



EUROPEAN UNION
**ALTERNATIVE ENERGIES
FOR SUSTAINABLE
DEVELOPMENT**

www.movenu.org.ve

Dear Delegates,

Welcome to MOVENU 2011, my name is Simonetta Spavieri and I will serve you as the Secretary General for this Ninth Edition that we have named “Voluntaries for Peace” convinced of the duty that youth has towards the achievement of a better world. I am honored to oversee the contents of MOVENU next to the Academic Coordinators, Maria Pinzón, Jacobo Cordido y Daniella Nacad. Together, we have committed to ensure the academic excellence of MOVENU, to which we believe necessary different conditions given by the delegates and the Dias. From you delegates, we hope to find commitment on being proactive speakers of your thoughts, smart creators of solutions and forgers of solid consensuses. From the Dias we shall offer efficient and non obstructive moderation, dedication, knowledge of agenda topics and the following study guide which shall serve to you as a first immersion in the topic.

The study guide is set in different sections that can help to understand the committee’s agenda. Firstly, a section regarding the mandate and functions of the committee, then the topic issue explained with its background and different aspects. Finally, a section related to the different bloc positions can orientate you to understand your official position and role in the committee and the section “questions a resolution must answer” should allow you to understand the kind of solutions that are expected as a result of the discussion you will be part of. Another document that as a delegate you should refer to is the General Rules of Procedure of MOVENU 2011 and those specific rules for specialized committees, all of these available on our website.

We would like the result of this academic and social experience to be the renewal of commitment from us youngsters in serving as tools for change of our social realities. The invitation is to prepare to the debate in your committee of MOVENU 2011 with the awareness that to confront the problems of our generation it will be required the same level of preparation, as well as your interest and actions. You have demonstrated to be pre-occupied by entering this event, we wish to see us all occupied in finding solutions during the days of MOVENU and occupied afterwards in applying our strength in voluntary initiatives that can contribute to the development of our country and the world.

We are available to assist you during your preparation to MOVENU through the official e-mails for each committee, academic coordinator and the Secretary General, as well as other digital media set by each Dias for your committee.

Specifically for your committee: eu.movenu2011@gmail.com, ca.dnacad.movenu2011@gmail.com and through Facebook: European Union MOVENU 2011

Wishing to meet you all in October,

Simonetta Spavieri
sg.movenu2011@gmail.com

Dear Delegates,

Welcome to the European Commission! My name is Angelica Ortiz and I am very excited to be your Chair. First, let me tell you a little more about myself: I am a student at UCV pursuing a degree in International Studies. When I was in high school I started to participate in Models of United Nations, having the chance of going to several national and international MUNs. During that time I found out that my passion lies in contributing to solve the greatest international concerns, which is why in my first year in university I decided to be part of the delegation of WORDLMUN Singapore 2011 (where I had the chance of participating this year). Currently I'm a member of the delegation preparing for WOLDMUN Vancouver 2012. In my spare time I enjoy hanging out with my friends while enjoying a nice sushi meal or movies as well as reading a good book.

Soon we will find ourselves discussing one of the major concerns in the world: How to achieve Sustainable Development? In the words of Paulo Coelho in his portrait of today's society, "The Winner is Alone": *"Today, it seems that the central point of human concerns -despite the wars, the hunger in Africa, the terrorism, the lack of respect for human rights and the arrogance of some developed countries- is how can we save our poor Mother Earth of threats that have been created by the society... is to save the planet! "*

Given this, we will be discussing this issue in one of the most powerful organs of the European Union, in the creator of its policy. This is a huge advantage since the European countries are pioneers in sustainability; nevertheless it is a great challenge because it carries within the responsibility of going beyond what has been done, to find new initiatives to solve this problem. The future of the climate action taken by the Union and the possibility of achieving the goals of sustainability lie in your hands.

Furthermore, as the conference nears, I would love to hear from you if you have any questions about the committee, procedures or just if want to introduce yourself. I very much look forward to meeting all of you next October!

Sincerely,

Angelica Ortiz

Chair, European Commission MOVENU 2011

The European Commission

The European Union (EU) is a unique economic and political partnership between 27 European countries created after World War II in Brussels. Since its creation it has delivered half a century of peace, stability, and prosperity, helped raise living standards, launched a single European currency, and is progressively building a single Europe-wide market in which people, goods, services, and capital move among Member States as freely as within one country (EUROPA, 2011,1)

It is an evolution from the European Coal and Steel Community (ECSC) and the European Economic Community (EEC) created in the 50's. Nowadays the EU operates through a hybrid system of supranational independent institutions and intergovernmental made decisions negotiated by the member states (CIA, 2011). Their institutions include the European Commission, the Council of the European Union, the European Council, the Court of Justice of the European Union, and the European Central Bank.

The European Commission (EC) is one of the main institutions of the EU, it represents and

upholds the interests of the EU as a whole. It drafts proposals for new European laws and manages the day-to-day business of implementing EU policies.



Berlaymont Building, Headquarter of the European Commission

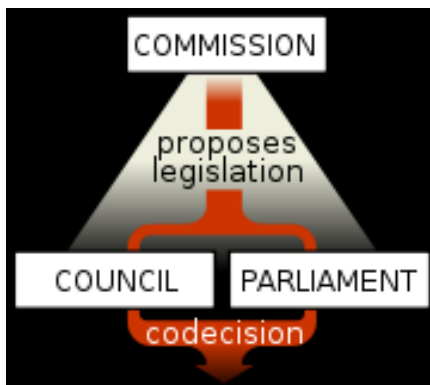
<http://www.europeword.com/blog/europe/european-commission/>

The EC is governed by 27 commissioners, one from each EU country. Each of these commissioners works directly with the EU and therefore (s)he is a representative of the Union. For achieving the goals of the EC, each commissioner is in charge of specific fieldwork (such as economic affairs, environment, humanitarian aid, etc) and has a broad staff to work in that matter. At the same time all the commissioners meet weekly in the “College of Commissioners” to discuss the progress done in each field and the policies that the Union will implement.

