



OSTBAYERISCHE
TECHNISCHE HOCHSCHULE
REGENSBURG

BUSINESS STUDIES
(BACHELOR)

STUDY OF THE ECOLOGICAL ECONOMICS AND THE CONFLICT OF THE WESTERN SAHARA

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**Academic year: Fourth year, last
semester.**

INTRODUCTION

The overexploitation of natural resources and the struggle for their control, as a consequence of the current economic system and the way we live, are causing irreparable damage to the environment, and innumerable injustices in different parts of the world. In this respect, I am interested in studying the ecological economics as a way of sustainable development, taking the Western Sahara's conflict as model of the political control over natural resources, and the negative effects this issue has on society.

In this sense, my thesis is organized in two main sections. A first part where I present how the ecological economics is carried out, giving an explanation of the term 'ecological economics' and how it rejects the current system of economic growth. Proposing other ways to grow in a sustainable way such as the economy for the common good of Christian Felber or the political system of Ecuador in which nature is recognized as a subject with rights.

In the second part, I report on the Western Sahara's conflict and the interests in the exploitation of its natural resources.

At the same time, my work also alludes to the ecological economics in Germany and its advanced systems of environmental protection.

The realization of this end-of-degree work has been highly motivated by the fact of doing so in a country like Germany and being able to speak about the Sahara conflict since, except for Spain, people do not usually have knowledge of the conflict. Other important reasons are the increasing social concerns about environmental problems such as deforestation, pollution or the excessive use of natural resources and the dreadful circumstances the Sahrawi people are living in.

ABSTRACT

In the following end-of-degree work, the environmental problems caused by our economic system are studied alongside the Western Sahara's conflict, the Sahrawi population vital circumstances and the exploitation of the Sahara's resources. In the first part, the reader is informed about the ecological economics and its sustainability based on an interactive order between the economic and ecological system, and how it rejects the GDP as an indicator of welfare. The final observations on this section speak about the economy for the common good of Christian Felber and the importance that the constitution of Ecuador gives to the nature. The second part, on the other hand, deals with the Western Sahara's conflict, and how the struggle over the control of its natural resources has caused a conflict of such a magnitude. The German ecological model is also mentioned.

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1. Ecological economics and its basic aspects

1.1. What is ecological economics?

Ecological economics is one of the branches of economics based on the relationship between the state or health of ecosystems and humans. It is also known as "Green Economics". It is a set of production models which take into account different social and environmental variables and which, unlike the traditional economy, does not focus on the efficient management of goods, but on sustainability, that is, the capacity to live within environmental limits.

Green economists take much more radical stances than the rest of economists in relation to the economic growth.

The main fact that separates ecological economics from the already known economic theory is that the latter tries to analyze the transactions of matter and energy of life that happen on Earth.

1.2. Basic aspects of ecological economics

- Human capital complementary to natural capital.

We understand human capital as a factor of production that influences the process of procurement of goods and services. Human capital depends not only on the quantity of labor, but on the quality, that is, on the degree of training and on the productivity of those people involved in the productive process.

On the other hand, we understand natural capital as those natural resources found in the biosphere and which serve for the production of goods and services. These, which can be plants, animals, oil, minerals, etc., are also considered ecosystem services since they directly influence aspects such as oxygen production or erosion prevention.

Natural capital is a way of estimating the value of an ecosystem, it is itself an alternative to the more traditional view on natural resources. It should be recalled that the concept of "Natural Capital" was formalized in the 90s, after one of the works by Robert Constanza and Herman Daly, where this concept was defined as "all stocks of nature that produce a sustainable flow of valuable goods and services during a period of time". An example of this would be a population of trees, which would entail an annual production of new trees.

It is also important to bear in mind that Natural Capital is linked to the ecological footprint and eco-efficiency.

1.2.1. Ecological footprint

In the international context, the Gross Domestic Product (GDP) is one of the globally recognized indicators that reflect the economies of different countries. But, let's not

forget that it is a poor indicator that overlooks different issues: it does not take into account neither submerged economy (capital movements produced within a country but not declared to the Ministry of Finance), volunteerism, nor barter (exchange of goods and services), or unpaid domestic work. It is an indicator which only measures the final production of goods and services, and which does not reflect the degree of sustainability of a country, understanding sustainability as the exploitation of a resource below its limit of renewal.

However, the ecological footprint is an indicator of sustainability that is gradually consolidating worldwide. It is important to have indicators like this, to complete the information that the Gross Domestic Product (GDP) offers, in order to design policies committed to the environment.

This indicator reflects the set of impacts that the human being makes on his environment, taking into account the necessary resources and those generated to maintain the existing consumption model. It is the ecologically productive surface that is necessary to produce the resources consumed by a citizen, as well as the needed surface to absorb the different residues that it generates.

It is important that this indicator is taken into account as this will lead to greater human awareness about the environment.

Below we can observe the top ten countries with a greater ecological footprint according to data obtained from the latest survey conducted by Global Footprint Network:

COUNTRY	ECOLOGICAL FOOTPRINT
1. United Arab Emirates	9,5
2. United States	9,4
3. Kuwait	8,9
4. Denmark	8
5. Australia	7,8
6. New Zeland	7,7
7. Canada	7,1
8. Norway	6,9
9. Estonia	6,4
10. Ireland	6,3

Source: Own elaboration from data obtained from Global Footprint Network.

1.2.2. Eco-efficiency

Eco-efficiency refers to the creation of goods and services using less resources, thereby reducing the waste their production entails.

According to the definition of the World Business Council for Sustainable Development (WBCSD) in its publication in 1992 called "Changing Course", the improvements of eco-efficiency are:

A reduction in the material and energy intensity of goods and services, a reduced dispersion of toxic materials, improved recycling, a boost in renewable energies and long lasting products.

- Rejection of the use of Gross Domestic Product (GDP) as an indicator of welfare.

As it has been mentioned earlier when explaining the ecological footprint, ecological economics rejects the importance given to the Gross Domestic Product (GDP) as a measure of the welfare of a given economy. This is because the GDP only takes into account a part of the objects that exist, objects which are interchangeable, appropriable and reproducible.

Traditionally, nature was incorporated into economy within the production function in two different ways: as "land" or as "natural resource".

The land, only fulfills two of the conditions that the objects measured in GDP do: appropriability and exchange. However, it does not accomplish the reproducibility condition; the land does not reproduce, but even so, it is considered as an economic object.

Those who consider the land as an economic object, consider the land in the Ricardian sense¹. This is wrong, the land undergoes constructions, meteorological phenomena and thousands of situations that can make it depreciated and even lost by its use.

By incorporating nature into the production process, we incur problems, when we consider that non-renewable resources do not meet the requirement of reproducibility.

- Interest in nature, justice and time.

These are aspects left aside by traditional economy. Nature is basic to economy. There are limits to material growth and serious environmental problems that will be discussed later.

Nature is a fundamental pillar of humanity, but we lack knowledge about it. Societies often do not know the consequences of their actions, and this is a problem of education that we must solve little by little, and generation after generation.

Ecological economics raises the need for equality between different generations, and

¹ This tells us that the land is something that is not consumed and does not end up depreciating with use.

considers the current generation and the future one equally important.

- It supports responsibility, respect and obligation to understand, investigate and inform.

2. Valuation criteria for the ecological economy

Currently, in economy, only monetary variables are used to decide on the viability of a management system, taking into account those goods and processes that are the subject of a commercial transaction. The continuity of an economic activity depends exclusively on the fact that there is an income that exceeds the expenses, and therefore there is a benefit. A profit with regard to the investment made on that economic activity. For traditional economy, this is the only issue to be taken into account and which influences the performance of an activity or not.

Taking only this into account is not enough for ecological economics, which defends the use of greater information, but always recognizing the economic viability as a fundamental condition that determines the performance of the different agents that intervene and influence the economy.

For ecological economics, a productive system must be analyzed around five properties:

2.1. Productivity

It is important to keep in mind that productivity is something that can be measured in different units, and that this influences the achievement of one result or another. We can find a system that involves high remuneration and does not use resources efficiently. If we consider the aspect of remuneration, we would rate the system as highly productive, but if we take into account the use of resources, we would determine that it is a totally unproductive system, as it does not make the most of its resources.

The final objective, whether one unit or the other are valued, is the maximization of the productivity of the scarcer factor. Now, from ecological economics, the measurement of productivity in physical units is defended, since they are invariants units in time and space, and they are not subject to human appreciation.

"A system aims to maximize ecosystem productivity through a reduced consumption of non-renewable resources and not through the use of increasing amounts of product inputs (new and expensive resources: industrial fertilizers, pesticides, high yielding varieties, etc.). But through new process inputs (structural changes in ecosystems, crop association, rotations, etc.)".

2.2. Sustainability

We define sustainability as the capacity that productive system has to maintain their levels of productivity over time when they are subjected to pressure or disturbance.

A productive system will be sustainable when it is endowed with abundant internal mechanisms to recover the path of development previous to the intervention of pressure or disturbance.

2.3. Stability

We call stability to the persistence of a production according to certain economic, environmental and of changing management conditions. That is to say, to the constant production of a certain good when some given economic and environmental conditions which vary over time.

Three different sources of stability can be identified:

- Management stability: derived from the technologies that best fit the needs.
- Economic stability: associated to the capacity to predict prices and anticipate to the market.
- Cultural stability: depends on the socio-cultural context that exists in the productive system.

2.4. Equity

There is not just one definition of the concept of equity. However, we can understand equity as the way in which the productivity of a system is distributed among its beneficiaries. Nevertheless, it also might be understood as what a productive system reaches when it can satisfy a bigger demand without it supposing a lost in production.

Equity is not a variable that has too much importance in the different production systems at the moment.

2.5. Autonomy

It is related to the degree of integration of agroecosystems, shown in the material, energy and information flow among its components and between the agroecosystem and the external environment.

Autonomy is a variable that is closely related to the internal capacity of a production system to satisfy the necessary flows that influence in the production.

3. History of ecological economics

The history of ecological economics goes back to several economic thinkers of the eighteenth and nineteenth centuries such as Claude-Henry Rouvroy, François Quesnay and Anne Robert Jacques who proposed the inclusion of nature and natural sciences in economic and political issues. This idea triggered the beginning of concerns about population growth and resource yields that had been raised by Thomas Malthus and David Ricardo.

This was the beginning of ecological economics. After this, different historical events were triggered such as: Criticism of the socialist model claiming that the limits to economic growth lie in the laws of physics and ecology, not of productive relations; the proposal of an economic-ecological matrix and the construction of a theoretical framework for ecological economics that has as an economic objective the population, natural resources and residues from production to consumption (Herman Daly 1977).

In addition, the first edition of *Ecological Economics* was held in 1989, bringing together a debate between the different trends and old and new studies in the subject, and the beginning in the same year of the International Society of Ecological Economics (ISEE).

Currently, the model of production and consumption of goods is overusing the capacity of the planet to generate the resources that allow us to live.

According to a study by the Global Footprint Network, an international research organization that uses tools of accounting of the ecological footprint, we are using the resources that correspond to 1.5 planet. This is a sign of the natural wear and tear nature is suffering. From this fact, many schools of thought have emerged to study the damage and offer solutions, such as the economy of natural resources or the environmental economy, but society continues to worsen its environmental crisis.

Ecological economics emerges as a response and antidote to this situation. A more critical stream of thought that seeks to analyze the economy in the context of environmental sustainability.

The origin of ecological economics is attributed to the ecologist and professor of public policy at the University of Crawford, Robert Costanza.



Robert Costanza.

Costanza was a professor at the Institute for Sustainable Solutions at Portland State University, Professor of Ecological Economics and founding director of the Gund Institute for Ecological Economics at the University of Vermont. He was also a professor at the University of Maryland and at Louisiana State University and a scientist at the Beijer Institute for Ecological Economics in Stockholm.

Currently he is:

- Member of the National Council of Science and Environment of Washington, DC.
- Member of the Stockholm Resilience Center.
- Member of the Gund Institute of Ecological Economics of the University of Stockholm.
- Co-founder and former president of the International Society for Ecological Economics, and was editor-in-chief of the journal Ecological Economics from its inception in 1989 until 2002.
- He is part of the editorial board of ten other international journals.

