in Buenos Aires in December 2004. It was especially important since there was no more doubt that the Protocol would come into force, since the Russian Federation had just ratified it, fulfilling the required conditions. Conversations concerning the period after 2012 informally started to take place, since the Kyoto Protocol would expire eight years after legal admission (February 2005).

**COP 11 / MOP 1**

The eleventh Conference of the Parties is also known as MOP 1, which stands for Meeting of the Parties to the Kyoto Protocol, and it was held in Montreal (Canada) in November 2005. Worries about the need of extension of the Kyoto Protocol beyond 2012 induced the creation of the Montreal Action Plan\(^ {33}\), which also intended to establish deeper cuts in greenhouse gas emissions and the engagement of important countries such as the USA, China and Brazil in those efforts.

**COP 12 / MOP 2**

\(^{32}\) See more about these concepts at the end of this guide.

The last outstanding issues in the implementation of the Kyoto Protocol were concluded during this meeting in Nairobi (Kenya) in November 2006. The need of a new binding agreement that would replace the Kyoto Protocol gained strength in the discussions.

**COP 13 / MOP 3**

This conference in Bali (Indonesia) in December 2007 is particularly important because the parties reached agreement on a deadline for signing a new framework for the period beyond 2012. The Bali Road Map calls for the formulation of a new Protocol in 2009, during the COP 15, in Copenhagen. Besides, mechanisms of helping developing countries would be established so that they could properly adjust to climate changes. Two working groups were established: 1) the AWG-LCA (Ad Hoc Working Group on Long-term Cooperative Action under the Convention), which shall conduct the process of reaching a common outcome, adopting a decision and presenting them at the COP 15; and 2) the AWG-KP (Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol), which is supposed to analyze the capacity of Annex I Parties to reach their emission targets.

**COP 14 / MOP 4**

This Conference was held in Poznan in December 2008. The main discussions were related to the establishment of the steps needed for agreed outcomes to be produced at the COP 15. Countries advanced discussions on capacity-building for developing countries, technology transfer, reducing deforestation, future commitments in a new climate change regime and cooperation, but consensus on any matter was difficult to be produced. Both of the newly established Ad Hoc Working Groups convened during this Conference, which was also characterized by the expectation of a possible change in the Washington position beyond 2009 and by individual achievements such as the decline of deforestation rates in Brazil and a more flexible position of the People’s Republic of China concerning the carbon emissions. One important remark was that the Adaptation Fund could finally become reality.

**COP 15 / MOP 5**

It will be hosted by Denmark in Copenhagen on November and December 2009. The main goal is to achieve another binding agreement for the period after 2012. Otherwise, any gap between the expiration date of the Kyoto Protocol and the beginning of new framework (The Kyoto Protocol with amendments, another Protocol or a mixture of both) may be seen as a waste of efforts, since the Parties would not be obliged to cut greenhouse gas emissions for a period of unknown length. The discussions will be related to the inclusion in a new agreement of as many countries as possible, as well as the possibility of engagement of developing countries in a compulsory regime of cutting greenhouse gas emissions. Not only efforts for the protection of the environment will be fostered, but ways of achieving sustainable development will also be discussed.

37 Ibid.
Statement of the Problem

The Bali Roadmap

One of the most important achievements of the 2007 United Nations Climate Change Conference (COP-13) was the adoption of the Bali Roadmap, which may be understood as a negotiation framework for the two next years. It also sets a deadline of 2009 to complete negotiations: parties are expected to produce in Copenhagen (COP-15) an agreed outcome which will apply to the period after 2012, when the first commitment period of the Kyoto Protocol (2008-2012) expires.\(^{38}\)

The map has four building blocks: mitigation, adaptation, technology transfer and financing. In the preamble,\(^ {39}\) nations acknowledge that scientific evidence for global warming is unequivocal and that a delay in reducing emissions increases the risks of severe climate change impacts.

The Bali Roadmap does not specify any clear emissions goal, not even points out which countries should cut emissions or how deep these cuts should be. However, a footnote\(^ {40}\) in the preamble refers to scenarios presented by the Intergovernmental Panel on Climate Change (IPCC), which include a goal of reducing global emissions by 50% by 2050, compared to the level for 2000. Developed countries would have to cut by 25-40% their emissions from 1990 levels by 2020.

Developing countries, on their turn, agreed to contribute through measurable, reportable and verifiable mitigation actions in the context of sustainable development. To do so, they are to be supported by climate-friendly technologies (those emitting zero or very low amounts of greenhouse gases), financing and skills-building.

Parties have also agreed on steps that can be taken immediately to strengthen their commitment to the UNFCCC, such as enhancing funding for adaptation measures, increasing investment in climate-friendly technologies, and combating deforestation. Concerning the latter, the map includes the possibility of financial support to reduce deforestation and forest degradation, which account for roughly a fifth of global greenhouse-gas emissions today.\(^ {41}\)

Poznan, the half-way mark between Bali and Copenhagen

The Poznan Climate Change Conference (COP-14) provided the opportunity to bring together all the progress made in 2008 and move from discussion to negotiation mode in 2009, in order to build the necessary conditions to an agreed outcome at Copenhagen. At the Conference, crucial continuing issues were capacity-building for developing countries, reducing emissions from deforestation (REDD), technology

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\(^{38}\) It is not defined whether the agreed outcome to be reached in 2009 will be a second commitment period under the Kyoto Protocol, a new protocol, a set of decisions, or a mixture of these three solutions.