The EC is the molder of the EU policy since it is in charge of:

1. Proposing new laws: The EC has the 'right of initiative', which means that it can propose new laws to protect the interests of the EU and its citizens in matters that cannot be dealt with effectively at national, regional or local level (EUROPA, 2011,3). At this point, it is important to highlight the ordinary legislative procedure of the EU established in the Article 294 of the “*Treaty of the Functioning of the European Union*” (Treaty of Lisbon). First, the laws are proposed by the Commission (the only institution that may put forward legislative proposals) after an extensive consultation process that takes into consideration the opinion of the national parliaments. Then, the proposal is forwarded simultaneously to the European Parliament and to the Council for being reviewed and approved by a co-decision

2. Managing the EU's budget and allocating funding: The Commission sets broad long-term spending priorities for the EU in the EU 'financial framework' and draws up an annual budget that must be approved by the Council and Parliament.
3. Enforcing EU law: As 'guardian of the Treaties', the Commission checks that each member country is applying EU law properly. Also, it suggests proper amendments to improve the previous treaties if necessary.
4. Representing the EU internationally: The Commission speaks on behalf of all EU countries in international bodies and negotiate agreements between the EU and other countries.



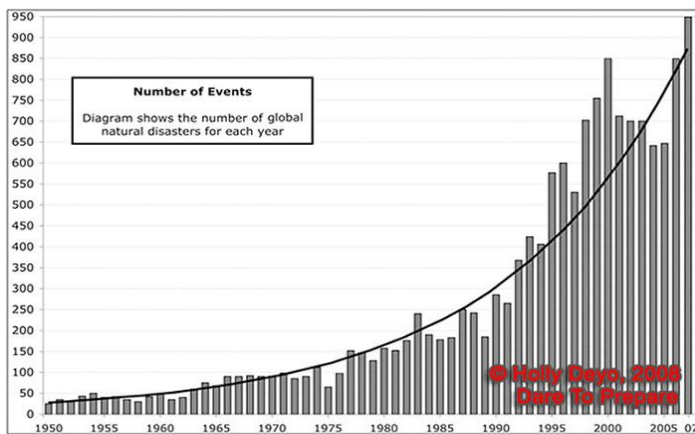
(EUROPA, 2011,2)

Ordinary legislative procedure (Legislative Triangle)

Statement of the Problem

There is no denying that Climate Change has already begun and that it poses one of the greatest threats on earth to humanity. In the last century, the average temperature of the planet has increased in 0,6 C and in Europe alone, it has risen by 1 C (Directorate-General for Environment, 2006: 7). This has caused several problems such as the rise in number of natural

catastrophes (mainly floods and hurricanes), which only in the last decade have triplicate its number, as well as the constant heat waves such as the scorching summer of 2003 that caused the premature death of 2000 Europeans and more than 10000 millions of Euros of losses in agriculture (Directorate-General for Environment, 2006: 9).

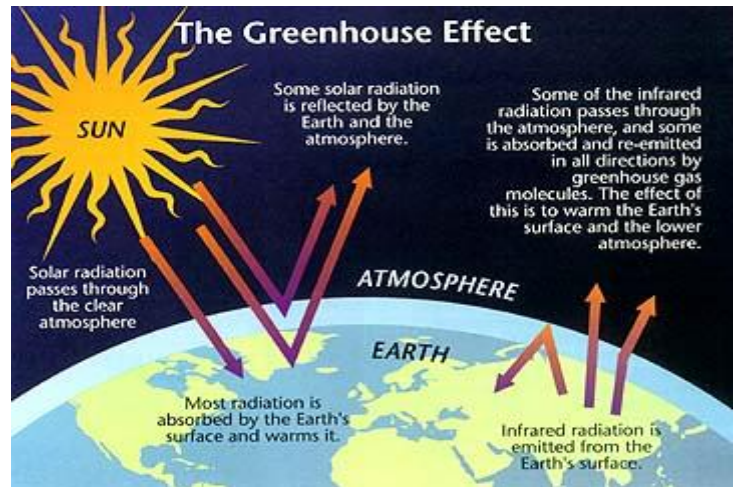


Graphic showing increased in the number of global natural disasters since 1950 to 2007

http://standeyo.com/NEWS/08_Earth_Changes/080510.diz.bogus.story.html

Climatologists expect this trend of global warming to accelerate due to the greenhouse effect, increasing global average temperature between 1.4 C and 5.8 C by 2100 and, in Europe, between 2 C and 6.3 C (Directorate-General for Environment, 2006: 7). Though they may appear relatively small in quantity, changes in temperature over the last 8000 years have been less than 1 C per century. This stability has been key to the development of

the societies and ecosystems that we know today, therefore any increase beyond that point could potentially put in jeopardy the evolution of humanity as we have known.



The Greenhouse Effect

http://www.fas.org/irp/imint/docs/rst/Sect16/Sect16_2.html

If measures are not taken to curb the increasing temperatures below 2 C, change will be irreversible and its consequence will be catastrophic (DC-CLIMA, 2008). The extinction of one third of the species of the earth by 2050, melted ice caps, the disappearance of glaciers, floods caused by rise of sea level (that would put at risk some 70 million people in Europe alone), the increase of the frequency and magnitude of weather events, the expansion of tropical diseases like malaria (endangering more than 210 million people), the scarcity of food and water, the desertification of the lands, etc.; are some examples of what the world will face

(Directorate-General for Environment, 2006:9).

Map showing the accelerated melting of the poles, since it shows the changes in the surface of ice from 1979 to 2007. For 2007 the arctic ice in the North Pole has reduced more than 10%.