Costanza has received numerous awards and scholarships, including: a Kellogg National Scholarship, the Society Award for Conservation Biology Award, a Conservation and Environment Fellowship, the Kenneth Boulding Memorial Award for Outstanding Contributions in Ecological Economics and honorary doctorates from the University of Stockholm and the Ecole Normale Supérieure de Lyon.

He has written or collaborated on more than 500 scientific articles and 27 books. He has been cited in more than 17,000 scientific articles.

He has undoubtedly marked the development of ecological economics, but we cannot forget the three great precursors of this economy: Thomas Robert Malthus, Karl Marx and David Ricardo.

Thomas Malthus was one of those who started talking about one of the problems with which the economy would find itself: "Struggle for Existence"².

For Malthus, the terrestrial surface is a limitation to food production, and this limitation determines the number of people that can exist in the world. The land is not able to supply an excess of population.

Malthus, with this topic led to the topic of the ecology.



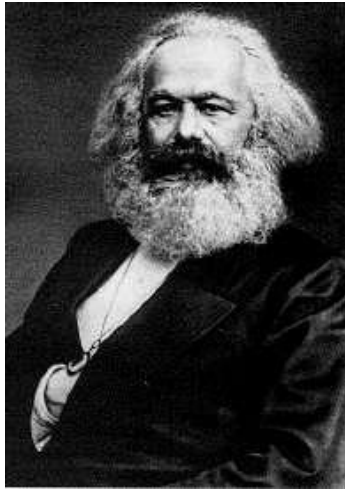
Thomas Robert Malthus

The law of Malthus is considered by the population ecology as one of its pillars. This law assumes that when birth or mortality rates are constant, population will grow or decrease at an exponential rate.

Specifically, Malthus' Law describes how a population can increase or decrease when nothing else occurs. The historian Ginzburg pointed out that Malthus's law would play a fundamental role in ecological economics and that it would have a similar impact to that of Newton's First Law in physics.

Karl Marx, studied the social form of wealth in capitalism. Marx's political economy and ecological economics are situated on different levels: while Marx sought to show the historical character of the capitalist mode, ecological economics deals with material relations with nature and the risks that growth imposes on sustainability.

² It refers to the competition that arises after an exponential increase of population against the demand of limited natural resources, for example, if a population increases, there will be competition for livelihoods such as food or shelter.



Karl Marx

For Marx and the Marxists, the environmental problem is inherent in the system, and therefore it will not have a solution in this context, while the ecological economy does not, at least explicitly, pose the responsibility of capitalism.

Marxism brings an understanding of the system and the essential causes of the problem, ecological economy provides particular studies and indicators to measure physical production and its impact on nature.

David Ricardo, was an English economist who was a member of the classic economic school³ of thought and one of the most influential, together with Adam Smith and Thomas Malthus.

He is considered one of the pioneers of modern macroeconomics, because of his analysis of the relation between benefit and wages, and one of the precursors of what would later be called the law of diminishing returns.



David Ricardo

³ This school has its origins in the publication of Adam Smith's book *The Wealth of Nations*.

For David Ricardo, as the necessary capital and labour factors for tilling the land increase, agricultural yields decrease. This is why, unlike Malthus, Ricardo focused on not considering that the supply of land was given, but on its different fertility. For Ricardo, the only ones who would gain from economic progress would be landowners.

4. Ecological economics as a science of Sustainable Development

Mankind has undoubtedly sought to improve its well-being year after year anticipating to the circumstances of changing weather conditions, meteorology and trying to adapt to the existing conditions in the biosphere and nature. Human beings have learned to live adapting to scarcity, conflicts of interest and to the cooperation that occurs in both economic and ecological systems.

The accumulation of experiences gathered by the human being has gradually led to the introduction of words such as *money, value, price, savings, investment, preferences, wealth, capital, etc.*

The Industrial Revolution meant a multitude of advances ranging from social to economic. This is where we have to keep in mind the differences between growth and sustainable development.

These advances, which emerged after the Industrial Revolution, represented a steady growth sustained over time, but not sustainable. The fact that it is not sustainable growth is something that alarms socially and it is motivated by the acceleration of environmental degradation.

One of the possible alternatives that emerged with the aim of eliminating the deterioration of the environment consists on achieving an interactive order between two systems: the economic and the ecological, which is durable and sustainable in the very long term. The ideology of sustainable development is based on this type of order, an order that is completely detached from unsustainable economic growth.

If we focused on the environmental field, the fundamental object of analysis of neoclassical economics would be the discussion about the management of natural resources and the need to consider the environment as part of the analysis of the existing relations between the natural environment and the economic one.

David W Pearce explained that it is possible to identify four functions that give value to the environment and that synthesize their interrelations with the economy, therefore allowing a focus on the management of natural resources and environmental valuation.

The environment is fundamental, and it is part of the production function of economic goods and it is the basis of the production process, so its absence is unthinkable. But, it does not only participate in the production of goods processes, but also, its second function is to receive the waste generated from the production of goods and services.

Besides, the environment provides another type of natural assets that are demanded by society, such as parks, landscapes or pleasant natural surroundings.

In short, the environment is "an integrated system that provides the means to sustain all kinds of life."

5. Environmental Crisis

Currently we are living in an environmental crisis caused by the way of life that human beings carry. Undoubtedly, the overexploitation of the existing resources, the emission of carbon dioxide (CO₂) from factories and vehicles, water pollution, the amount of waste generated and a multitude of malpractices are causing a reduction of the necessary resources and the appearance of the already known climatic change and destruction of the ozone layer.

As natural resources slowly deplete, we continue to wonder which invention will make it possible to replace those decreasing resources, instead of finding a solution and putting the necessary measures to end with the problem. It is important to see how we have come to that situation by getting to know the causes that first provoked this situation.

First, society has considered natural resources as an inexhaustible source and has assumed that they would always be there to satisfy our needs. But later, it was discovered that resources are scarce and finite. We consume resources faster than nature can replenish them, and that leads to overexploitation that ends up impoverishing the planet.

Second, another cause of the environmental crisis we are currently experiencing is the pollution of the environment⁴ caused by the massive collection of resources and the transformation to which they are exposed. The use of non-renewable energies or certain materials, such as oil or plastic, are examples of rapid consumption and, on the other hand, they take years to regenerate.

Last but not least, the increase of population, brings with it a greater pollution, since it means the existence of more lives in the planet that must feed and look for some place to live. Overpopulation generates an increase in the depletion of renewable and non-renewable resources, as well as a greater territorial occupation that leads to a greater urbanization and fewer green areas.

These causes have given rise to the appearance of environmental problems.

⁴ *In environmental pollution can be distinguished three types of causes: chemicals from the chemical industry, physicals caused by noise, heat etc and biological pollutants that are organic waste.*

5.1. Main environmental problems

5.1.1. Increase of the hole in the ozone layer.

The ozone layer is located at a distance of 15 to 35 km above the surface of the planet, and it is a part of the stratosphere which contains a high concentration of ozone. It absorbs between the 97 and 99 percent of high-frequency ultraviolet radiation.

Ozone causes damage to living beings, and depending on the intensity with which it affects human beings and the time in which it does, it can produce a great deterioration in the innate immunity system and it can even affect the growth of the plants.

The ozone hole was first observed during the years 1980-1984. Once it was detected, scientists started to prove how years before its detection there already were data that indicated the appearance of this hole.

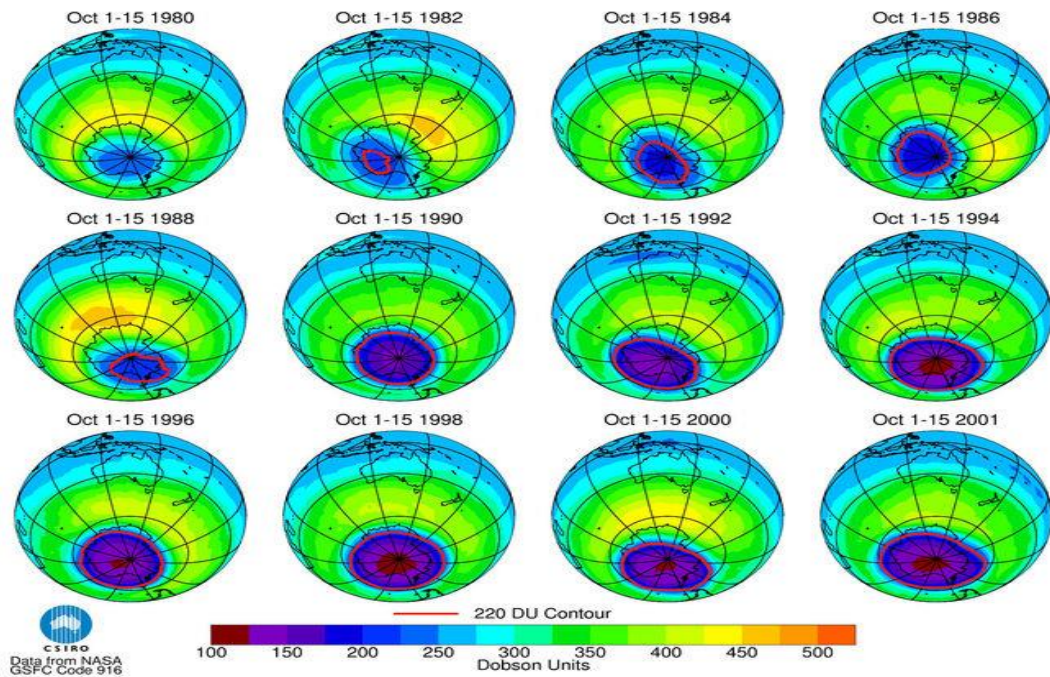
During the years 1978 and 1987, the hole grew equally in depth as in extension. In 1988, the hole diminished considerably. However, the following year, it returned to be as large as in 1987, reaching in 1992 and 1995 a greater extension.

This is one of the biggest environmental problems, which is growing and spreading over time. Even so, aerosols and fertilizers⁵ are still being used.

Next in the image, we can see how the hole in the ozone layer has evolved from 1980 until 2001. As we can see, the hole has been expanding more year after year, allowing more ultraviolet radiation to enter in contact with the Earth.

⁵*Their impact allow a greater amount of ultraviolet rays entering the earth and directly affecting people's skin leading to the appearance of certain diseases such as cancer or genetic mutations.*

EVOLUTION OF THE OZONE HOLE 1980-2001



Source: Data from Nasa

The main cause of the increase in the ozone hole over Antarctica is the present chlorine in the upper layers of the atmosphere, which comes from molecules called chlorofluorocarbons (CFCs)⁶.

That is why, in order to address this problem of the increasing ozone hole, in 1987 practically all the countries of the world signed an action protocol in Canada to eliminate the use of chlorofluorocarbons (CFCs), with the aim of recovering the ozone layer.

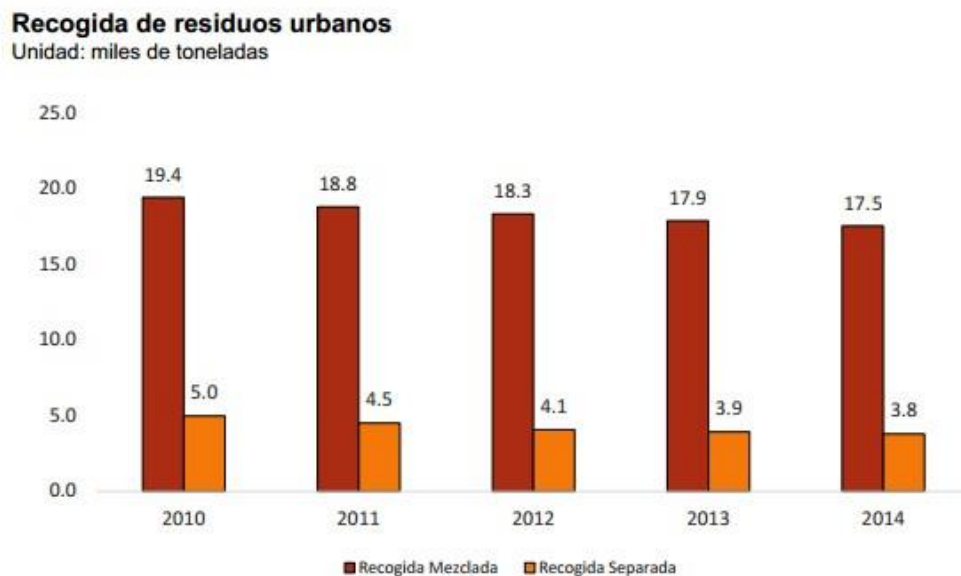
Currently, in 2016, that signed protocol has begun to be fruitful. The ozone layer is recovering. According to the journal "Science", the hole on the Antarctica has been reduced more than almost 4 million square kilometers since 2000. The work made by "Science" magazine was led by Susan Salomon, a researcher at the Massachusetts Institute of Technology (MIT) who, in 1986, discovered the relationship among chlorine, the incidence of light and the low temperature of the atmosphere, receiving the BBVA Foundation Frontiers of Knowledge Award in 2013.