\(^{40}\) Ibidem.

\(^{41}\) See http://www.news.com.au/story/0,23599,22932645-2,00.html
transfer and adaptation.\textsuperscript{42}

Despite the criticisms of environmentalists, activists and developing countries, significant progress was made. The launch of the Adaptation Fund was very important: it was agreed that the Fund will be a legal entity that will grant direct access to developing countries.\textsuperscript{43} There was also the general agreement that a post-Kyoto strategy has to focus on deeper emissions cuts, and that financial mechanisms are vital to a strengthened response to climate change.\textsuperscript{44} In addition, some progress was made concerning finance, technology, REDD and disaster management.

**Copenhagen 2009: challenges and expectations**

By 2009, Parties of the United Nations Climate Change Conference in Copenhagen (COP-15) are expected to define target numbers and types of legal documents required for a new international agreement. Facing the facts, there is still a great amount of work that needs to be done if Copenhagen 2009 is to cover all the necessary issues to make the agreement work.

There are three political essentials that need to be clearly defined in the agreed outcome in Copenhagen: the nature of the commitments (meaning whether they are to be voluntary or binding), how financial resources will be mobilized and the institutional framework that will be needed to deliver the financial, technological and capacity building resources for both adaptation and mitigation.\textsuperscript{45}

For both developed and developing countries, Copenhagen 2009 needs to be clear on the types of mechanisms and incentives for mitigation. Developing countries have clearly shown that they are willing to do more, but for that they need international support in terms of additional resources and technological assistance. The more ambitious industrialized countries’ commitments are, the bigger the financial and technological support will be, the more engagement can be expected from developing countries. And the more developing countries engage, the more ambitious commitments can be expected from industrialized countries. Thus, industrialized countries need to continue to take the lead in reducing emissions.\textsuperscript{46} It is particularly important that the United States is fully engaged in this process, as it accounts for 20\% of world’s total emissions\textsuperscript{47} and refuses to commit to the Kyoto Protocol.

Copenhagen 2009 also needs to deliver on adaptation. A great issue that needs to be addressed is the scarcity of capital available for global adaptation: it is measured in tens of millions of dollars, while estimates of the amounts needed run into tens of billions.\textsuperscript{48} While Kyoto provides small sums of money into the Adaptation Fund - which was set up to help poor countries cope with climate change - -, a successor agreement

\textsuperscript{42} See http://unfccc.int/meetings/cop_14/items/4481.php
\textsuperscript{43} See http://unfccc.int/meetings/cop_14/items/4481.php
\textsuperscript{44} See http://www.bbc.co.uk/portuguese/reporterbbc/story/2008/12/081213_poznan_resolucao_ebc_cq.shtml
\textsuperscript{46} Ibidem.
\textsuperscript{48} See http://news.bbc.co.uk/2/low/science/nature/7136485.stm
should leverage far more from the international carbon market.\textsuperscript{49}

The Bali roadmap foresees the expansion of Kyoto’s mechanisms designed to raise money from international carbon trading to pay for adaptation measures, such as sea walls, fresh water infrastructure, new crop varieties and whatever else may be needed as rainfall patterns change and the world warms.\textsuperscript{50} The main obstacle is that the carbon market is not big enough to provide significant adaptation funding: without a wider and deeper set of emissions targets that induce a meaningful carbon price, the market is likely to remain too small.\textsuperscript{51} In sum, the current carbon market structures are not developed enough to meet the challenge, and other ways of raising financial resources are needed.

In addition, many developing countries expect more funds for protecting their forests and still lack access to climate-friendly technology. Despite the intention to adopt the principle of rewarding poorer countries for protecting their carbon-storing trees, much remains to be worked through. Advancing on these concerns of the developing countries will be crucial for moving the process forward.\textsuperscript{52}

As it has already been affirmed in Bali Roadmap, economic and social development is a global priority. Thus, climate change action should not jeopardize developing countries’ overriding goals of economic growth and poverty eradication. It is vital that the negotiating process encourages viable, climate-friendly economic development on a global scale. Moreover, an agreed outcome ought to path the way for transforming the global economy into a low-emission one.\textsuperscript{53}

Reaching an agreement is clearly a challenging task, because global economy is also at stake. States should succeed in adopting climate-friendly sources of energy, otherwise mitigation efforts might jeopardize economic growth. Industrialized countries are accused of not keeping their commitments under the Kyoto Protocol. Developing nations, on the other hand, claim for their right to development and may find it difficult to cut emissions while aiming at poverty eradication. Many might accept no more than voluntary reductions.\textsuperscript{54}

The scarcity of resources for adaptation and investments in climate-friendly technology is likely to worsen because of the current global economic crisis, which makes negotiations even more difficult and demands billions of dollars for saving institutions from going bankrupt.\textsuperscript{55}