<http://2.bp.blogspot.com/TYdKAWWATXE/TYLG0GuZ2iI/AAAAAAAAAAXGxI/xwRK9x1V75E/s1600/2.jpg>

Since the world took notice of the terrible consequences of climate change, it has addressed the issue by creating initiatives such as Sustainable Development and fighting directly the causes of global warming: the emission of greenhouse gases. But reducing our emissions of greenhouse gases will require investment and modification of the way how we currently produce and use energy. The EU is convinced that as a major economy, it has the duty of leading by example, thereby placing itself at the forefront of the fight against climate change, with an energy policy that involves the use of alternative energies to reduce the high dependence on contaminant

energies as the fossil fuels (DC-CLIMA, 2008:

The use of carbon and fossil fuels is specially damaging



for the environment since its production generates a great number of greenhouse gases

<http://scienceclassaipcv.blogspot.com/2010/09/vocabulary-14.html>

History of the Problem and Past International Actions

It seems that Sustainable Development has always been part of our international agenda, but that has not been the case. Climate Change had been a serious threat from many centuries ago. The problem of pollution (and thereby Climate Change) started with the growth of humanity and its constant quest for new energies to sustain its development. An example of this is the “horse carts” which were one of the greatest contributors to Global Warming during the 1800’s. Pollution generated from animal dung in the biggest cities coupled with the growth of population was equivalent to the CO₂ emission of today’s motor vehicles. Therefore, what really enhanced during the new century was the

awareness of the problem due to the high impact that it had caused.



Horse Cart of England (1853)

<http://www.thamesweb.co.uk/windsor/windsorhistory/curfewsilhouette.html>

International awareness regarding climate change and pollution started in 1963 when a group of nations, led by France, established the International Biological Program to coordinate large-scale ecological and environmental studies. This institution was the predecessor of all environmental research centers (National Academy of Science, 2011).

Four years later the first nonprofit environment organization was established in the United States: The Environmental Defense Fund. This organization was known for its work on issues like global warming, ecosystem restoration, oceans, and human health. Today it has offices all around American territory and the European Union.

Same phenomenon happened in Italy when "The Club of Rome" (CoR) was created the same year as the EDF. The CoR describes itself as a group of world citizens, sharing a common concern for the future of humanity (Green Agenda, 2011). It initiated as an informal association of independent leading personalities from areas such as politics, business and science, men and who were committed in contributing with long-term, systematic interdisciplinary and holistic solutions, thinkers interested in contributing in a systemic interdisciplinary and holistic manner to a better world; starting with a transformation of humanity into a global interdependent sustainable society, based on respect and reverence for the Earth (Club of Rome, 2011). Definitely the 1960's set the beginning of the environmental era.



Original logo of "The Club of Rome"

<http://aftermathnews.wordpress.com/2008/08/10/the-firstglobal-revolution-of-the-club-of-rome/>

A decade later, environmental progress was little less fast but it had great institutional advances with the creation of the first green

parties and the creation of the first environmental ministries in governments. On the 22 of April, in 1970 the first Earth Day was celebrated and the well known Non-Governmental Organization Greenpeace starts up (Green Peace, 2011). Also the Club of Rome publishes “The Limits to Growth”, a book which stresses the importance of the environment, and the essential links with population and energy, marking a milestone in the path of Sustainable Development (European Environment Agency, 2010).



First Environmental Day 1970

http://www.eoearth.org/article/Earth_Day_%2770:_What_It_Meant

Finally, the United Nations began its participation in environmental care with the adoption of the “Declaration of the United Nations Conference on the Human Environment” at Stockholm (United Nations Environment Programme, 1972), which was

the prelude to the United Nations Environmental Program, the main forum within the system for environmental discussions.

From the very beginning of the world's fight against climate change, Europe stood at the forefront with its innovative programs and institutes. For example, in 1971 the International Institute for Environment and Development (IIED) is established in Britain with a mandate to seek ways to make economic progress without destroying the environmental resource base and in 1973 the European Environmental Action Program was launched as the first attempt to synthesize a single environmental policy for the European Economic Community (EEC) ((European Environment Agency, 2010).

The 1980's came with high peaks but also with great inconveniences and disappointments. During 1982 the United Nations World Charter for Nature was published. This proclaimed five "principles of conservation by which all human conduct affecting nature is to be guided and judged" (General Assembly of the United Nations, 1982).

Moreover in 1983 one of the main advances in the fight against Climate Change and the struggle for a fairer world was made. The term Sustainable Development was created as the result of many years of research, discussion and negotiation within the World Commission on Environment and Development (established under the General Assembly A/RES/38/161), better known as “The Brundtland Commission” because of its chairman Gro Harlem Brundtland (former Prime Minister of Norway).



Gro Harlem Brundtland addressed to the UN General Assembly

http://ekstranett.innovasjon Norge.no/templates/Page_Meta____58420.aspx

The Commission defined Sustainable Development as - development that *“meets the needs of the present without compromising the ability of future generations to meet their own needs”* (UN General Assembly, 1987).

But not everything was that good. In 1985 the British Government discovered the Antarctic Ozone Hole and one year later the worst nuclear tragedies since the atomic bombs were launched occurred, Chernobyl. This generated fear in developed countries who were trying to innovate and create clean mechanisms of



energy like nuclear power.

Building destroyed after the Accident of Chernobyl

<http://latrola.net/blok/chernobyl-hoy-fotos>

Finally with the coming down of the Berlin Wall and the “Iron Curtain” at the beginning of the 90’s, a new perspective of the world was given to us and as a consequence of this globalization was born.

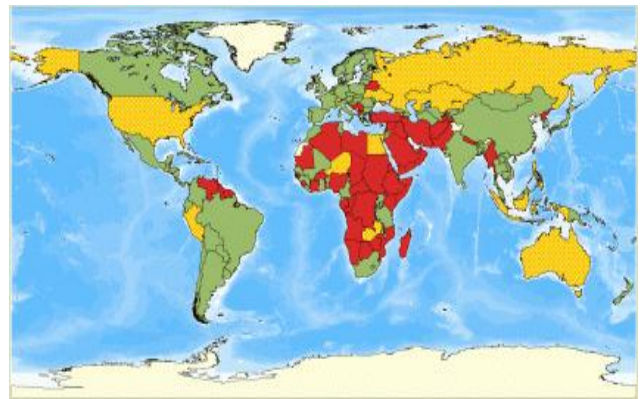
In the 90’s the eastern European countries began to voice their preoccupation alongside the rest of the continent. Accordingly, the “Regional Environmental Center for Central and Eastern Europe” was established as an

independent, non-profit organization to assist non-governmental organizations, governments, businesses, and other environmental stakeholders to fulfill their role in a democratic, sustainable society. Now every single country within Europe was moving in the same direction.