⁶ These are molecules which are emitted by sprays, cooling systems or dry cleaning products, as well as air fresheners.

5.1.2 Increased amount of dumped waste.

The daily waste production and garbage burning from organic or inorganic wastes have been multiplied by the increase of population, as more and more waste is emitted per minute. To these, the industries waste should be added, causing a rapid deterioration of the ozone layer.

In 2014, it was the last year that data concerning the global accumulation of waste in Spain was recorded through a study carried out by the National Statistics Institute (INE) which is called "Statistics on the collection and treatment of waste. Survey on the generation of waste in industry." According to this study, in 2014, 459.1 kilograms of urban waste per inhabitant were collected, 4.5% less than the in 2013.



Source: Instituto Nacional de Estadística (INE)

As we can see in the graph, in 2014, 0.4 tonnes less of municipal waste mixed collection was dumped than in 2013; and 0.1 tonnes less than separated collection. It is a small reduction, but if we compare with the one in 2010, we can see that it does exist a greater reduction in the collection of waste.

Below we can see a table about the amount of waste collected separately in 2014:

Recogida de residuos urbanos de forma separada. Año 2014

Unidad: miles de toneladas

Residuos de recogida separada	Cantidad	% sobre el total	% variación interanual
Total	3.798,2	100,0	-3,4
Papel y cartón	976,9	25,7	-1,1
Animales y vegetales	782,0	20,6	-7,4
Vidrio	733,9	19,3	1,8
Otros	598,6	15,8	-11,1
Envases mixtos y embalajes mezclados	565,7	14,9	1,1
Madera	88,5	2,3	-16,2
Equipos eléctricos y electrónicos desechados	52,6	1,4	26,4

Source: Instituto Nacional de Estadística (INE)

As can be seen, paper and paperboard are the most widely dumped waste in 2014 (976.9 thousand tons), being the electrical and electronic equipment waste (52.6 thousand tons being discharged) the lowest percentage of the total amount represent (1.4 percent the second versus 25.7 percent the first).

Next, we will see how the discharge of these residues is distributed by industrial sectors and by Autonomous Communities.

Residuos generados por sectores industriales. Año 2014

Unidad: Miles de toneladas

CNAE 2009	Sector	No peligrosos	Peligrosos	Total
	Total	37.416,7	1.309,6	38.726,3
05-06-07-08-09	Industrias extractivas	18.638,4	2,5	18.640,9
10-11-12	Alimentación, bebidas y tabaco	2.586,2	9,3	2.595,5
13-14-15	Textil, confección, cuero y curtido	88,2	5,0	93,2
16	Madera y corcho	353,1	3,8	356,9
17-18	Papel, artes gráficas y reproducción de soportes grabados	1.625,3	17,3	1.642,6
19	Coquerías y refino de petróleo	38,6	43,9	82,5
20-21-22	Química y fabricación de productos de caucho y plásticos	665,5	345,5	1.011,0
23	Otros productos minerales no metálicos	2.797,7	11,4	2.809,1
24-25	Metalurgia y fabricación de productos metálicos	4.135,3	737,5	4.872,8
26-27-28-29-30	Productos informáticos, electrónicos, maquinaria y material de transporte	1.116,4	91,3	1.207,7
31-32-33	Muebles y otras industrias manufactureras	128,6	13,9	142,5
35	Reparación e instalación de maquinaria y equipo			
	Suministro de energía eléctrica, gas, vapor y aire acondicionado	5.243,4	28,2	5.271,6

Source: Instituto Nacional de Estadística (INE)

As can be seen, it is the extractive industries the ones that generate the greatest amount of waste, 18.6 million tons. We understand the extractive industries as the heavy industry dedicated to the extraction and transformation of raw materials such as mines, oil and the necessary machinery production for those purposes.

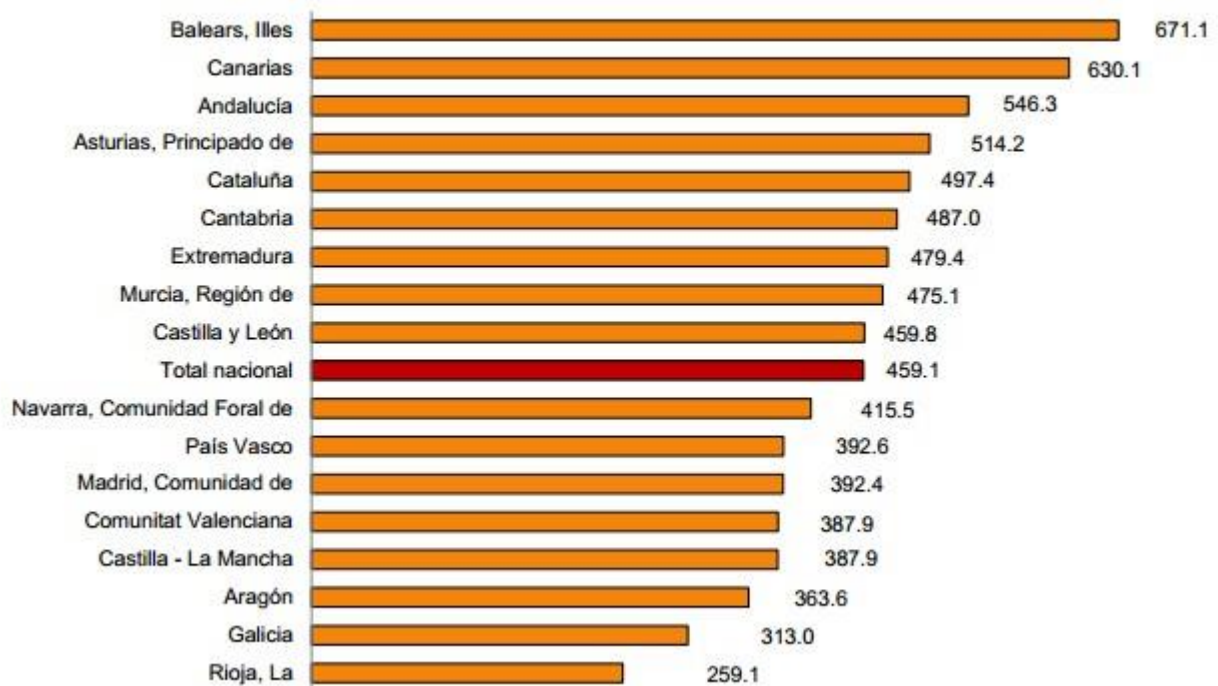
On the one hand, we can see how the largest amount of hazardous waste is concentrated in the sector of metallurgy and the manufacture of metallic products, generating 737.5 thousand tons of hazardous waste.

On the other hand, the industry of oil refinement is the one that produces the least amount of residues waste, 82.5 thousand tons.

Finally, with the spill of waste, we will observe the following graph, where we can see how waste generation is distributed among the different Autonomous Communities that make up Spain.

Recogida de residuos urbanos por habitante y comunidad autónoma. Año 2014

Unidad: kilogramos por habitante



Source: Instituto Nacional de Estadística (INE)

As we can see in the graph, the Balearic Islands, Canaries and Andalusia are the Autonomous Communities with more kilograms of waste discharged per inhabitant. Specifically, they pour 671.1, 630.1 and 546.3 kilograms per inhabitant respectively, standing above the average of the country's dumping with regions such as Asturias, Catalonia, Cantabria, Extremadura, Murcia and Castilla y León.

However, La Rioja and Galicia are the Autonomous Communities that generate less waste, in particular, 259.1 and 313 kilograms per inhabitant respectively. These two communities, together with Navarra, Basque Country, Madrid, Comunidad Valenciana, Castilla La Mancha and Aragón, are below the average of the country, which is situated in 459.1 kilograms of waste generated per inhabitant.

5.1.3. Increase on the greenhouse effect.

The greenhouse effect is the phenomenon that occurs when certain gases retain the energy emitted by the earth after being heated by solar radiation. It is called the

greenhouse effect because it is very similar to that produced in a greenhouse when the temperature rises.

One of the most famous science fiction writers, Isaac Asimov, explained in his book "Hundred basic questions about science" what the greenhouse effect meant with a basic example:

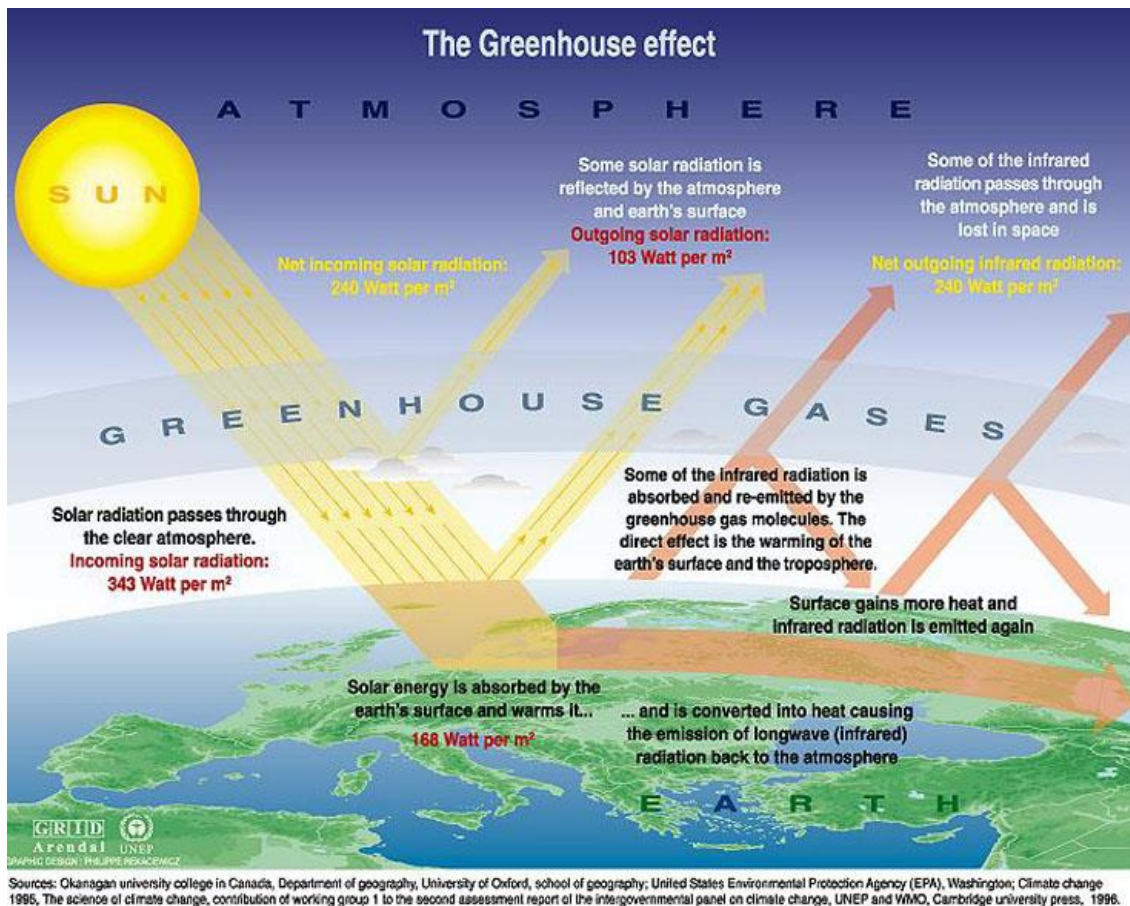
Now think of a glass house in the open air and the Sun: the visible light of the Sun simply crosses the glass and it is absorbed by the objects inside the house. As a result, these objects are heated, just like the outside objects, which are exposed to direct sunlight.