Technology transfer and deforestation are also sensitive topics. Developed countries hesitate to share their advanced techniques, which may have a low impact anyway if not associated with skills-building in poor countries. Concerning deforestation, states rich in biodiversity frequently stand up for their sovereignty and their right to determine the use of their natural resources.\textsuperscript{56}

**Proposed Solutions**

\textsuperscript{49} Ibidem.
\textsuperscript{50} See http://www.zerocarbonbritain.com/content/view/63/35/
\textsuperscript{51} See http://news.bbc.co.uk/2/low/science/nature/7136485.stm
\textsuperscript{52} See http://unfccc.int/files/press/news_room/statements/application/pdf/080925_speech.pdf
\textsuperscript{53} Ibidem.
\textsuperscript{54} See http://www.straitstimes.com/Breaking%2BNews/World/Story/STISStory_311140.html
\textsuperscript{55} Ibidem.
The Kyoto Protocol has provided an essential architecture for the creation of a new international agreement to tackle the challenges posed by climate change. Many countries have already recognized climate change as a fact and what should be done to stabilize GHG emissions. An agreement that would gather almost every country in the world is by no means easy to accomplish and probably most of the future protocol structure is going to be based on the previous one.

The development of a new protocol must consider the respect for the environment, living standards and long-term security of energy supply. Also, the discussions must take into consideration the principle of common but differentiated responsibilities and respective capabilities, and the right to promote sustainable development. These are principles that are not likely to change. But there are points in the Kyoto Protocol that must be improved so climate change can actually be dealt with.

Developing countries have become more and more responsible for GHG emissions, which mainly come from India and China.\textsuperscript{57} It is noticeable that these are great GHG releasing countries, but both do not have any obligations towards reductions.

Lately, the developing countries have been held responsible for more than half of the GHG emissions.\textsuperscript{58} This is a very serious problem, because it is obvious now that without the cooperation of the developing countries, the efforts of the developed ones to decrease their emissions will not be enough to cope with climate change. Hence, the involvement of developing countries and the transition economies in adaptation and mitigation measures is one of the goals to be achieved. The imposition of emission targets to those countries or voluntary reductions are also points to be negotiated.

Likewise, the engagement of the United States of America (USA) in the efforts to manage climate change is crucial. It is the most powerful country in the world and one of the biggest polluters as well. They will not solve the climate change problems alone by reducing their GHG emissions or by being less dependent on oil, however, more than any country, they have the power to take the leadership role in fighting against it. The USA has enough material capabilities to support climate change research, to invest in science, technology, and institutions, and can also promote international cooperation to deliver responses to climate change.\textsuperscript{59}

Although controversial, more ambitious emission targets must be discussed, at the very least. A priori, the obligation to cut emissions only affects developed countries. What targets should be imposed must also be negotiated. Many developing countries, the European Union and New Zealand propose that developed countries should curb their emissions in the range of 25% to 40% below 1990 levels by 2020. Bangladesh and other least developed countries, which will be the most affected ones by climate change, want at least a 90% reduction below 1990 levels by 2050.\textsuperscript{60} It is necessary to remind that curbing GHG emissions may diminish the production of a

\textsuperscript{57} Global Carbon Project 2008 and Carbon budget and trends 2007. Available at: www.globalcarbonproject.org

\textsuperscript{58} Ibidem.


country and, if an economy depends on carbon-based energy, then becoming efficient in the use of fossil fuels costs a high price to governments and companies. For the developing countries and even for the developed, an increase in technology transfer is necessary. There is no doubt that the production and consumption of many countries emit a considerable amount of GHG at the atmosphere. One vital point here is energy. Currently, the generation of energy comes from three major fossil fuels: coal, oil and natural gas. The use of these fuels must be optimized and its gradual substitution must be stimulated, so their GHG emissions will decrease. Even though there is the possibility of employing renewable energies, such as wind, solar and tidal energy or the biomass, that is not feasible on a commercial scale, given the high costs. There is a lack of investments in technological research. Some suggestions of what can be done about this: elimination of subsidies for fossil fuels, incentives for the production of technology and development of projects to generate energy from renewable sources, more economic incentives for energy from renewable sources, investments on projects to generate high energy efficiency.  

Adaptation and Mitigation measures must be discussed as well. The climate change has provoked irreversible impacts, which call for adaptation. There is already a debate regarding the international fund that will support developing countries that are most vulnerable to climate changes. It is expected that the developing countries will negotiate national mitigation measures. The fight against deforestation, the conservation and the sustainable management of forests are considered important measures to mitigate the climate change.  

The Kyoto Protocol created a market-based mechanism so countries could meet their targets. But it also created a new commodity. Trading emissions “allow countries that have emission units to spare - emissions permitted to them but not 'used' - to sell this excess capacity to countries that are over their targets” 63 this is known as carbon market.  