Parallel to this, the first global forum for sustainability, where leaders from all around the world were capable to express their country's opinions and solutions, was held at Rio de Janeiro in 1992: The United Nation Conference on Environment and Development (UNCED). It resulted in the publication of Agenda 21, the Convention on Biological Diversity, the Framework Convention on Climate Change, the Rio Declaration, and a statement of non-binding Forest Principles (Earth Summit, 1997).

A few years later the UN General Assembly review of the Earth Summit's progress revealed the little progress that has been made in implementing Agenda 21 and without significant new commitments. Even though the international community has been working hard in order to build a new sustainable world, the climate remains a threat to humanity because of the human action. In 1997 delegates to the UN Framework Convention on Climate

Change Third Conference of the Parties (COP-3) signed the Kyoto Protocol. This document sets goals for greenhouse gas emission reduction, emissions trading and the clean development mechanism for developing countries (Third Conference of the Parties: 1997)



Map of the countries that have ratified or signed the Kyoto Protocol as of June, 2003. Green: Ratifying countries. Yellow: Those countries that have signed, but not ratified. Those countries that have neither signed nor ratified the agreement are depicted in red.

<http://www.pbs.org/saf/1404/features/publicpolicy.htm>

Our world remains hard at work on national and regional plans and frameworks that can improve the quality of life of those who need it the most. In this sense the European Union has a wide legislation on the matter that goes from major frameworks to community projects that involves directly the society.

Moreover, the EU firmly believes that a common European Energy Policy will achieve

within EU members a greater commitment and, therefore, greater results. So it has worked in creating this single policy through several documents such as the “Green Papers”, which aim to set guidelines regarding the policy of the Union and create debates. From these green papers the “*European Strategy for Sustainable, Competitive and Secure Energy*” of 2006 is a milestone which proposes a common European energy policy that enables Europe to face the energy supply challenges of the future and the effects that these will have on growth and the environment (EC, 2006). Taking this document as a base, in 2007 the EC published a communication called “*An Energy Policy for Europe*”, which summarized the strategy that the EU proposes to address the problem of climate change (EC, 2007). This policy consists of six pillars and each one of them has been further developed in other legislations.



Giant EU energy flag outside EU Spring Council:
Grassroots support for climate-friendly energy as EU
leaders seal energy future in 2007.

http://www.foeeurope.org/press/2007/March9_JK_energyflag.htm

The first pillar is to “*Establish the Internal Energy Market*”. A competitive, integrated, interconnected and public market remains a crucial need for the EU members and, thus, for EU policy; to ensure that consumers have the opportunity to choose a supplier, at a fair and competitive price. Regarding this point in particular it is important to highlight the “*Decision No 1639/2006/EC of 2006 establishing a Competitiveness and Innovation Framework Programme (2007 to 2013)*” which supports measures to strengthen the competitiveness and innovation capacity in the European Union (Official Journal of the European Union, 2006).

The second pillar, “*Ensure a Secure Energy Supply*”, is related to the first and it is aimed to minimize the EU's vulnerability concerning imports, shortfalls in supply, possible energy crises and uncertainty regarding future supply. This is also very close to the objectives of energy efficiency and renewable energy proposed by the third pillar: “*Reduce Greenhouse Emissions*”. Energy accounts for 80% of all greenhouse gas emissions in the EU therefore for reducing the greenhouse and fight against climate change, the EU must change its ways of producing energy; in other words, reducing greenhouse gas emissions involves using less energy and using more clean energy. (EC, 2007,3).



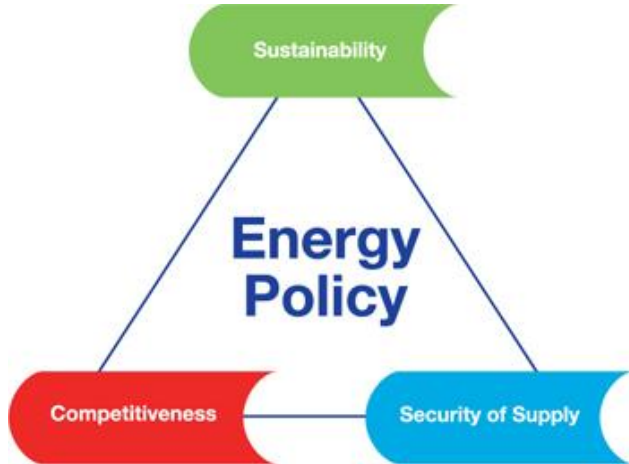
Graphic showing some of the Renewable Energies

<http://www.hamiltoncentral.org/webpages/jbossard/renewable.cfm>

In the path for accomplishing the second and third pillar there are three major legislations that are needed to be pointed out. In first place there is the Communication from the Commission, of the 10 of January, 2007, entitled: *"Limiting Global Climate Change to 2 degrees Celsius - The way ahead for 2020 and beyond"* that recommends a package of measures to limit global warming at the EU and international levels (EC, 2007,2). There is also the *"Action Plan for Energy Efficiency (2007-2012)"* aimed at achieving a 20% reduction in energy consumption by 2020 by implementing measures that improve the energy performance, and the *"Renewable Energies Roadmap"* that assesses the share of

renewable energy in the energy mix and the progress made in this area, as well as the target of producing 20% of total EU energy consumption from renewable energy sources by 2020 (EC, 2007,3).