Objects heated by sunlight give way again in the form of radiation. But since they are not at the temperature of the Sun, they do not emit visible light, but infrared radiation, which is much less energetic. After a while, they give out an equal amount of energy in the form of infrared rays that they absorb in the form of sunlight, so their temperature remains constant (although, naturally, they are warmer than if they were not exposed to the direct action of the Sun).

Outdoor objects have no difficulty in getting rid of infrared radiation, but the case is very different for objects within the glass house. Only a small part of the infrared radiation they emit manages to pierce the crystal. The rest is reflected in the walls and is accumulating in the interior.

The temperature of the interior objects rises much more than that of the exteriors. And the temperature inside the house is increasing until the infrared radiation that is filtered through the glass is enough to establish the balance. "

Although it is difficult to better explain what the greenhouse effect is, following, we will observe a graph that shows what the greenhouse effect is in a schematic way and how it occurs:



Source: United States Environmental Protocol Agency (EPA)

The concentration of greenhouse gases has increased in the past few years. This is due to man's action through fossil fuels, industries, etc., leading to an increase on the air pollution.

The excess of the insulating gases which do not return to the space causes an increase on the temperature of the planet, something known as global warming, which also provokes the climatic change, of which we will speak later.

The use of fuels such as oil or coal increases the greenhouse gases that affect the natural balance of this effect. An example of this would be the production of carbon dioxide, which is one of the gases that causes global warming.

The main elements other than coal or oil that produce the greenhouse effect are the methane, water vapour or the already mentioned carbon dioxide.

Some of the gases that cause this effect are released in large quantities by volcanoes and they can be compared to what humans can contaminate over several years.

It is the companies related to the industrial sector the ones that have contributed most to the increase of this effect, since when transporting their goods from one place to another, they have been generating a greater amount of carbon dioxide.

In order to prevent the greenhouse effect from keeping on expanding we must consider certain aspects:

- Deforestation and growth of carbon dioxide emissions.
- Breeding animals such as cows: they release a large amount of methane.
- Reduction of fossil fuel consumption or replanting of deforested areas.
- Avoid the use of aerosols that emit carbon dioxide, methane, and other gases that cause the increase of global warming due to the large number of people using this type of products.

5.1.4. Exhaustion of non-renewable resources such as water

Companies related to the industry sector have led to the depletion of non-renewable resources such as water. Water is a basic and fundamental natural resource for its scarcity causes shorter life expectancy as in the case of developing countries.

Water is the most abundant liquid on Earth and represents the most important natural resource and the basis of all life.

About 97% of the planet's existing water is saline water from oceans and seas, and only a 3% of the total water is freshwater that we can find frozen in glaciers, poles and high mountains. This natural resource constitutes more than 80% of the body of most organisms, and it is involved in the majority of the metabolic processes that occur in living beings.

It plays an important role in the photosynthesis of plants and what's more, it also serves as habitat for a large number of organisms. It is due to its importance, the necessity that human beings have to protect this resource and avoid any kind of harm that affects it.

"38 countries in the world suffer from acute shortages of fresh water, 1.2 billion people do not have access to drinking water, 2.4 billion lack sanitation, from 4 billion cases of diarrhea a year, 2.2 million people die unnecessarily." (Environment and immigrants in SMEs, 2008).

What is strikingly impressive is that precisely these developing countries are the largest non-renewable resource holders.

Water consumption has multiplied by 4 in the last 4 years, and an 80% of it is used for agriculture.

According to the World Health Organization (WHO), 91% of the world's population had access to an improved source of drinking water in 2015, 15% higher compared to 1990.

It is from that precise year, 1990, when almost 2.6 billion people have had access to improved water sources, with 4,200 million people currently being able to access running water, and 2.6 billion people getting water from other sources of improved

water supply such as taps or wells.

There are 663 million people who are supplied with unimproved sources of water, and 159 million of them depend on surface water.

If we consider the world, there are about 1,800 million people who are supplied with a source of drinking water contaminated with feces, a kind of contamination that can transmit diseases such as: diarrheal, cholera, typhoid fever and polio. Contaminated drinking water causes more than 502,000 deaths from diarrhea per year according to the World Health Organization (WHO). It is estimated that by 2025 about half of the world's population will live in areas with water shortage.

It was in 2010 that the UN General Assembly explicitly recognized the human right to water and sanitation. That is, everybody has the right to continually have sufficient, accessible, affordable, and in optimal conditions water. That was when the Millennium Development Goal was set. This goal was to halve the proportion of the world's population without sustainable access to safe drinking water.

From this objective we draw the following conclusions:

- The 48 least developed countries have not reached the target, although we must take into account that 42% of the population in these countries have been able to access improved water sources since 1990, which is a step forward.
- There continue to be geographical, socio-cultural and economic inequalities between rural and urban areas. Besides, there are differentiation in the middle of cities where low-income people generally have less access to improved water supplies than other residents.

The depletion of natural resources is a problem that is present today and has led man to the concern of preserving them. There are studies that even inform about the year when we will suffer a real water crisis, some scientists estimate that by 2030 we will suffer this problem. Therefore, there could be two main problems: the water decreases and the population grows.

The World Organization of the United Nations (UN) published in the "WIREs Water" magazine, the present situation: the demand for drinking water will soon exceed supply. The world's population is expected to reach 9 billion by 2050, which means an increase in demand by 55 percent, a percentage that is not assumable. In addition, if the forecasts continue invariable, in 2030 only a 60 percent of the water demanded will be available. In the last thirty years, water consumption per capita has been reduced, but the water crisis is already a fact in many countries, as we have seen previously.

Groundwater reserves are depleting and climate change (which we will be discussed later) foresees long-term droughts. This situation, together with poor water management practices, will cause terrible environmental problems.

Only a more conscious and forward-thinking policy that plans and implements intelligent water management and halts demographic progress and global warming will hopefully turn the current situation and the studies that reveal that the water crisis is closer.

5.1.5 Deforestation

Deforestation is increasingly razing forests and rainforests, causing massive damage to soil quality. Forests cover about 30 percent of the world's regions, but stripes like the size of Panama are inevitably lost each year. If the pace continues, tropical jungles and forests could disappear within 100 years if the rate of deforestation does not change.

Deforestation is a generally man-made process from which the forest surface is destroyed. Deforestation without a reforestation implies damage to habitat and a loss of biodiversity which is motivated by: the neglect or ignorance of the value to society, irresponsible forestry management and the existence of poor and insufficient environmental laws.

Overexploitation in forests with the aim of obtaining wood, paper or other substances causes a considerable reduction in the number of trees. But it is important to note that not all deforestation is intentional⁷.

Deforestation has multiple negative effects on the environment, resulting in the loss of habitat for millions of species, as about 70 percent of the animals and plants that live in the forests could not survive deforestation.

In the last fourteen years, the world is more aware of the gravity of deforestation than before. The Earth has lost 2.3 million square kilometres from 2000 to the present, of which 800,000 square kilometres were planted, so the difference is located in 1.5 square kilometres.

Below we can see a graph showing the ranking of the ten countries with the greatest forest loss between 2001 and 2014 by satellite:

⁷ Part of it is caused by phenomena such as unintentional forest fires and intensive grazing, which can affect the growth of new trees.

Countries with Fastest Acceleration of Tree Cover Loss 2001–2014

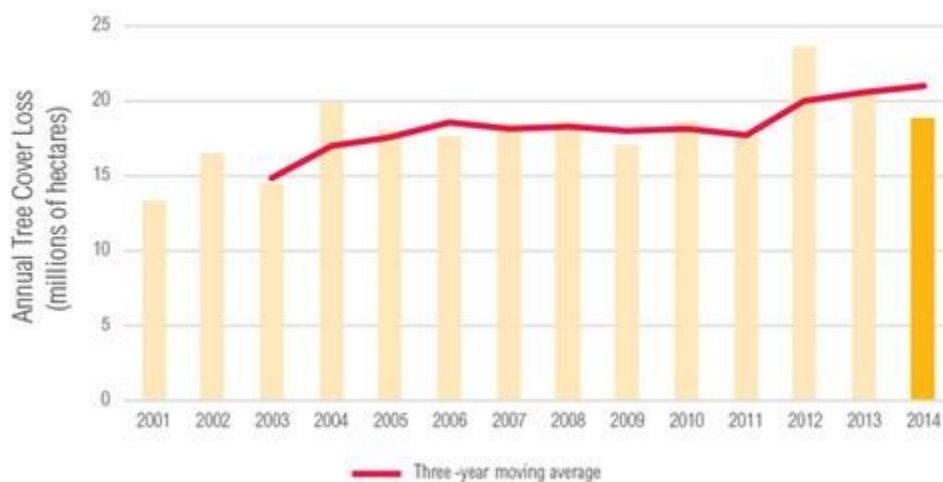


Source: World Resources Institute

As we can appreciate from the data compiled by the University of Maryland and Google published in Global Forest Watch, Cambodia, Sierra Leone, Madagascar, Uruguay, Paraguay, Liberia, Guinea, Guinea-Bissau, Vietnam and Malaysia are the ten countries with the greatest forest loss via satellite.

These ten countries lost a total of 9.9 million hectares of trees, more than half, an amount that is equivalent to the surface of South Korea. These are scary data.

Global Annual Tree Cover Loss Remains High, 2001-2014



Source: World Resources Institute

We can see in this second graph how the deforestation managed to remain practically static between the years 2005 and 2011. But right after 2011, it underwent a slight increase, reaching up to 20 million hectares.

Brazil and Indonesia are the countries with the largest forest area. Brazil has made important efforts to curb this problem, achieving a reduction of 70 percent in recent years. On the other hand, Indonesia has wanted to preserve some of the most emblematic forests in order to prevent deforestation.

The Nordic countries, meanwhile, are often an example to follow, and now they have decided to lead the fight to save the planet. To try to end this problem, Norway has been the first country in the world to ban felling anywhere, with the aim of ending deforestation, as announced in a statement by the United Nations Climate Action Agency.

In particular, Norway is implicated to avoid and prohibit through public procurement any product from its supply chain which contributes to the deforestation of trees. This decision comes also following the UN Climate Summit in New York in 2014, where Norway, Germany and the United Kingdom committed themselves to promoting national commitments to avoid deforestation.

It is in everyone's hands to achieve that the chopping of trees and its negative effects diminish. It is important to support those associations that fight against this fact, which we will see later, and change our daily habits to protect this raw material.

5.1.6. Contamination

According to the World Health Organization (WHO), more than 2 million deaths a year take place in the world as a result of the air pollution in which we live in and the water we drink.

Environmental pollution is produced when harmful gases come into contact with the environment in which we live and alter it. An environment is contaminated when these gases alter the environment in which we live and modify it, attacking the health of living beings and the quality of natural resources.

This situation is carried out by the human being, who influences the pollution of rivers and seas, and by industrial activities.

The high volume of vehicle traffic, the system of manufactured cars that do not have a system that reduces pollution, and industrial development and its factories are the causes of the existence of pollution.

This problem means:

- Alteration of the ecosystem:

This is one of the most serious consequences of environmental pollution since the environment in which we live is the main source of life. Therefore, if there are changes

on the planet, many species may be endangered or there may appear new diseases on Earth.

- Appearance of diseases:

Environmental pollution is harmful to health since it mainly affects the respiratory tract. This causes cardiovascular diseases such as appendicitis, dizziness, headache or even cancer.

- 5.1.6.3 Pollen problem:

Many toxins are established in the soil, making pollen more aggressive for those allergic people and the general population.

According to the Ministry of Natural and Marine Environment, it is estimated that 16,000 people die every year due to pollution.

6. Globalization and the Environment

Although it is not easy to define the meaning of globalization, it is understood as the process of integration between the different countries of the world. It is an economic, technological, political and cultural process, an acceleration and intensification of integration and interaction between people.