The Clean Development Mechanism allows a country that has targets to meet under the Kyoto Protocol to implement an emission-reduction project in developing countries. 65 The reduction can be counted as part of the country efforts to meet its targets and this is a way of promoting technology transfer. The Joint Implementation allows a country that has targets to implement an emission-reduction project in another country with emission reduction or limitation commitment. 66

**Bloc Position**

*The United States of America*


63 See http://unfccc.int/kyoto_protocol/mechanisms/emissions_trading/items/2731.php

64 See more about this concept at the end of this guide.

65 See http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php

66 See http://unfccc.int/kyoto_protocol/mechanisms/joint_implementation/items/1674.php
During the Democrat administration in the 1990s, the American government was engaged in the negotiations of the Kyoto Protocol. However, the Republican administration of this decade opposed to the Protocol and to the goals of carbon emission reductions. Now, with the election of a new administration, the necessity of diversifying the American energy matrix and the willingness of the Democrats to change the American environmental policy, there is a possibility that the agreements of the COP-15 will advance and consolidate an environmental plan with more ambitious goals for emission reductions.67

Some states of the Federation are already adopting favorable policies to the reduction of emissions. However, this change in policy is a challenge for the American society. On one side, change in environmental politics is expensive and can initially reflect a reduction in the dynamism of the economy. In addition, it has to be remarked that at this moment the Americans are suffering the consequences of the financial crisis that spread for all over the world in 2008. On the other hand, the country has a great potential to conquer these challenges. The United States has technologies to increase the production of energy from thermonuclear plants and could also boost the energy efficiency of its automobile fleet (the biggest in the world). Besides, deeper cuts could be achieved if the U.S government encouraged the use of alternative energy sources (for example, solar, wind and biofuel) and invested in the adoption of more efficient and less pollutant processes in its economy.68

The United States might find, in the Obama administration, new solutions along with the international community for solving environmental problems. In an interview to the Folha de S. Paulo on November 18th, Daniel Esty, member of the Obama’s team of energy and environmental affairs, said that the USA will lead the discussions after-Kyoto: “there’s no possibility of well-succeeded environmental cooperation without the participation of the United States”.69 It is important to take into account that the country understands that reductions of greenhouse gas emissions should not be restricted to developed countries, because emergent countries, with their good economic performance, have been raising their emission levels in a large scale.

Democrats are interested in advancing multilateral negotiations to join the international community on a common project of sustainable use of natural resources. However, since agreements have to take into account the interests of the national society and both public and private sectors, compromise might be difficult to be achieved.70

As argued by Eduardo Viola,71 the discussions for the conclusion of an agreement have been hampered by divergent positions among the international community: the European Union and Japan, which have internal commitments towards reduction, other developed countries that do not and the developing world are some of those groups. However, the Obama administration may produce a dramatic change in the American position, and that would affect all the rest of the world”72

67 See: http://www.mudancasclimaticas.andi.org.br/node/567
68 Ibidem
69 See: http://www.mudancasclimaticas.andi.org.br/node/828
70 See: http://www.mudancasclimaticas.andi.org.br/node/567
71 Professor of International Relations at the University of Brasilia
72 See: See: http://www.mudancasclimaticas.andi.org.br/node/567
Europe

The European Union (EU) accounts for about 15% of world’s carbon emissions. The bloc continually reaffirms its commitment to the objectives, principles and purposes of the UNFCCC and the Kyoto Protocol. It urges the developed countries to show strong leadership and give the example, by keeping mitigation commitments and providing financial support and technology transfer to developing countries. Besides, the EU has committed itself unilaterally to a 20% emission cut from 1990 levels by 2020.

As the first commitment period of the Kyoto Protocol expires in 2012, the EU expects that an effective and comprehensive agreed outcome is produced at COP-15. Crucial elements of the bloc’s proposed strategy for the period post-2012 are the cost-effectively reduction of greenhouse gas emissions, investment in alternative sources of energy and the continued use of market-based mechanisms such as emissions trading. In addition, the EU considers it vital that all major world emitters, including the United States and China, are drawn into a binding emission-cutting scheme.

For several years, the EU’s strategy has been focused on reducing emissions and persuading international partners to commit to the Kyoto Protocol. However, the increasing number of extreme weather phenomena has drawn attention to the fact that an effective long-term strategy to deal with global warming needs to deliver also on adaptation.

Internally, efforts are being made to approve the European Commission’s purpose of a fund for Eastern and Central European states, which are expected to suffer the most from the transition to a low-carbon economy. Poland, for instance, relies on coal for over 90% of its electricity. Currently, most of Eastern and Central European countries are below their Kyoto targets, but this is due to the restructuring of their economies. In the future, their carbon emissions are likely to raise, a tendency that is already being observed in the last few years.

Other developed countries

Developed countries, namely those who have a developed economy in general, generally take a very positive attitude and engage in protecting the environment. Again, their concern seeks to focus on dealing with climate change and on the development of mechanisms of adaptation and mitigation.

On the other hand, those countries usually argue that they really “must make greater efforts to reduce emissions of gases that cause global warming. However, the big emerging economies such as China, India and Brazil also have to contribute”, according to the Minister of Climate and Energy of Denmark, Connie Hedegaard.

74 See http://www.cop15.dk/en/servicemenu/News/AsiaAndEuropeFirmInFightingClimateChange.htm
75 See http://news.bbc.co.uk/1/hi/sci/tech/7136485.stm
76 See http://www.icecircle.org/europeandusa.htm
Norway, for example, even being considered the third less vulnerable country related to the problems derived from climate changes, is still a model in combating them. It requests by 2020, according to Prime Minister Jens Stoltenberg, to achieve the overall reduction equivalent to 30%, based on the index in 1990.