On the other hand the fourth pillar of the Energy Policy is "Develop Energy Technologies". Energy technologies play a central role in offering both competitiveness and sustainability in the energy sector while increasing security of supply. Therefore in this field the Commission proposes an outline for a *"European Strategic Energy Technology (SET) Plan"* which will cover the entire innovation process, from the initial research to the entry onto the market; it presents a strategic plan to accelerate the development and deployment of cost-effective low carbon technologies (EC, 2007,4). This strategic plan will support also the *"Seventh Framework Programme for Research"*, which foresees a 50% increase in spending on research in the energy sector, along with the *"Intelligent Energy for Europe (IEE) Programme"* which helps to remove barriers, particularly administrative, which delay authorization and construction of new renewable energy projects, thereby slowing market growth (Directorate-General for Energy, 2010:23)



Brief of the goals of the EU Energy policy

<http://www.europa.eu/content/default.asp?PageID=413>

The next pillar of the EU policy is “*Consider the Future of Nuclear Energy*”. Faced with increasing concerns with regard to security of supply and CO₂ emissions, nuclear energy has the benefit of being one of the low-carbon energy sources offering the most stable costs and supply (EC, 2007, 3). Nevertheless the decision whether or not to use nuclear energy is made by Member States and currently there is no plan of action or framework exclusively about nuclear energy that applies to all the Union. The only regulation that exists is the “*European Nuclear Safety Regulator Group (ENSREG)*” which is an independent authoritative expert body composed of senior officials from national regulatory or nuclear safety authorities from all 27 member states in the EU (ENSREG, 2011).

Finally the six and last pillar is “*Implement a Common International Energy Policy*”. The EU is not able to achieve the objective of secure, competitive and sustainable energy alone. To do so it requires the involvement and cooperation of both developed and developing countries, energy consumers and producers and countries of transit (EC, 2007, 3). Therefore it is at the forefront of the global initiative leading by example, being an important part in the making of the greatest international laws (such as the Kyoto Protocol), constantly proposing new mechanisms to fight climate change (as the 30% reduction) and aiding others countries (particularly in Africa) to implement decentralized energy services which are low-cost, reliable and sustainable (EC, 2007, 2)

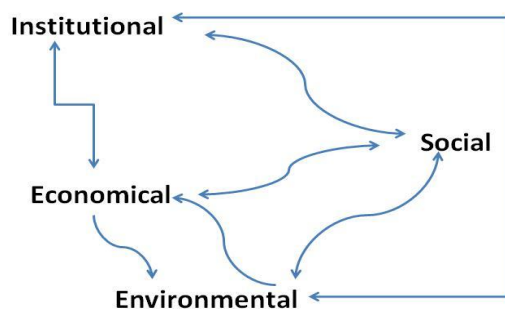
Components

The achievement of a sustainable development is a problematic that has many components since it does not only rely on the environmental aspect but, also, is related to the economical, social and institutional configuration of a nation; which makes it even harder to achieve, since it needs a cooperative work between all

of these fields.

To fully understand the broad scope of this problem it is important for us to recognize the closed relation of these four aspects and how they are connected to the climate change. For this, we need to evaluate the socio-ecological system (the system formed by the relations between the different components employed to analyze sustainability).

In the following graphic there are the four principal components (institutional, social, economical and environmental) of the system conformed by nature and society. These also correspond to the four basic categories stated by the Commission of Development and Sustainability of the United Nations (UNCSD) as the dimensions of sustainable development; and therefore, the four main issues that we should evaluate in order to develop public politics to reach a sustainable improvement of the quality of life of the population:



Relation between the different axis of the Sustainable Development: Socio-ecological System. (Cegarra, 2007:12)

Institutional: This subsystem contains the

formal and informal institutions of society (from law, regulations and politics, to political procedures and structures of power) (Cegarra, 2007:12). In other words, what this component of the sustainable development is trying to encompass is the importance of the decisions taken by the institutions of society to assure the well development of others subsystems. For example the arrows between the economical and institutional components represent the interrelations like economic and fiscal policy, and monetary flows. In this way, a flexible institutional system is important to the process of sustainability since it allows effective decision making when it is needed.

Flow of Power in the EU



http://news.bbc.co.uk/1/hi/english/static/in_depth/europe/2001/inside_europe/eu_institutions/flow_chart.stm

Social: This aspect is comprised of the effects the population can exert and undertake on other

subsystems. Quality of life is one of the priorities that must be taken into consideration by any plan of sustainable development, since man will be the first to suffer from the woes of contamination. Evidence of the damaging effects that pollution can have on the population can be found in reports of the World Health Organization that show how in 2004, the United Kingdom and France had lost a total of 187,732 lives to pollution (World Health Organization, 2011) and the situation gains a more pressing nature when one is confronted with a studies of Hasselt University and Catholic University of Leuven, both in Belgium, that show how traffic fumes could trigger 9,200 heart attacks per year (Adams, 2011).

London Air Pollution: Up to 320,000 people in London are already exposed to nitrogen dioxide levels above EU limits, according to the government.



<http://www.guardian.co.uk/environment/2008/aug/26/pollution.boris>

Therefore it is imperative to understand that society must be at the front in the fight for

sustainability by demanding comprehensive legal actions; proposing new ideas; and urging the proper functioning of institution, since it is the one affected by the Climate Change.

Economical: The progress of nations can be measured through its capability of generating wealth, and the ability to better its citizen's life. Any change made in this aspect shall be felt throughout the entire system, for better or worse. Nevertheless, all economies are strictly connected to the natural conditions in which they exist. Which is why, as these become larger, they tend to have a more lasting and detrimental effect on its environment. Such dependence demand action right now if we are to avoid the grave findings of studies, such as the Stern Review on Economics of Climate Change, which foretell the erosion of the world's Gross Domestic Product (GDP) in rates of 5% to 20% over the nearing future (European Commission, 2008:7). In spite of this, many will claim that the cost of fruitfully changing the production apparatus may be too big, yet evidence demonstrates the contrary. An analysis done by the European Commission state that it would only take humanity the low investment of 0,5% of the world's GDP, between the years of 2013 and 2030, to successfully transform the international economy into a more efficient, and low carbon

emitting one (European Commission, 2008:7).

Furthermore, tackling the issue of climate change head on not only will it cut emissions, but also create jobs and boost the economy in the future. By building upon Europe's already strong dominance in "High-tech" green industrial development, there can be an increase of one million in jobs by 2020 from the already existing 1.5 (European Commission:2009).