One of the most decisive moments of globalization was the creation of the World Trade Organization (WTO) in 1995, as it was made up of most of the countries of the world. This organization was set up to establish the rules of the world economy which together with the World Bank and the International Monetary Fund are the central axis of globalization.

However, we cannot speak of globalization without highlighting the definition established by the economist José Luis Sampedro in his book "The market and globalization" (2002).

For José Luis Sampedro, globalization is defined as:

"Constellation of centers with strong economic power and lucrative purposes, united by parallel interests, whose decisions dominate the world markets, especially the financial ones, using the most advanced technology and taking advantage of the absence or weakness of regulatory measures and public controls."

The process of globalization has effects on the environment, culture, political systems, development and economic prosperity, as well as on the physical well-being of human beings that make up societies around the world.

It is also important to state the factors responsible for promoting the development of globalization, as well as not only the potential benefits that it can bring with it but also the risks.

6.1. Factors that encourage the development of globalization:

1. Privatizations: Elimination of public enterprises.
2. Mergers between companies: multinationals.
3. International financial deregulation in favour of free trade: The Free Trade Agreements.
4. Opening of national markets: Free trade.
5. Growing global competition.
6. Changing political situations.

6.2. Potential benefits of globalization:

1. Greater efficiency of the market which increases its competition by reducing monopoly power.
2. Improvements on communication and international cooperation that can lead to better use and exploitation of resources: reciprocal advantages are gained and problems are tackled together.
3. Elimination of labour market, goods and services, and financial entry barriers.
4. Ability to maneuver according to fluctuations in national economies.
5. Promotion of scientific-technical development as it is profitable.
6. Improvement in the resolution of multinational problems.
7. Improvement when understanding problems outside the territory.
8. The leverage in option: the transfer of experiences and systems, economies of scale and overall strategy.
9. Universal access to culture and science.

6.3. Risks of globalization:

1. Irresponsibility of companies and multinationals.
2. Increase of economic, territorial and social inequality.
3. Loss of factors that do not adapt to competition.
4. Oversight of human development indexes: increasing poverty.
5. Failure to comply with minimum labor standards.
6. Threats to national sovereignty.
7. Market differences.
8. Economic growth and environmental stress.
9. Inequality in the distribution of income.

10. Lack of control over markets.

11. Concentration of wealth and increase of social inequality.

As we can see, there are many risks that globalization entails, but in this work we will focus on the consequences of globalization on the environment.

The problems that have existed in the environment have been increasing since the Industrial Revolution, motivated by the economic, political and social systems, although it has not been the same everywhere.

However, it has been possible to produce a substitution of resources during these last years, thus avoiding the exhaustion of several of them, such as wood, which has been replaced by coal.

Globalization has multiple negative effects on the environment since one of the factors implies the fact that international markets continuously generate an increase in the large scale of resources, and with that, there is an increase in the emission of polluting substances. These substances contribute to climate change and global warming, which are a threat to human development and affect all inhabitants of every country.

Poor countries may feel threatened to see their natural resources overexploited in order to satisfy the great demands of consumers, and to fulfill external debts that have been acquired with the more developed countries, that is, those that are responsible for exploiting resources by generating greater benefits.

To increase benefits, many countries have abused their resources and it is important to bear in mind that if there is no moderate use, they can be exhausted.

There are countries which have the aim of improving their competitiveness. They try to reduce costs in environmental security, as in the case of large transnational companies which establish their factories within countries where labor is cheap and environmental legislation is much less strict, therefore producing at lower cost to obtain more profits.

6.4. The negative effects of globalization on the environment are:

- Slimming of the ozone layer: fact that, as mentioned above, causes a greater exposure to the radiation emitted by the sun.
- Increase of the temperature and melting of polar ice caps.
- Sea level rise and desalination of the seas: this implies important consequences in the changes of currents.
- Death of fish and aquatic ecosystems due to desalinization.

This is how globalization implies an important ecological impact in the expansion and acceleration of the use of natural resources, the change of the geography of the ecological pressure in the length of the world, being the poorest countries the ones

that suffer the most.

6.5. But, What is the relationship between economic globalization and the environment?

This question is complicated to answer because many factors influence its response. The fact that globalization is expanding implies, as we have already said, that resources are overused even reaching unsustainable levels.

Indeed, the inhabitants of the industrialized countries are the ones who generate most of the unfavorable changes in the global environment.

These changes imply:

- Loss of a 50% of freshwater ecosystems such as rivers, wetlands and lakes.
- Deterioration of a 30% of marine ecosystems.
- Reduction of forest area by 10%.
- Increase of the overall energy consumption by 70%.

Broadly speaking, one-third of the planet's wealth has been lost in thirty years. This does not happen everywhere, since globalization has not reached all regions equally.

International competitiveness is intensifying, leading to a loss of sovereignty and autonomy in environmental decision-making. The rules which regulate employment, the regulation of economy, the land-use planning or the environmental legislation are obstacles to global competitiveness.

We will highlight Mexico, a country that is in a continuous environmental modernization including ideas and putting them in the international field. This country has generated a 25 percent of alternative energy according to Mexico's energy secretary. This is a progress in the environmental issue, which is gradually achieving a positive effect in the country.

In short, globalization is a very broad process that involves a change in the different economic societies, both at a culture level and at an economic one. It is strongly related to the free market, the market whose objective is the economic benefit and where the environmental norms for the protection of the environment and its conservation are completely ignored as a result of exaggerated consumerism without any limit.

The environment has been affected causing irreparable damages to water, air, the ozone layer, soil, trees, etc. which are increasingly contaminated, influencing human activity. Let us not forget that, behind this, there are interests of large transnational corporations whose goal is just on: profit maximization.

It is necessary that the various states become aware of the alarming situation we are experiencing, and that they adopt policies that protect the environment. Let us not

forget that all the damage caused is irreparable, and that these are natural fundamental resources to our life.

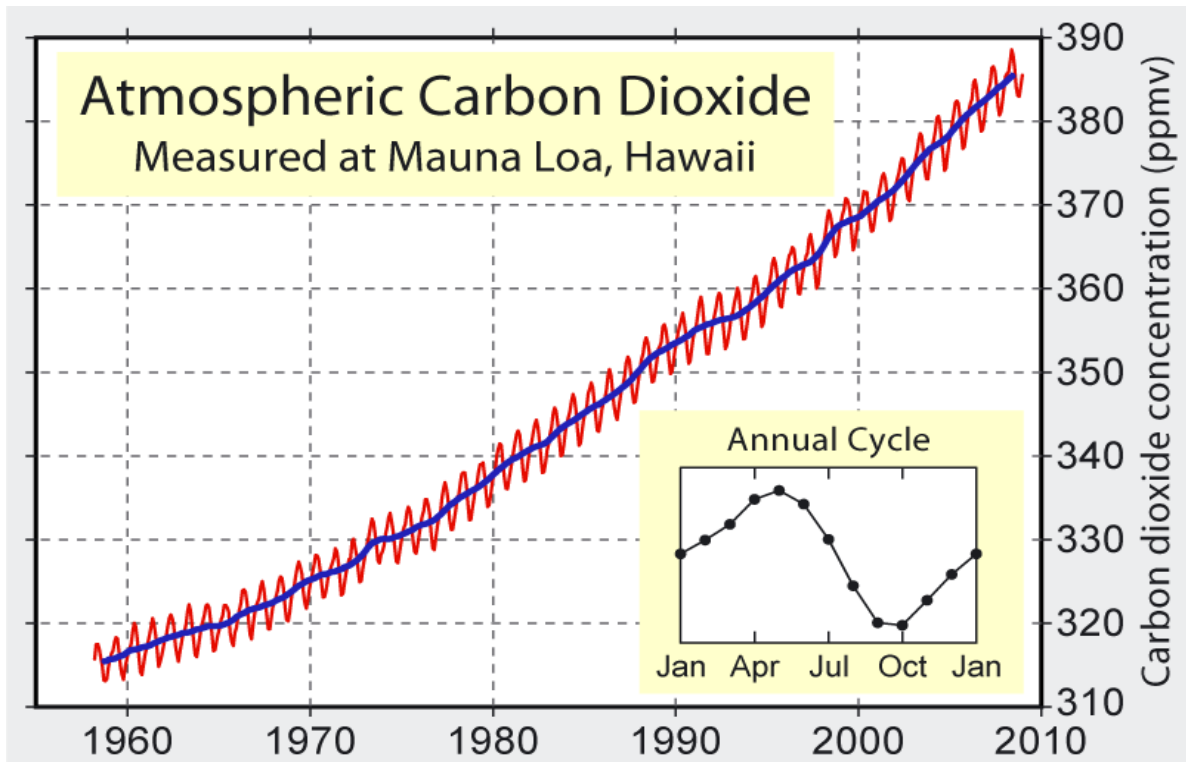
In order to avoid these negative effects provoked by globalization, we should use it as an instrument to allow sustainable development among countries around the world.

7. Climate change and the Kyoto Protocol

We define climate change as a modification in the distribution of climate over periods of time ranging from decades to millions of years. It is a stable, meaningful and lasting change. An example would be the variations in the energy received by the Sun, the volcanic eruptions or the biological processes.

According to the Intergovernmental Panel on Climate Change, an international leading association, the existence of climate change is evident. Climate change could range from being limited to a specific region, to encompassing the entire land surface. It is a concept that could be synonymous with anthropogenic global warming, that is, warming caused by human activity, unlike those natural processes of the Earth and the Solar System.

In the chart that we can see below the concentration of carbon dioxide measured in Hawaii.



Source: <http://cambioclimaticoglobal.com/>

In the graph we can see an increase in the concentration of carbon dioxide in the atmosphere during the period from 1960 to 2010. This increase goes from 320 ppmv in 1960 to almost 400 ppmv in 2010.

However, to get into the matter, we must distinguish between global warming and climate change⁸.

7.1. What are the causes of climate change?

There are two aspects that must be balanced: the energy received by the Earth from the Sun, and the radiation emitted from the Earth's surface. Any question that implies a change in this balance can end up generating climate change.

These factors are not directly involved in the climate system and are considered as climate forcing, that is, factors that influence or lead to climate change.

The causes that lead to climate change are:

- Natural causes: include volcanic activity or changes in energy received from the Sun.
- Anthropogenic causes: those generated by human activity.

These causes are materialized in the following:

- Fluorinated gases: According to the Ministry of Agriculture and Fisheries, Food and Environment, these gases began to be used in the early 1990s with the aim of replacing substances that deplete the ozone layer. They are used as refrigerants, fire extinguishing agents, solvents and for the manufacture of insulating foams.

They include: Hydrofluorocarbons (used in various sectors and equipment as refrigerants), perfluorocarbons (mainly used by the electronics sector, the cosmetic and pharmaceutical industry and used as refrigerant, or in fire extinguishers) and sulfur hexafluoride (used as insulating gas for cooling in high voltage switching equipment, and as a coating gas in the production of magnesium and aluminum).

The emission of this type of gases implies an important heating effect that can be up to 23,000 times higher than the one produced by the carbon dioxide. They are gases that are currently emitted in small quantities and that the legislation of the European Union is eliminated of its emission of progressive way.

- Deforestation: As previously discussed, trees absorb carbon dioxide, helping to regulate the climate. Its indiscriminate felling causes the loss of that positive effect that its existence supposes. Therefore, the carbon dioxide that the tree

⁸ *The former refers to the increases occurring in temperatures, while the latter includes the former and all the aspects that influence the increase of greenhouse gases.*

was supposed to absorb, is released to the atmosphere producing an increase in the greenhouse effect.

- Stockbreeding development: Methane is emitted in large quantities by cows and sheep. Inhalation of methane gas may cause suffocation as the oxygen content in the air is reduced. It is also a gas emitted in the carbon mines, where its presence has double risk:
 - Absorption by inhalation.
 - A mixture of methane and air that can be even explosive at times under certain conditions, putting the miners at risk.

Control of methane emissions⁹ is included in Europe's strategy to combat the effects of climate change.

According to the study conducted by the World Input-Output Database (WIOD), Russia, China, Brazil, France, Spain and Italy are the countries that emit more methane.