Japan is another key actor, not only because it holds the second largest economy in the world and accounts for nearly 4.6% of the global carbon dioxide emissions, but also because its efforts related to combating human-caused environmental problems are well known. Great investments in new technologies have been made, as well as cooperation between public and private sectors has been achieved when it comes to finding new ways of tackling environmental problems. However, those efforts do not seem to be enough even for the achievement of the commitments stated in the Kyoto Protocol, but it still defends greater efforts of the international community to achieve cooperation and has recently defended new commitments for the period beyond 2012.

Meanwhile, Canada and Australia, for example, are two developed countries very vulnerable to climate change. They have a large land mass and an incredible biodiversity, and now take similar positions on the face of environmental problems. Australia only joined the Kyoto Protocol in 2007, during the Bali Conference. According to its prime minister, Kevin Rudd, the country will, in its government, “act on climate change immediately.”

Meanwhile, Canada stated in 2006 that it “is committed to protecting the health and diversity of species, promoting energy efficiency and technology that would not harm the environment, as well as controlling and keeping its renewable reserves for the benefit of future generations.”

The Russian Federation

The country only ratified the Kyoto Protocol in November 2004, which allowed the agreement to come into force in February 2005. As an Annex I country, the Russian Federation is also obliged to limit its greenhouse gas emissions. However, it may not be seen as a big challenge, because its 1990 levels were still too high, due to its former inefficient and low-productive socialist economy. So, to achieve those levels again does not seem to be a big task. Nevertheless, that self-imposed constraint could still be harmful to economic growth if productivity was not achieved, which could suggest that the country would not be interested in engaging in other binding reductions that could hurt its economy.

In 2004 the Russian Federation accounted for 5.6% of the global CO₂ emissions. In 2007, the country was the second largest oil producer, holding big proven reserves

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79 According to a ranking prepared by the British Consultancy Risk Maplecroft.
80 http://www.mudancasclimaticas.andi.org.br/node/210
82 Idem.
83 Idem.
of the product, as well as of natural gas. Then, the exploration and exportation of energy resources are very profitable. Besides, Moscow uses its resources as a source of geopolitical power, since, for example, many European countries depend on them. As a result, the Russian Federation would oppose to any kind of restrictions on the use of fossil fuels.

Moreover, there are sectors in the Russian society that believe that global warming could make it possible to produce food in the regions that are too cold nowadays. Finally, with a high per capita carbon dioxide emission, the Russian society is developing fast, but its big, but low productive economy jeopardizes efforts that would face climate changes.

People’s Republic of China (PRC)

The PRC is one of the largest emitters of carbon dioxide in the world, not only because its economy is growing quickly, but also because its energy matrix is highly based on fossil fuels. Although it is one of the most polluter countries, the Chinese government has been emphatic in defending that the PRC must be treated as a developing country, so it could not bind rigid carbon-cutting targets.

Despite its rigid position and the lack of democratic political debate in the country, there is, in recent years, greater awareness of the government regarding the emissions, which can be shown by the fact that, in 2006, Beijing launched the 11th five-year Plan for Development of Renewable Energies (2006-2010), which aims to increase in 10% the participation of renewable energy in its energy matrix until 2010. The plan took into account the excessively high proportion of coal fuel in the Chinese energy matrix and the scarcity of gas and oil in the country. The plan also calls for the necessity of more investments in hydroelectricity, biofuel and other clean sources of energy.

Notwithstanding, some kind of change might be happening, since the Chinese government seems to realize now that the cost of failing to reduce the emission levels would be higher if it continued to stimulate the same old way of industrialization and did not invest in clean energy sources. Insisting on this model could also threaten the Chinese society, affecting its public health. Besides, the international community may no longer consume Chinese products, in an attempt to drive the country towards the adoption of a more productive and sustainable development, for example.

Thus, the Chinese government has started to change its environmental policy, although this may not be considerably reflected in its foreign policy, though there is, nowadays, a group of new Chinese political leaders which admit the problem of global warming and the PRC’s contribution to this process. As change is incipient, it is still too early to expect that the recently initiated changes could be reflected into a different position of Beijing’s in Copenhagen.

Developing Countries

86 http://www.mudancasclimaticas.andi.org.br/node/567
87 See: http://portuguese.cri.cn/101/2008/03/19/1@85476.htm
88 See: http://www.mudancasclimaticas.andi.org.br/node/567
Latin America and the emerging markets hold similar positions on climate change. As developing countries, they may be represented in general by the Group of 77 (G-77)\(^{89}\). The speech of the developing countries is that sustainable development is challenged by climate change. Its promotion depends on the integrated promotion of three pillars: social and economic development and environment protection. However, G-77’s priorities are focused on poverty eradication and social and economic development. Therefore, the discussion of a new protocol must take into account the principle of common but differentiated responsibilities.\(^{90}\)

Generally speaking, those countries are against the imposition of emission quotas to themselves. The G-77 also proposes that developed countries should take the lead in addressing the implementation gap by fostering capacity-building, transferring clean technology\(^{91}\), financing adaptation and mitigation measures in developing countries.\(^{92}\)

Mexico has a fossil fuel energy-based production and its emissions are caused mainly by population growth along with energy supply growth, economic development, and land use change. Mexico has begun to reduce deforestation rates, switch to natural gas, and save energy, reducing annual emissions growth. Besides it has signed many international agreements to deal with the climate change issue.\(^{93}\) Its position has been highly influenced by the United States and perhaps, with the election of Barack Obama, Mexico will be again as flexible to assume international commitments to curb emissions as it was during the Clinton administration.\(^{94}\) During the COP-14, Mexico considered halving its emissions below the 2002 levels by 2050, but it is not a binding commitment yet.