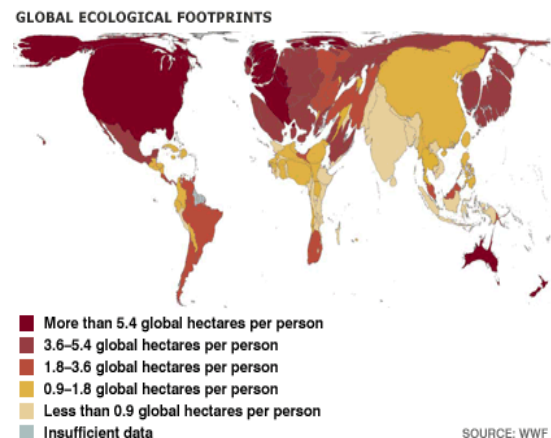


EU Eco-label Design: Awarded to goods and services which meet the environmental requirements of EU-Eco-Labeling Scheme as an initiative to transform the production apparatus of the EU for a "greener" one.

<http://www.europarl.europa.eu/sides/getDoc.do?language=en&type=I-M-PRESS&reference=20090331IPR53012>

Environmental: Growth is only possible thanks to the natural resources we are able to reap from the earth, and if not done so in an

efficient and responsible manner, we will not be able to maintain it for future generations. In this era of living accordingly to the boundaries of our world, ecological assets are becoming the core of long term wealth of Nations, meanwhile GDP is becoming a less valuable indicator of progress (Global Footprint Network, 2011). Having being said that, it is pertinent to consider the Ecological Footprint index as a way to measure the "demand on the biosphere in terms of area of biologically productive land and sea require to provide the resources we use and to absorb our waste" (Global Footprint Network, WWF, 2008).



Map showing the Global Ecological Footprint and the unbalanced world consumption.

http://heuristicthinking.blogspot.com/2007_10_01_archive.html

In 2003, Europe's footprint was of 2.26 billion global hectares (gha, or hectare with world-average ability to produce resources and absorb wastes), while its biocapacity (total supply of

productive area) was of 1.06 billion gha. This clear deficit shadows the world's own of .04 gha, and gives an indication that if the entire planet lived as EU citizens, it would need two entire planets worth of resources and ability to absorb waste to maintain that lifestyle (Global Footprint Network, WWF, 2008: 2).



Deforestation in Amazonas: 80% of the native forests have disappeared due to the logging, while tropical deforestation causes almost 1 / 5 of the emissions of greenhouse gases.

<http://elmundodelasdrogaseliana.blogspot.com/2010/05/tala-de-arboles.html>

This poses a paradox, since it clearly demonstrate that nations are increasing their Ecological Footprint even after the point of reaching high levels of human development. The time is upon us to start thinking beyond individual economic sectors and embrace the idea that healthy nations can only thrive within healthy environments. Which is why, it is of the utmost importance to sustainable development that we preoccupy ourselves with

protecting and preserving permanently the environment, so as to reach what Meadows, Randers, and Meadows describe as a sustainable society: a society that *“has the time, resources, and will to innovate, to preserve the fertility of its ecosystems and focuses on increasing the quality of life rather than on expanding consumption”* (Global Footprint Network, WWF, 2008:3)

A simultaneously look at the indicators of the subsystems allows us to detect if development occurs in harmony with other components or seems to come at the expense of the deterioration of the rest of the system. In other words, sustainable development indicators, considered under the framework of the socio-ecological system, can provide a holistic view of sustainability and at the same time allows us the ability to identify some of the interrelationships that are being problematic.

Possible Solutions

The European Commission has focused in proposing solutions for the Climate Change. From all this proposals the following three are the most important, not just because of its means but also because of its impact internationally:

20 20 by 2020:

This is an initiative started by the EU's leaders that looks to transform the Union into a highly energy-efficient, low carbon economy. For this, it is "*endorsed an integrated approach to climate and energy policy that aims to combat climate change and increase the EU's energy security while strengthening its competitiveness*" (EUROPA, 2010). This proposal set a series of targets that needs to be achieved by 2020 by all the Union, the three "20" of the plan:

- A 20% reduction (below 1990 levels) in EU greenhouse gas (GHG) emissions,
- A 20% reduction in primary energy use compared with projected levels and
- A 20% of EU energy consumption must come from renewable resources.

This "climate change and energy package" was also adopted as a law in 2009 after the EC proposed, in 2008, the implementation of the 20-20-20 plan as a binding legislation. To achieve these goals, the legislation established national goals, efforts sharing decisions and a strengthening of the Emission Trading System. The package promised not only to make a major contribution in the fight against global

warming and to be a great example to the world, but also to create more than 1 million of jobs, a reduction of at least E50 billion per year in the oil imports, less air pollution, more secure energy supplies and competitive advantage through the innovation in the energy sector (European Commission, 2009).



Carbon Emissions

<http://www.earthtimes.org/politics/eu-vote-firms-moves-30-emissions-cut/921/>

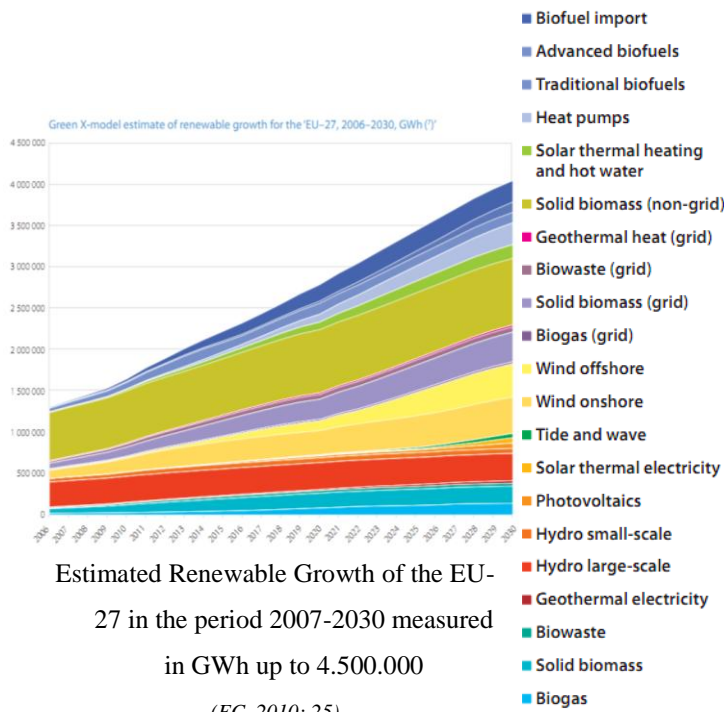
Nevertheless, even when this is "*the most ambitious proposals anywhere in the world*" (as stated by the president of the EC), it has come under criticisms by some scientist for considering that a reduction of 20% is not enough for avoiding the global warming (McDermott, 2008). Some specialist assures that a reduction of 24-40% is mandatory to avoid the raising global temperatures. Meanwhile some others have stated that a reduction of 80% is more the order of the day. The "climate and energy package" creates pressure to improve energy efficiency but it