- Combustion of coal, oil and gas: the combustion of these elements produces a large amount of carbon dioxide and nitrous oxide.

Coal companies emit pollution that produces negative effects that trigger asthma attacks on children or respiratory diseases that incapacitate and kill.

In the case of oil, we have recently seen the danger of burning in the Amazon Rainforest, an extension of the central part of South America. It is considered one of the most diverse ecoregions and it was declared as one of the seven wonders of World in 2011. Now, it is in danger from oil exploitation.

As for the gas, it is considered as a dangerous merchandise that presents a health risk and that can produce damages in the environment. We can distinguish three types of gases:

- Flammable gases: gases that at 20°C and with a pressure of 101,3 kPa, are flammable in contact with a source of heat. Example: butane.
- Non-flammable non-toxic gases: gases that displace oxygen from the air causing suffocation and which favor combustion to a greater extent than air. Example: helium.
- Toxic gases: when inhaled they can produce chronic or acute effects, even leading to death. They can be corrosive as well as flammable. Example: chlorine.
- Fertilizers with nitrogen: they produce high emissions of nitrous oxide. Nitrogen oxide emissions are generated by the fertilization of the artificial soil, by fixed and mobile sources of combustion of fossil materials or manure.

The artificial fertilization of soil has been a way to facilitate the increase of the

⁹ Since methane is the second component responsible for global warming, after carbon dioxide, which occupies the first position.

production to feed the population. It is also believed that it has contributed to increment the profits of the farmers, but this is uncertain, since the amount of tillable land has diminished as a direct consequence of the excessive use of fertilizers and pesticides.

The annual expenditure of farmers par excellence is undoubtedly the purchase of synthetic pesticides and fertilizers that result in a greater harvest in exchange of deteriorated lands and products of not so good quality. These synthetic fertilizers are absorbed by plants and by people. This process implies a greater consumption of energy and electricity, thus affecting climate change.

At the moment, the average global temperature is situated 0.85°C above that existing at the end of the 19th century. Each of the previous three decades has been warmer than any of the preceding decades since data began to be recorded in 1850.

People in charge of combating climate change indicate that human activity is possibly the main cause of the rise in temperature since the mid-20th century. The temperature limit should be set within a 2°C increase with respect to pre-industrial temperature. If the increase is higher, we are facing a much greater risk of dangerous and catastrophic changes to the global environment. That is why, the international community has recognized the need to keep warming below 2°C, to avoid irreversible damage to the planet.

7.2. The Kyoto Protocol

It is an international agreement that aims to reduce emissions of gases that cause global warming. This agreement was established within the framework of the United Nations Convention on Climate Change (UNCED) in 1992, within the already well-known Earth Summit of Rio de Janeiro.

It is a document which constitutes one of the most important legal tools adopted in the field of climate change. It contains commitments assumed by the industrialized countries that are materialized in the reduction of emissions of some greenhouse gases that are responsible for global warming. These gases are:

- Carbon dioxide (CO₂)
- Methane (CH₄)
- Nitrous oxide (N₂O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFC)
- Sulfur hexafluoride (SF₆)

The countries that signed the Kyoto Protocol were:

- The United States: Bill Clinton signed the agreement, but his country did not ratify it, which is why his adherence was symbolic until 2001, when George Bush withdrew as he considered it ineffective. It was Obama, who through the Environmental Protection

Agency stipulated as a goal the reduction of emissions of polluting gases by 30 percent.

- European Union: Undertook to reduce emissions as follows:
 - Germany 21%
 - Austria 13%
 - Belgium 7.5%
 - Denmark 21%
 - Italy by 6.5%
 - Luxembourg 28%
 - The Netherlands 6%
 - United Kingdom 12.5%
 - Finland 2.6%
 - France by 1.9%
 - Spain committed to limit its emissions to a maximum of 15%.
 - Greece committed to limit its emissions to a maximum of 25%.
 - Ireland agreed to limit its emissions to a maximum of 13%.
 - Portugal committed to limit its emissions to a maximum of 27%.
 - Sweden committed to limit its emissions to a maximum of 4%.
 - Argentina: It was not obliged to comply with the targets set by the Kyoto Protocol, since it was a developing country that had approximately 0.6% of total global emissions.
 - Canada: Abandoned the protocol years later, specifically in 2011 not to pay the fines imposed for having exceeded the reduction of emissions.

Following the Kyoto protocol, the members monitored the pact in 2005, where the well-known Special Working Group on Future Commitments was established. It was two years later when a follow-up evaluation meeting of the pact was again held.

8. World Ecological Organizations and Associations

Environment Liaison Centre International



It is an NGO founded in Nairobi in 1975 that seeks to act as a liaison between NGOs and the United Nations Environment Program. It has 850 members distributed in 103 countries.

Goals:

- To promote the voice of the grassroots through the stimulation of communication and the exchange of information and experiences among working groups.
- To encourage the advisory role of environmental NGOs in developing countries and United Nations bodies.

Greenpeace International



Greenpeace is an NGO founded in Canada 1971 as a consequence of the environmental movement that emerged in the decade of the 70s. This movement, started from the action of a group of activists who formed a small organization called “Don’t Make a Wave Committee” that had as a goal that the United States did not carry out a second nuclear test in the archipelago of Amchitka (Alaska) located in the north of Canada. As a protest, this group organized a boat trip called Greenpeace to the area where the nuclear tests were being conducted.

“Don't Make a Wave Committee” did not officially get any change done, but the media echoed its action and there were numerous demonstrations that ended up supposing the abandonment of the tests by the United States.

In 1996, Greenpeace achieved that the Comprehensive Nuclear-Test-Ban Treaty was signed by the UN. This NGO also stands out by its support to the Kyoto Protocol.

Goals:

Protection and defense of the environment through intervention in different parts of the planet when attacks against nature are committed.

- Implementation of campaigns to halt climate change.
- Protection of biodiversity.
- Fight for the non-use of transgenics and achieve reduction of pollution.
- Ending the use of nuclear energy and weapons.
- Protection of forests and natural landscapes.
- Identification of human activities that can affect the ecological balance and carry out campaigns in defense of the environment.

Campaigns:

Greenpeace carries out numerous campaigns in order to fight against the deterioration of the environment. Among them, the most important are:

- The so called "School for Forest Friends"

It is an education program whose aim is that schools take part in the welfare of woods. Besides, in these schools, teachers teach the diverse ways and practices of daily care of forest resources.

- Marine environment:

With this project, Greenpeace tries to inform and defend the situation of the coasts and oceans from pirate fishing, overfishing, whaling and threats to the marine world. This is why members of this group have ships such as the "Rainbow Warrior", which we can see below, and with which they intercede between the harpoons and whales to prevent the hunt of this animal.



Rainbow Warrior

This boat was built in Aberdeen in 1955 and was initially used by the British Ministry of Agriculture as a research vessel. It was later converted into a fishing boat, until its acquisition by Greenpeace in 1978.

It was used as a support boat for the demonstrations organized by the association against different activities carried out by countries that are against the protection of the environment. The ship was sunk in 1985 by the General Direction of the French Foreign Security in 1985 in order to avoid its incursion in its territorial waters.

- Non-Toxic Fashion and Catastrophe of the Union Carbide Pesticide Plant in India:

Greenpeace fights against toxic pollution and its harmful effects on the environment and health.

International Federation of Environmental Journalists



It was founded in Germany in 1993. Among its partners there are about 1,900 citizen groups from 161 countries. Approximately, 1,000 of these groups are located in the Southern Hemisphere.

Goals:

- Dissemination of truthful information through all channels, free from any

pressure on ecology, environmental management, nature conservation and sustainable development.

- Encouragement of a large number of people around the world to demand effective measures to solve global problems to their governments (or sometimes corporations): ecological degradation, poverty, war and human rights abuses

Intergovernmental Panel on Climate Change



It was established in 1988 to provide comprehensive assessments of the state of scientific, technical and socio-economic knowledge on climate change, its causes, potential impacts and response strategies.

Goals:

- Evaluation of relevant scientific, technical and socio-economic information in order to understand the risk of human-induced climate change.

Friends of the Earth



It is a Dutch organization which tries to promote a social and global change towards a respectful, just and supportive society with the environment.

Goals:

- Coordinate 68 environmental organizations around the world. Its purpose is to support and develop policies and action measures in defense of the environment, and persuade governments, companies or international organizations to modify their programs, projects and activities in relation to this objective.
- Promote food sovereignty.
- Fight for a fair economy.
- Defense of community energy and equitable use of resources.
- Work with local communities

United Nations Environment Program



It is based in Kenya and it is a United Nations' program that seeks to coordinate activities that are related to the environment. This program was created by the recommendation of the United Nations Conference on Human Development.

Goals:

- Its mission is to direct and encourage participation of citizens in the care of the environment by inspiring, informing and giving nations and people the adequate means to improve the quality of life without endangering that of future generations.

World Rainforest Movement



The World Rainforest Movement was founded in 1986 and it consists on an international network of citizen groups from the South and North involved in efforts to defend the world's forests from their destruction.

Goals:

- Work to secure land tenure and livelihoods of forest-dwelling peoples and support their efforts to defend forests from commercial logging, dams, mining, plantations, shrimp farms, colonization, settlements and other projects that could endanger them.

World Wildlife Fund



This association was founded in 1961 and it is the largest independent conservation organization in the world.

Its origin is due to a group of people committed to nature that ended up creating a global network supported by totally different people.

It is considered a non-profit organization named World Wildlife Fund. In Spain, the 30th of July of 1968, Adena (Association for the Defense of the Nature) was created, and it was united to the network of WWF which turned into the denomination WWF / Adena. This association focuses on conservation projects.

Goals:

- Originally committed to the preservation of wildlife and natural habitat, it currently aims to conserve the world's biological diversity, to ensure that the use of renewable natural resources is sustainable, and to promote pollution reduction and uncontrolled consumption.
- Stop the degradation of the planet's natural environment.
- Building a future based on the harmony between population and nature.
- Conservation of the world's biodiversity and the sustainable use of renewable natural resources.
- Reduction of pollution and excessive consumption.

Achievements:

- Creation of more than 300 protected areas worldwide.
- Rescue of the extinction of numerous species such as elephants, gorillas, whales, butterflies, etc.
- Encouragement of numerous treaties for the conservation of nature such as CITES, Ramsar or Kyoto.
- Businesses with thousands of companies to improve their environmental impact.
- Training of millions of people around the world in favor of the environment.
- Work with local communities to make development compatible with conservation.

9. "Prosperity without growth" Tim Jackson

Tim Jackson is a teacher of sustainable development at the University of Surrey. He was the first person in the UK to gain a chair in the field of sustainability.



Tim Jackson

He has worked as a commissioner of economics at the Commission on Sustainable Development for seven years (2004-2012). He is known for his work *Prosperity without growth: economy for a finite planet*, written in 2009. This paper has been considered "one of the most important works on environmental economics."

The book is about the prosperity of hope, a prosperity shared by all countries. Jackson states that we have valued prosperity in terms of money and economic growth, and that we have made our economies grow so much that we are now in real danger of breaking hope, cutting off natural resources, cutting down rainforests, spilling oil as in the Gulf of Mexico, altering the climate, etc. Therefore, recession has been the only factor that has reduced carbon emissions during the last three decades, and precisely this recession is not something hopeful.

That is why we are in the dilemma of growth¹⁰, we cannot live with it and we cannot live without it.

Jackson wants to resort to the blind faith of our own intelligence, technology, performance and to make things more efficient.

He believes that we should review the figures and face reality now. Therefore, he proposes to visualize a world in 2050 with about nine billion people, all aspiring to

¹⁰ *Destroy the system or destroy the planet, there is not much choice.*

income and Western lifestyles and to have an increase of 2 percent on their wages annually, for believing in growth. We currently emit about 770 grams of carbon, but in the world we imagine, we should reduce that amount of carbon emissions and put it at 6 percent, thus assuming a 130-fold improvement. This would mean going ten times faster than in any episode of industrial history.

This is possible, and it is even possible to get an economy that extracts carbon from the atmosphere, which is exactly what we should be doing at the turn of the century.