Brazil has a renewable energy-based production, and its main emissions come from agriculture and deforestation.\(^{95}\) In Poznan, the South American country promised a 70% reduction in deforestation by 2017. The Brazilian biofuel, which is made from sugar-cane, has been defended by the country as a clean alternative to fossil fuels and the most efficient way to produce ethanol. However, the Brazilian biofuel has been

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89 “The Group of 77 is the largest intergovernmental organization of developing states in the United Nations which provides the means for the countries of the South to articulate and promote their collective economic interests and enhance their joint negotiating capacity on all major international economic issues within the United Nations system, and promote South-South cooperation for development.” Available at: http://www.g77.org/doc/


91 According to Clean Edge, clean technologies stand for "an emerging sector that comprises a diverse range of products, services, and processes that harnesses renewable materials and energy sources, dramatically reduces the use of natural resources, and cuts or eliminates pollution and toxic wastes". They are also “competitive with, if not superior to, their conventional counterparts. Many also offer significant additional benefits, notably their ability to improve the lives of those in both developed and developing countries". See http://www.cleanedge.com/

92 Ibidem.

93 CHANDLER, William; SCHAFFER, Roberto et al. “Climate change mitigation in developing countries: Brazil, China, India, South Africa and Turkey”. Pew Center on Global Climate Change. 2002.

94 See: http://www.mudancasclimaticas.andi.org.br/node/567

95 VIOLA, Eduardo. “A América do Sul: perfil, desafios e oportunidades na economia e na política do aquecimento global"
criticized as well. The plantations of sugar cane are large, monocultural and would degrade the soil in the long run. Because these and other side effects are not accounted, one may wonder whether sugar cane-based biofuel is really a clean alternative.

Costa Rica is committed to achieve the Carbon Neutrality until 2021 through the development of market instruments designed to attract capital investments for carbon sequestration and biodiversity conservation. It also proposes more ambitious emission targets to the developed countries, along with El Salvador, Honduras, Nicaragua and Panama.

Poverty is still a great social and economic problem to emerging markets. There is a general understanding that economic growth is the only way to take more people out of it. Equity is one of their guiding principles – developing countries argue that because developed countries have been releasing GHG emissions for more than 200 years, they could achieve development and also are historically responsible for climate change. Emerging markets are not willing to undertake emission quotas, since they believe that binding commitments are a means to distract attention from developed countries historical responsibilities.

In Poznan, however, the emerging markets showed changes towards their traditional management of climate change. Although they are still not willing to undertake binding obligations, they seem to have stopped to blame the developed countries for causing all the climate change problems, leaving behind the idea that the developed alone should assume their historical responsibility, and expressed their willingness to curb emissions through the establishment of voluntary commitments. This is of great importance, considering that developed countries stated that they would not assume deeper commitments if the developing countries did not have any obligations towards the climate change mitigation and adaptation efforts. It is now even more reasonable to ask for deeper GHG emission reductions and more international funds to deliver answers to climate change.

It is important to stress that emerging markets are being pressured by their populations about the climate change issue. Recently, only Turkey is not part of the Kyoto Protocol, its emissions are climbing principally because of energy-intensive, inefficient industries under government control with subsided energy. Domestically it has been implementing environmental regulations, yet it is not willing to accept binding emission targets so its economic growth would not be put at risk.

India’s growth in GHG emissions was reduced through economic restructuring, enforcement of existing clean air laws and renewable energy programs. As in the other two major emerging markets – Brazil and China –, efforts are clearly concentrated on the economy and few resources are directed to mitigation and adaptation measures. However, in India there is an important environmental movement which, along with its society, questions the government’s negligence towards the environment. The

96 See http://cglobal.imn.ac.cr/eng_estrategia.asp
98 See http://www.mudancasclimaticas.andi.org.br/node/828
100 See http://www.mudancasclimaticas.andi.org.br/node/567
country has launched in 2008 a National Climate Change Action Plan that establishes solar energy and energy efficiency as priorities.\(^{101}\)

Indonesia’s GHG emissions are increasing and come mainly from deforestation. It is an ironic fact, since the deforested areas are mainly designed to the culture of palm for the production of biofuel. Because Indonesia is a poor country and cannot afford mitigation or adaptation measures, it will probably not curb its emissions, unless it receives international financing to those measures.\(^{102}\) Besides, the country, which comprises the largest archipelago nation-state in the world (nearly 13,700 islands), is a global player since it shares a high proportion of the global carbon emissions (around 1.5%).