does not address in what ways it should achieve this. However, it is one of the major solutions proposed by the EU with worldwide acceptance.

unable to create a binding international agreement to tackle climate change, therefore the European Commission proposed for the EU to commit to a 30% reduction, as part of a genuine global effort until global negotiations continues (European Commission, 2010: 2).

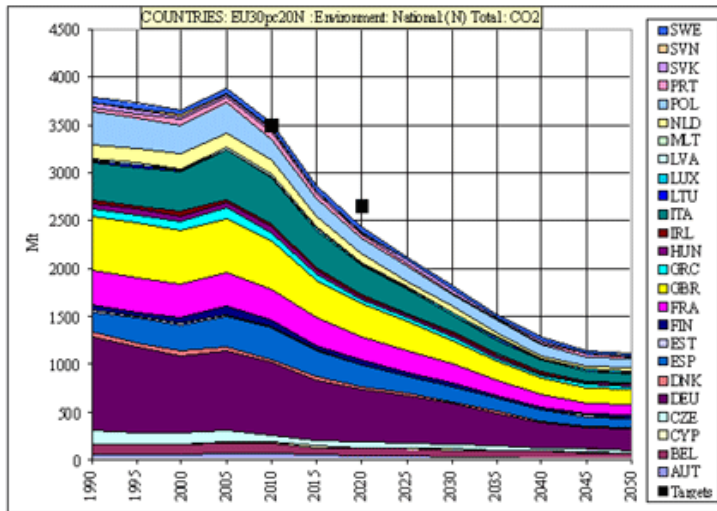
The EC assures that (thanks to economical changes of the 2008 recession) for 2009 the EU have reduced its emission in 17%, hence the targets need to be raised (European Commission, 2010: 3). Many experts have studied the possibility of decreasing the GHG in 30% by 2020 and have reached the conclusion (after of creating reference scenarios of the development of the European Union) that this commitment can be achieved.

This is shown in the following graphic elaborated by Mark Barrett from the Economical and Social Data Services of the University College of London that exposed the projections of the CO2 Emissions of the EU Countries in respects of the Targets of 30% for 2020. According to the results of this graphic if the actual trend of the EU continues its countries will be able of reducing its carbon emission under the 30% of their level in 1990, because of a joint work of each one of its countries:



Reduction of a 30%

Acknowledging that a reduction of 20% of their emission is just a first step but is not enough to counteract the effects of global warming; the EU leaders also offered to reduce the EU's emission to 30% on condition that other major emitting countries in the developed and developing worlds commit to do their fair share of the burden under a global climate agreement (EUROPA, 2010). Nevertheless, in Copenhagen the international community was



Projection of the CO2 Emissions of the EU Countries

http://www.esds.ac.uk/international/casestudies/energy_scenarios.asp?print=1

The EC also affirms (after several analyses) that the pursuit of this goal will bring several economical benefits to the EU and that the Union is ready to assume these challenges. Consequently, in May of 2011 the Members European Parliament (MEP) voted in favor of a resolution that adopts 30% as legally binding, which is a major step in the fight against climate change and the fulfillment of a sustainable development.

Nonetheless, these targets will depend greatly on the EU meeting its renewable energy and energy efficiency goals; as well as the efficiency of the national measures taken, hence it represent a high challenge for the Union (ClickGreen, 2011).

On the other hand this resolution has some conditions that have caused skepticism about the EU's commitment. In first place, the target only commits to a 25% in domestic emissions (those that occur from within the EU's state boundaries); that means that half of the proposed raised target, 5%, can be met by offsets purchased elsewhere. And secondly, the carbon accounting rules remain tied to 'point of emission', rather than 'point of consumption'; as a result, *“consumer goods made in China, for EU citizens, won't have their emissions included in the EU's totals. This allows the EU the option of continuing to 'export' a greater share of its emissions”* (Leggett, 2011).

Low-Carbon Economy by 2050

Climate Change is a problem that needs more than just mid-term targets since it has long-lasting repercussions. If we do not think in future actions, temperatures might increase by as much as 4°C by 2100 (DG-CLIMA, 2011). That is why the EC is looking beyond these 2020 objectives and setting out a plan to meet the long-term target of reducing domestic emissions by 80 to 95% by mid-century.