For Jackson, it is important that we first look at the economic system we have and analyze whether the current system makes it possible for us to reach such improvements by 2050.

Businesses produce goods for the household and provide us with income, and that is better because we can spend that income on more goods and services. This is known as economic circular flow, and it can seem harmless; but in this system, the role of investment, which accounts for a fifth of the national income in most modern economies, plays a key role in stimulating greater consumption growth. This is accomplished in two ways:

- Pursuing productivity: decreasing prices and encouraging consumerism.
- Searching for the new: the production and consumption of novelty. Schumpeter called this "The process of creative destruction"¹¹.

And the latter, searching for the new, is what Jackson is most interested in. Human beings feel attracted to novelty, new things but also new ideas and new adventures. However, material goods also matter as for human beings, material things act as a language we use to transmit stories.

Unsustainable consumption driven by status thrives thanks to the language of the new. And this is where we find a system that combines economic structure with social logic.

Economic institutions work to promote a growth engine that does not only consist on economic value. It goes moving material resources through the system driven by our own insatiable appetites conducted by a feeling of anxiety.

Adam Smith talked about the aspiration of the human being to a life without shame. This life implied a constant consumerism about the novelties that are constantly appearing in society. This nowadays supposes an unstoppable supply of material goods driven by that anxiety.

We get to the point in which even if we do not need certain material goods, we end up buying them, because if we do not buy them the system ends up collapsing. To prevent

¹¹ *It is a process of production and reproduction of the novelty that continuously pursues to expand the consumer markets.*

it from collapsing, over the last few decades, money, credit and indebtedness have expanded to keep people buying things. This situation has contributed to the crisis.

This is "the story of how we are persuaded to spend money we do not have on things we do not need to create ephemeral impressions on people we don't care about."

But, are we doing the right thing?

The essence of our evolution as social beings is the behaviors we express towards others. The new is adaptive when things are changing and you need to adapt yourself.

Tradition is essential to provide stability, for the formation of cohesive families and social groups. It is here where we see humanity, a human heart that shows us the key of the matter.

That is why the solution is clear. It is not a matter of changing human nature or of restricting possibilities, it is about opening them, about allowing ourselves the freedom to become completely human, recognizing depth and creating institutions whose goal is to protect the fragile altruist.

If we applied this to the economy, and economy focused on human nature, we would see something similar to the four thousand companies that emerged in the United Kingdom over the last five years with environmental goals in their statutes.

Companies like Ecosia, an Internet search engine. This company works thanks to the revenue produced by sponsored links that appear when you search for something. It allocates 80 percent of its income to a project of protection of rainforests in the Amazon.

Investing, for Jackson, must be something dedicated to protect and nourish the ecological assets on which our future depends. There has to be transition, investments in low carbon technologies and infrastructure should be made. We have to invest in the idea of prosperity with meaning by offering capacities for people to flourish¹², and also, that that investment counts with social objectives. Prosperity is based on the help to each other. It is not about putting obstacles to development, but about overthrowing capitalism, about changing human nature.

¹² For Jackson, prosperity has to do with the ability to flourish: physical, psychological and social. Beyond mere subsistence, prosperity fundamentally depends on our ability to participate meaningfully in society. This is a task not only material, but social and psychological.

10. Economic Growth Vs Sustainable Development: Incompatible?

Carlos Mario Gómez Gómez, in his work on economic growth and sustainable development, maintains that a fundamental axis on which the limits of growth revolve is the fact that nature offers a limited endowment of natural resources destined to satisfy the demands arising from the economic activity. We broadly define the environment as a lender of a set of services necessary for economic growth.

From an economic point of view, the environment is considered a scarce asset necessary to satisfy the demand for production of goods and services.

If there could not be a change in production systems and we would like to consume a greater quantity of the same goods, the growth of the economy would lead to a depletion of resources and thus to the deterioration of the environment.

On the other hand, even assuming that our resource base is given, our knowledge of it, the preferences of society and technology are variable over time. So, why could it be argued that economic growth necessarily leads to a greater scarcity of resources?

A first alternative is attached to the Malthusian hypothesis. It states that as growth occurs, all environmental impacts simultaneously increase. This means that when there is economic expansion, the demands of materials, energy, waste assimilation services, recreational services, environmental quality, etc. also increase. (Eg Christensen, 1989 and Daly 1992).

If we assume this hypothesis, we must consider that environmental problems arise from the scale of economic activities. In this sense, Daly (1987) argues that the price system is unable to solve the problems of scarcity, even if relative prices are adequate. Problems can only be solved by establishing quantitative limits on the use of resources and population growth.

As growth occurs, the ability of the environment to meet the new demands arising from the economic system is diminished.

Contrary to the before mentioned ideas, the main opinion in economic analysis is to think that scarcity is a direct consequence of the conflict between the different demands that nature can satisfy. That is, the cost of opportunity and the need for choice. For example, the use of a forest to obtain wood implies giving up other environmental services such as landscape.

All the demands of society imply a need of choice on what to allocate natural resources. That is, conflicts do not come from the size or growth of an economy but are based on social choice.

Growth is not questioned. Nothing prevents long-term growth from being possible and sustainable. What impedes sustainability is then the choices about where to dedicate those natural resources that are limited.

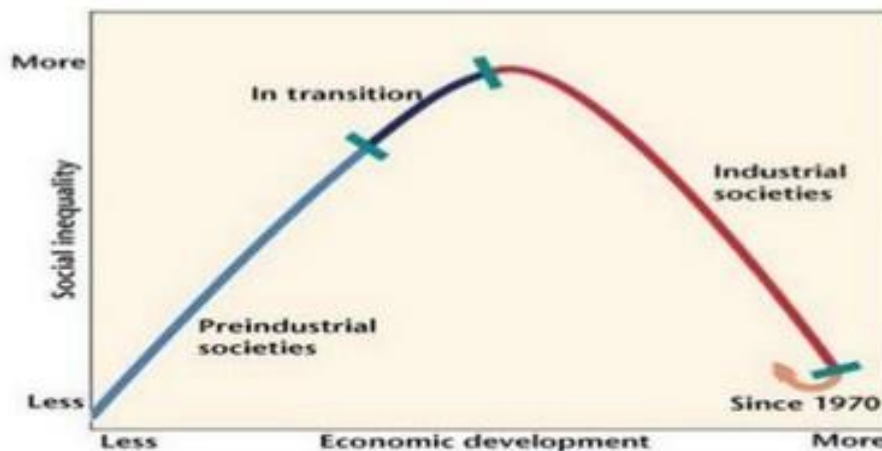
Before we face a global problem of limits to economic growth, we face numerous problems that arise in an individualized and particular way for which we must pose particular solutions.

Admitting that, we are able to advance and ask whether it is possible that economic growth, particularly in developing countries, lays the foundations for improving the problems of environmental degradation.

Well, there is a hypothesis known as the Environmental Kuznet Curve that states that in developing countries, environmental degradation is limited since production is basically produced from traditional agricultural activities that are not massively productive, respectful of environmental balance, and with a large proportion of biodegradable waste.

When the process of economic growth accelerates, the intensification of agriculture and the rise of industrialization lead to an accelerated increase in the extraction of resources.

Below, we will show Kuznet Environmental Curve, where we can observe the relationship between the development of countries and environmental degradation:



Source: *“Capital in the Twenty-First Century”* Thomas Piketty

The curve states that, in countries with a high level of development, the change in the productive structure oriented to service activities that are information-intensive and accompanied by a higher valuation of the environmental quality by people, and by greater environmental regulation, results in a stabilization and, possibly, in an improvement of the quality of the environment.

There is therefore a relationship between the level of development, measured by per capita income, and any indicator of environmental quality that could be represented by

an inverted U-shaped curve.

If we rely on the reports of the Club of Rome, we can state that economic growth of the poorest countries could be a means to create the necessary conditions for sustainable development.

This belief appeared in the World Development Report published in 1992 by the World Bank. The simultaneous idea of sustainable development and, at the same time, of achieving economic growth is therefore compatible.

11. Problems in the implementation of Sustainable Development

There are many considerations that we must take into account because, despite the fact of the importance of sustainable development and the enormous problem of the depletion of natural resources, sustainable development has not been fully implemented, either globally or at a local level. One reason could be found in the very definition of sustainable development.

Sustainable development is a concept created at the end of the 20th century as an alternative to the usual development, defined as a reconciliation between:

- Economic growth.
- Natural resources.
- Society.

To this reconciliation, the idea of avoiding to compromise the possibility of life on the planet was added, as well as not to compromise the quality of life over the human species. That is, sustainable development goes in search of common ideas. Achieving that reconciliation is one of the challenges that remain in force, as reaching a common point among different objective and subjective perspectives is something complicated.

However, it is necessary to consider three key conditions which must be satisfied in order to achieve sustainable development:

First Condition

A judicial system that ensures the compliance of existing laws and establishes new ones as society and technology continue evolving.

Social, environmental and economic development seeks to satisfy individual interests in order to achieve sustainable development based on collective ideas. Ideas that can only be generated by an educated society.

Second Condition

An assessment of goods and services should be carried out to ensure the continuity of the production process which is necessary to obtain them without diminishing the quality of those goods or services.

The valuation of resources is fundamental. It should go beyond a simple analysis of costs or benefits. Here, a subjective aspect takes part, since what for one is a cost, for others can be a benefit.

Third Condition

In order to be able to implement sustainable development, it is important that all the agents related to its implementation participate in its decisions, in the interest of evaluating them. If we considered the history, there have been different development projects:

- Projects that have failed if we value the expectations they expected with their arrival.
- Projects that have absorbed large amounts of funding and have achieved nothing.
- Projects that looked successful but failed once their funding ended as scheduled.
- Projects with optimistic objectives whose unintended consequences were social and environmental disasters.
- Well-funded, well-equipped and technically sophisticated projects that were sabotaged by beneficiaries.

There have existed from small, unfinanced local projects to major international initiatives with massive budgets. Evaluation of projects takes time, it is usually difficult and often not funded.

It is essential that these three issues are taken into consideration to understand the difficulties that sustainable development is experiencing in order to establish itself globally as an alternative to development based on the indiscriminate use of natural resources, without considering the serious problems that would be caused by their exhaustion.

12. German Ecological Economics

The protection of the environment and, together with it, of the climate have a great importance in Germany. Germany is a pioneer country in the protection of the climate and the expansion of renewable energies.

Germany, following a restructuring of the energy sector, is moving towards a future of sustainable energy.

That is why it gives up atomic energy until 2022, and it is until 2020 that Germany plans to reduce its carbon dioxide emissions by 40 percent compared to 1990 and by 2050.

Germany aims to fight for environmental protection, for cooperation concerning energy matters and for development based on low environmental impact, all of it in a global framework. Germany is a great driving force in the European Union, undoubtedly a pioneer in international climate policy.

The European Union supports the objective of limiting ^{global} warming to a maximum of two degrees Celsius. To achieve this, there is a need to reduce the emissions of carbon dioxide from 80 to 95 per cent in industrialized countries.

Germany perfectly combines the country's economic growth with environmental protection as a strategy to achieve a sustainable economy. Therefore, there are essential elements such as:

- Expansion of renewable energies
- Increase of energy efficiency and resources
- Intelligent use of renewable resources.

These means a strategy that, on the one hand reduces the environmental impact and on the other hand makes new areas of business and jobs arise.

Germany is the first country in the world to produce wind energy, producing up to 20,622 MW according to the German Wind Energy Institute (DEWI).

The country is ranked number one in the global wind energy market, where turnover reached 5,640 million Euros, due to the large number of companies dedicated to this type of energy, throughout the supply chain and maintenance.

13. Western Sahara Conflict

13.1. Origins of the Western Sahara Conflict

The origins of the Western Sahara conflict take place in the second European colonial expansion plan in Africa. The plan emerges at the Berlin conference (188-1885), in which Spain was granted Western Sahara although it does not start ruining its territory until the 30's of the 20th century.

In 1934 Saharawi and Spanish leaders signed a peaceful agreement in which the colonizer was allowed to control the territory.