Emerging markets do have the resources to fight climate change. However, the Least Developed Countries (LDC) have little contribution on GHG emissions, are the most vulnerable ones and are too poor to defend themselves from the impacts. The first impacts of climate change have been on dry-land agriculture, tropical forests, subsistence fishing. Climate change has also eroded coastlines and spread pests and water-borne diseases. The LCD need financing to implement mainly adaptation measures, which could be solved by an adaptation fund. They demand from developed countries help to cope with climate changes and a 90% reduction of GHG emissions below 1990 levels.\(^{103}\)

**Middle East**

The combination of climate change, water scarcity and population growth is particularly worrying in the Middle East. According to a report of Friends of the Earth Middle East,\(^{104}\) climate change could increase instability in the region, with spill-over security consequences for the rest of the world. The likeliness of reduced precipitation, water shortages, droughts, floods and rising sea levels in the Middle East may exacerbate tensions over water, threaten poor and vulnerable populations, lead to mass migration and jeopardize the region’s climate-sensitive agriculture, as well as its economic activities in urban coastal zones which are likely to be flooded.\(^{105}\)

The Middle East and the North of Africa account for only 4.5% of world’s greenhouse gas emissions. Despite that, the region presents one of the fastest rates of growth in emissions, due to an inefficient use of energy and the high carbon content of its energy basis.\(^{106}\)

Environmental protection is not a priority on the agenda of Arab governments.\(^{107}\) Mitigation efforts demand that less oil, coal and gas are consumed, which threatens great Arab oil-producing countries due to their high reliance on revenues from fossil


\(^{102}\) PAMUKCU, Konuralp. 2008.

\(^{103}\) “Adapt or die”. The Economist. Available at: [http://www.economist.com/world/international/displaystory.cfm?story_id=12208005](http://www.economist.com/world/international/displaystory.cfm?story_id=12208005)


\(^{105}\) See [http://go.worldbank.org/E3P7R52200](http://go.worldbank.org/E3P7R52200)

fuel exports. Saudi Arabia, the world’s biggest oil exporter, is accused of hindering climate negotiations and presenting poor national and international climate policies.\(^{108}\)

Nonetheless, a shift to alternative sources of energy does not necessarily mean an economic disaster to Middle East oil producers. Much of the region is rich in natural resources (for example solar energy) and can play an active role in the solution. Exploring renewable energy in the Middle East will not only help dealing with climate change, but also will provide alternative sources of income, away from oil production and traditional agriculture.\(^{109}\)

**Alliance of Small Island States (AOSIS)**

An "island country", also called a borderless country, is an independent State whose territory is composed of an island or group of islands. Some of them are seriously threatened by global warming, mainly by increasing sea level. The IPCC's estimations are quite alarming: it is estimated that sea level will raise between 18 to 59 centimeters in this century. This will submerge some of the islands, causing great inconvenience to their people. Among those island countries that could suffer serious consequences of global warming are Tuvalu, Kiribati, Palau, Indonesia and The Maldives.

Three Pacific Islands, Tuvalu, Kiribati and Palau are pointed out by many experts as the most likely to disappear within the next 20 years\(^ {110}\). Tuvalu, with only 9,561 inhabitants\(^ {111}\), is already feeling the effects of global warming. Every year, the population decreases due to increasing immigration to neighboring countries such as New Zealand. Thus, the government began clamoring for provisions, especially among developed countries - the main polluters.

Kiribati, an archipelago made up by 33 islands, is also seriously threatened by climate change. Its president, Anote Tong, asked in June 2008 the international community to help the people of Kiribati, due to serious threat of the country to disappear. Palau, with more than 350 islands, has its president, Tommy Remengesau, considered by the Time magazine as one of the "heroes of the environment". According to the Time, “Remengesau says that climate change is like a dark cloud over his people”\(^ {112}\).

The Maldives are located in the Indian Ocean; however they also suffer from the consequences of global warming. The country, in which more than 300,000 inhabitants live, has the closest coast to the sea level in the world - its highest altitude is two meters above the sea level\(^ {113}\), so it is also one of the most concerned countries about sea level rising. In the last century, sea level in parts of the archipelago rose almost 20 cm, which led the government to plan the purchase of a new territory for its people\(^ {114}\).
The African nations, which are low greenhouse gas emitters, may face great challenges derived from climate changes, since they are vulnerable to natural disasters and have low economic and social capacity to tackle its own problems. Food and water shortages gain different proportions in the poorest regions, but the continent as a whole is prone to be affected by climate uncertainties (such as droughts, floods), which have terrible social and economic consequences. Therefore, generally, the countries of the continent claim that they are not the ones with the best means to tackle climate change; instead, they call for adaptation help from the developed world, which should be engaged in seeking the higher cuts of greenhouse gas emissions.

Agriculture is the most important economic activity in the majority of the countries, but it still needs technological means which would avoid instabilities caused by climate changes. Moreover, the governments suffer from the lack of adequate means of tackling environmental problems, and the widespread poverty makes the consequences harsher.

Combating this situation of vulnerability is a must for the majority of sub-Saharan countries, and that is what they usually claim by asking for help from developed countries in international negotiations, in which their voices are rarely properly heard. Countries such as the Democratic Republic of the Congo, which hold a huge biodiversity, do not possess appropriate means of preserving it. Nigeria has a similar situation, despite the fact that oil exports revenues largely account for its economy.