As a part of the Europe 2020 strategy for smart, sustainable and inclusive growth, the *“Roadmap for moving to a competitive low-*

carbon economy in 2050” also established a range of reductions of GHG Emissions per sectors, in order to contribute to the Resource Efficient Europe flagship initiative (intended to put the EU on course to using resources in a sustainable way). These are their sectored reduction targets:

Table 1: Sectoral reductions

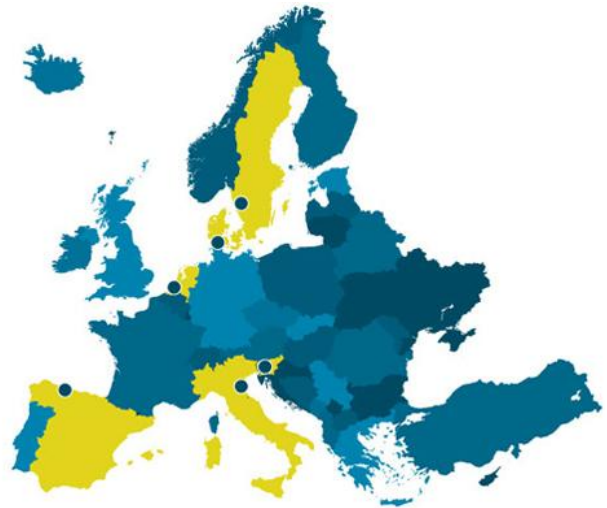
| GHG reductions compared to 1990 | 2005 | 2030 | 2050 |
|--|------|-------------|-------------|
| Total | -7% | -40 to -44% | -79 to -82% |
| Sectors | | | |
| Power (CO ₂) | -7% | -54 to -68% | -93 to -99% |
| Industry (CO ₂) | -20% | -34 to -40% | -83 to -87% |
| Transport (incl. CO ₂ aviation, excl. maritime) | +30% | +20 to -9% | -54 to -67% |
| Residential and services (CO ₂) | -12% | -37 to -53% | -88 to -91% |
| Agriculture (non-CO ₂) | -20% | -36 to -37% | -42 to -49% |
| Other non-CO ₂ emissions | -30% | -72 to -73% | -70 to -78% |

Communication “A Roadmap for moving to a competitive low carbon economy in 2050”

http://ec.europa.eu/clima/documentation/roadmap/docs/com_2011_112_en.pdf

This transition is meant to give Europe a wide range of benefits. The first of these is a boost in its economy, thanks to increased investment in clean technologies and energy. Also, due to a decrease in the air pollution, considerably less money would need to be spent on health care and on equipment to control the ill effects felt in the population, meanwhile improving the quality of life of its citizens. Finally the EU could save € 175 - 320 billion annually on fuel costs over the next forty years and reduce its energy consumption (DG-CLIMA, 2011). In brief “By 2050, the EU could reduce their energy consumption by around 30% compared

to 2005, while enjoying more and better energy services at the same time” (EC, 2011).

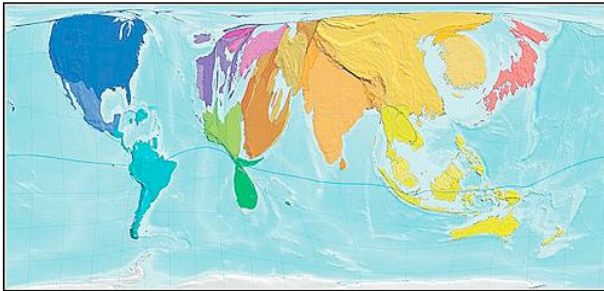


Map showing the six Low Carbon Economy Regions (Lo-Care) in the EU, created to join forces in a common initiative to reduce CO₂ emissions regionally and locally.

<http://www.locareproject.eu/wm315427>

Nevertheless, EU’s actions by their own account will not change the global warming trend. Global emissions will need to be reduced by at least 50%, compared to 1990 levels, to actually avoid the rising temperatures. Therefore, European efforts need to be considered also in the context of international actions, from both developing and developed countries point of view. In addition to this, since the Roadmap is intended to be used as a basis for developing sector specific policies and initiatives, the steps needed to meet the goals established have not been analyzed yet

(DG-CLIMA, 2010).



Picture showing the increase of GHG emissions in proportion to the territory (most emission-larger).

<http://www.guardian.co.uk/environment/2009/oct/22/science-museum-climate-map>

Questions a resolution must answer:

- Shall the EU reinforce the existent proposals or shall it create new initiatives in order to achieve its goals?
- What should be the voice of the EU at any upcoming international conference regarding climate change?
- Which sector should be the focus of the Union's Climate Action?
- What legislative instruments could be considered for achieving the goals on the EU?
- What does the EU (as world leader in the matter of sustainability) can do for aiding the rest of the world to be more "Eco-friendly"?

- Should the responsibility of meeting the designated goals and designing new plans lay in each specific country or the Union?
- Taking into consideration the diverse angles that sustainable development has, which measures can be taken to improve the situation of the EU in each subsystem?
- Given the recent global economical crisis, how can the EU guarantee the achievement of its goals in sustainability?

Recommendations for further research

Internet sources are plentiful, and in particular the website of the European Union is a wide source of primary information; not just for understanding EU policy but also for obtaining the original documents of the Union (laws, resolutions, plans, communications, briefs, etc.). I personally suggest you search for original documents of the EU in order to deeply understand what has been done in the matter. Also, other organizations (such as universities, the UN and the EU itself) have analyzed (in reviews) the scope of the EU's proposal, its effects and applicability. These

kinds of sources are really good in aiding you to comprehend what is lacking and what is needed to be done. In addition to this, I suggest to deepen in the matter of the components, applicability and definition of the Sustainable Development so that you can fully comprehend its implications.



Design of the meaning of Sustainable Development

<http://www.eoi.es/blogs/jholanypaolaavila/sustainable-development>

Finally it is highly important for you to embark on a research project of your own and consult as many sources as you can; using the references of this guide could be a really good first step!



Meeting Room of the College of Commissioners

<http://www.europeword.com/blog/europe/european-commission/>

Closing Remarks:

Congratulations on reaching the end! As you can see, sustainable development is a multidimensional problem that surpasses the national boundaries and requires constant improvements. This guide is only an introduction, but we have hopefully provided a general insight of the issues we will be discussing together in MOVENU. Regarding position paper, it is highly important that you keep in mind the fact that you will be representing a commissioner with a specific fieldwork (not a country) and therefore your position is based on your work in the EC. Finally, we encourage you to be as creative as you want, take advantage of your fieldwork (as commissioners) for creating new strategies. The EU is the world leader in green initiatives for being creative and tackling the problem of Climate Change with all kind of solutions. Therefore, we are looking for a fluid debate where you will be able of bringing alternative ideas that approach mankind to the Sustainable Development that Earth claims.

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