Countries in the North have economies that mainly depend on oil and gas production and exportation. Then, their political and environmental positions are similar to those of the Middle East countries, for which the revenues from fossil fuels exportations are an essential part of the economy. In spite of this fact, countries as Algeria and Libya are also prone to environmental problems, such as desertification. Egypt is also in the North, but its economy is highly agriculturally dependent. Then, its economic activities, as well as the majority of its population, lie in the regions near the Nile River and the coastal zones, which are much more vulnerable to instabilities.

Finally, South Africa has a different position from other countries, since its economy is more developed and is intensively based on a fossil fuels matrix, which makes the country a global player that holds around 1,5% of the global carbon emissions. However, it also faces poverty and other risks derived from climate uncertainties. The country has been acting in accordance with China, India and Brazil in order to reject future commitments, since the country is a big polluter.

Annex I: Concepts

Adaptation: it can either be anticipative or reactive measures to alleviate the adverse impacts of climate change

115 See more about the concept of “vulnerability” at the end of this guide.
116 http://www.africaaction.org/docs01/clim0102.htm
117 http://www.mudancasclimaticas.andi.org.br/node/568
a) Actions taken to help communities and ecosystems cope with changing climate conditions.\textsuperscript{118}

b) Adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. Various types of adaptation can be distinguished, including anticipatory and reactive adaptation, private and public adaptation, and autonomous and planned adaptation (IPCC TAR, 2001a).

**Carbon Market**: it is a mechanism that allows countries to trade the reduction of carbon emissions. It can be either mandatory or voluntary. In a voluntary carbon market, an emitter of carbon volunteers to reduce its carbon emissions by purchasing carbon allowances from another country or company, which use the money in a project that will diminish the carbon concentration at the atmosphere. Example of projects: planting trees, investment in renewable energy generation.

In a mandatory carbon market, the emitter has a carbon emission limit. The emitters are given allowances, so they can come up with a way to conduct their business within their limitations. This creates a market for these allowances, where lower emitting entities can trade their extra allowances to those who need the additional capacity, hence the term "cap-and-trade" carbon markets.\textsuperscript{119}

**Legally-binding**: “it simply means that one agrees with the terms under a written or spoken contract to behave in certain ways. The terms and conditions of such a contract can either prohibit or define appropriate behavior under the agreement. Violation of terms in a legally binding agreement can either void the contract, or cause legal repercussions”.\textsuperscript{120}

**Mitigation**: measures to limit the GHG emissions, and thus its concentration, in the atmosphere in order to avoid adverse associated impacts. It may also reduce, eliminate or compensate for adverse environmental effects (Expert Meeting on Climate Change Adaptation and Mitigation - FAO, 2008).

**Principle of Common but differentiated responsibilities**: The Rio Declaration (1992) provides the first formulation of this principle, which includes the idea of common responsibilities “which arises from the concept of common heritage and common concern of humankind, and reflects the duty of States of equally sharing the burden of environmental protection for common resources; the second (idea) is the differentiated responsibility, which addresses substantive equality: unequal material, social and economic situations across States; different historical contributions to global environmental problems; and financial, technological and structural capacity to tackle those global problems. In this sense the principle establishes a conceptual framework for an equitable allocation of the costs of global environmental protection.”\textsuperscript{121} Or, in a nutshell: all countries share the obligation to protect environmental resources, but it is

\textsuperscript{118} http://unfccc.int/adaptation/items/4159.php
\textsuperscript{119} (http://www.renewableenergyworld.com/rea/news/ate/story?id=52451
\textsuperscript{120} http://www.wisegeek.com/what-does-legally-binding-mean.htm
\textsuperscript{121} http://www.eoearth.org/article/Common_but_differentiated_responsibility
also considered the circumstances of each country, its contribution to the evolution of the problem and what it can do about it.\textsuperscript{122}

**Sustainable Development**: formally, it means "the development that meets the needs of present generations without compromising the ability of future generations to meet their own needs" (CMMAD, 1987). But also, it is an attempt to conciliate economic growth, human development and preservation of the environment.

**Vulnerability**: “(it) may be defined as an internal risk factor of the subject or system that is exposed to a hazard and corresponds to its intrinsic predisposition to be affected, or to be susceptible to damage. In other words, vulnerability represents the physical, economic, political or social susceptibility or predisposition of a community to damage in the case a destabilizing phenomenon of natural of anthropogenic origin”.\textsuperscript{123}

Annex II: distribution of Greenhouse gas emissions in the world\textsuperscript{124}

Annex III: distribution of Carbon dioxide emissions in 2000\textsuperscript{125}

\textsuperscript{122} http://www.cisdl.org/pdf/brief_common.pdf
\textsuperscript{123} CARDONA, Omar D. The need for rethinking the concepts of vulnerability and risk from a holistic perspective: a necessary review and criticism for effective risk management. Available at: www.desenredando.org/public/articulos/2003/nrcvrfhp/nrcvrfhp_ag0-04-2003.pdf
\textsuperscript{124} http://www.worldmapper.org/display.php?selected=299
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Veja as principais resoluções da conferência da ONU sobre clima

What does legally binding mean?


Worldmapper