During the years of colonization, the territory was stable and the Spanish and Sharawis coexisted peacefully until 1968. Few years before, a nationalist movement emerged throughout Africa which pushed a lot of African countries to decolonization and helped them to proclaim their independency. Western Sahara wasn't an exception, the Advanced Organization for the liberation of Seguia el Hamra and Rio de Oro¹ led by Sidi Brahim Basiri was created that same year.



Sidi Brahim Basir

After the creation of the Saharawi nationalist organization in 1970, the tensions between colony and colonizer began. These tensions started when the Sahara General Government called for a peaceful demonstration at the main square of The Aaiun on June 17, 1970, which ended up in fights that resulted in some deaths, injuries and

¹ *Seguia el Hamra and Rio de Oro Was a Spanish province located to the north of the Sahara.*

hundreds of detainees. The leader of the organization, Basiri, was arrested by the Spanish military service and no one knew anything about him until his death.

The death of the Saharawi leader was a state crime that provoked the rupture of the peaceful relations between Sahrawis and Spaniards. As the writer and journalist Pablo Ignacio Dalmases² said:

"The death of Basiri broke the harmonious coexistence between Spaniards and Saharawis and still nobody considered it opportune to clarify"

The Polisario Front, founded and led by Uali Mustafa Sayed³, is a liberation movement of Saguia el Hamra and Rio de Oro. The Polisario Front is the current maximum representative of the Saharawi people and was created with a very clear purpose: the independence of Western Sahara and the creation of a country of its own. In article 1 of the Polisario Front statutes, the Polisario Front is defined as:

"The Polisario Front is a National Liberation Movement, the result of a long Saharawi resistance against all forms of foreign domination, in which the Saharawis are voluntarily mobilized, for the struggle for national independence and for the recovery of Saharawi sovereignty over the entire territory of the SADR (Sahrawi Arab Democratic Republic)."

The Polisario Front was created in 1973, and that same year started an armed confrontation against Spain, the first fight took place on 20th May of 1973. This confrontation is characterized mainly by the courage of the Saharawis people for defending their rights, as there were only 17 Sahrawi soldiers with just 5 weapons fighting the Spanish army for months.

In 1974 Spain announced its decolonization plans promising the autonomy of the Saharawi territory by holding a Referendum in Western Sahara.

13.2. Betrayal of Spain to Western Sahara and beginning of the war.

When Spain announced its intention to hold a referendum for the self-determination of Western Sahara, Morocco objected to the referendum and claimed the Saharawi territory as its own and addressed it to the International Court of Justice in The Hague. The international court in The Hague ruled in favor of holding the referendum rejecting the requests of Hasan II, king of Morocco at this time.

² Pablo Ignacio Dalmases He lived in Western Sahara, was director of Radio Sahara and has written several books on the history of the Sahara.

³ Uali Mustafa Sayed was a revolutionary Sahara leader who has gone down in history because of the guerrilla tactics he used. On 9 June 1976 he was killed in combat by the Mauritanian army.

Unconfirmed with the decision of the International Court, King Hasan II started his plan for the invasion of Western Sahara which he called the Green March⁴.

After Morocco announced its intentions of invading the territory, the Spanish government and its troops promised to defend Western Sahara and grant its independence before the decolonization process is completed.

Four days after this announcement, on 6th November, 1975, Hassan II carried out his invasion plan and the Green March began.

In this climate of great tensions Spain failed to live up to its promise and opted for signing the Tripartite Agreement of Madrid on 14th November, 1975. In the agreement Spain transferred the administration of Western Sahara to the governments of Morocco and Mauritania and withdrew its troops precipitately from the territory of Western Sahara.

After these events, the Sahara began to be bombed by the Moroccan military, which caused the population to flee to the Tindouf refugee camps where they began to assemble the first jaimas⁵. Before reaching this area ceded by Algeria the Sahrawis were persecuted and bombarded with white phosphorus and Napalm, many civilian population lost their lives by fleeing. The Polisario Front settled its base in the Refugee Camps of Tindouf and from there began its fight against the Moroccan and Mauritanian armies.

The war was a war of wear in which Mauritania withdrew in 1979 and signed an agreement for peace with the Polisario Front. However, the confrontation with Morocco lasted until 1991 when the United Nations Security Council established a peace plan called the United Nations mission for the referendum of the Western Sahara (MINURSO). The plan was accepted by both parties and would consist in the elaboration of a Referendum in which the Saharawis would decide to be independent or to be part of Morocco.

It has been 26 years since the plan was put together but the referendum has not yet been held and half of the Saharawi population is still in the refugee camps and the other half under the oppression of the Moroccan regime, waiting for a solution to the conflict that started 42 years ago.

⁴ The green march was the way that Morocco invaded the Sahara, this march consisted of the penetration of 350,000 Moroccan civilians sent by the Moroccan king in the Sahara.

⁵ *Tents*.



Source: *ElconfidencialSaharai*

This picture shows the moment when Mauritania recognized SADR (Sahrawi Arab Democratic Republic) in 1984.

13.3. Current situation of the Sahrawi people.

The Sahrawi population is currently divided between the Refugee Camps in Tindouf, the area occupied by Morocco and the area liberated by the SADR.

This division of the population becomes more effective with the construction of the “wall of shame” raised by the Moroccan government in Western Sahara to protect the occupied area. This wall is the longest wall of the planet after the Chinese wall and is surrounded by more than 9 million antipersonnel mines, making the area one of the most mined on the planet, and protected by more than 100,000 Moroccan soldiers.

In the following graphic-map we can see this distribution.



Source: *New internationalist magazine*

13.3.1. Sahrawis in Tindouf Refugee Camps.

Refugee camps are located in the western part of the Algerian desert bordering the SADR. This is one of the regions with the most extreme climate conditions on the planet, temperatures exceeding 50° in summer and where it is practically impossible to do any agrarian activity.

The establishment of an organized society in this tough part of the planet has been possible thanks to the characteristics of this town, its solidarity, justice and way of looking at life which is very different from what we are accustomed to.

The Sahrawi population in the refugee camps is approximately 200,000 people who have lived in these camps for more than 40 years. The life of the Saharawis depends practically on international aid, since the economy in these camps is almost non-existent. International aid is insufficient and this is why 30% of Saharawi children suffer from malnutrition and most women suffer from diabetes due to the lack of varied food supply.

The working life in the camps is precarious and is based entirely on the services sector, such as the sale of basic products by Sahrawis who purchase from Algeria, teaching for a salary of 50€ per month or military service with a salary of 80 € per month. Most families depend on the money sent to them by relatives who live outside, mainly in Spain.

Most of the Saharawi youth in the refugee camps are well educated as they have access to universities in Spain, Cuba or Algeria. This is one of the reasons why they are running out of patience, because despite having studies they don't have any possibilities for putting their knowledge into practice. The majority of the young Sahrawis believe that the only way to recover what has been taken from them is going back to the war as the international community has shown its indifference to solve a conflict that is seen as unfair by the entire world.

Spain, despite the fact that politically speaking it has not fulfilled its responsibilities and continues to fail to comply with them, continues to be the main administrative power of Western Sahara. Western Sahara is still considered the only country in the world pending of decolonization. The Spanish population always has supported the Sahrawi population by sending food, toys, welcoming children and organizing cultural events of great importance in refugee camps such as the film festival called FiSahara⁶, to which dozens of Spanish film stars come every year to reaffirming their support, the injustice of the Moroccan occupation and to remind the Spanish government of its duties towards the Saharawi people.

⁶ *Its objectives are to empower, entertain and give audiovisual training to the refugee population of Western Sahara using cinema as an instrument for social transformation.*

Practically in all and every Spanish provinces there is an association pro-Saharawi.

An example of this support is the production of a film by Javier Barden, *Sons of the Clouds*, about the situation of Western Sahara and claiming justice to the two main powers involved in the conflict, Spain and France. The film was raised to the general assembly of the United Nations to get it involvement to resolve the conflict.

Another country to which the Sahrawi people will be eternally grateful is Algeria. In Algeria the Saharawis found a faithful ally and a territory where they built a stable nation after the Moroccan invasion. Algeria has supplied the Sahrawi people with food, weapons and infrastructures.

While waiting for a solution that seems not to be around any time soon, the Sahrawis continue in the camps living in their jaimas and their houses made of mud in the middle of nowhere.

In the following image we can see how the jaimas mixe with the houses of mud in a Daira⁷ of the camps of Tindouf.



Source: Oxfam.

⁷ Territorial administrative unit that groups Town Councils.

13.3.2. Situation in the occupied area

Western Sahara is still on the list of non-autonomous territories of the United Nations and Spain remains the sole administrative power of the country, which proves that the Moroccan occupation is totally and absolutely illegal.

Around 300,000 Saharawis live in the occupied territories under a system that lacks of basic human rights.

The Saharawi population is strictly controlled by the Moroccan government. The Sahrawis have no rights to reunion, associations, health, education...etc. and when they express some kind of demonstration in a peaceful way, claiming their rights they are harshly repressed by the Moroccan police.

Life in this area is sometimes a calvary, often imprisoned, tortured and killed by the hands of the invasive state without anyone being able to do anything and without the media to echo what happened. The media is strictly controlled and the international media is witnessing a constant high pressure from a regime that calls itself democratic but does not comply with any requirement of democracy, considered by a lot of countries rather dictatorial in fact.

The Sahrawis see how their resources are exploited illegally and how Moroccan is growing its economy at the expense of their land. Moroccan citizens are provided with jobs while Sahrawis are prevented from having a chance to live with dignity.

Despite the thought conditions, many Sahrawis end up abandoning the occupied territory and going to the area of Refugee Camps of Tinduf where they lack basic needs but at least can live in a dignified way.

Below we will show different real stories collected by associations in the area occupied by Morocco.

This is the experience of ASPA (Andalusia Association for Solidarity and Peace), a Spanish association, in their visit to the occupied territories:

Visit of an aspa commission to western sahara occupied by morocco

In July, a group of people from the Andalusian Association for Solidarity and Peace (ASPA) have traveled to Western Sahara. Among the objectives of this trip were to have an approximation to the reality that the Saharawi people are living in the occupied territories.

We have seen the occupation in the broadest and most dramatic sense. In each city there are two police checkpoints before entering and two on the way out. We counted more than 50 controls from the north, already in cities like Guelmin and Tan Tan until Dajla. The uniformed people stopped us and asked for our passports, not only outside

but also inside the city, and they recorded data such as profession, address, phone number...etc.

They communicate our data by telephone to someone else. There is an absolute control of visitors and an interest in making it clear that you are watched at every moment, that you are not welcome and the sooner you go better.

As soon as you are in the cities you are followed whether you are moving in vehicle, motorcycle or on foot. Wherever you look there are several shadows behind you as in the worst black film. If you visit an association, even if they are legally constituted, in the middle of the meeting two or three plainclothes policemen are installed and write down your data and everything you discuss.

We have been able to verify that the situation that the Saharawi people live is of total siege and repression. They can not move freely in the streets in their own land, they are not safe in their homes, they can be registered and stopped by the Moroccan policy at any time. They can not study their culture in schools because there is no Saharawi teachers. If they go to the hospitals they are not attended and if they are it's always in humiliating manners.

Police vans with 14 or 15 plainclothes policemen take the streets every day - we have seen it in Smara and Dajla, more hidden in El Aaiún, but also present. The cities are full of military barracks and the green of uniforms is the predominant color in this landscape.

We have also been able to see how the Moroccan citizens live in villages built especially for them. In semi-detached houses and receive a certain amount of meat, oil, sugar and other necessities totally free, besides not having to pay neither water nor light.

They arrested teenagers, including young children, one of our friends showed us pictures of his son with broken arm and an inflamed eye and other signs of violence in legs and body provided by the Moroccan police. Women who are participating in a very active way in the intifada, also suffer the detentions and violence.

We have heard from the most crude testimony of torture suffered by defending the most basic human rights and denouncing the public torture of political prisoners, in front of the other prisoners; Inhuman conditions inside prisons: insufficient and poor quality food; The overcrowded prisons prevent the prisoners from having the smallest space to be able move which also led to the insalubrity . There are photos on the Internet taken by the Saharawi prisoners themself



Source: El Confidencial

The injured from the demonstrations that are taken to the hospitals, are injected with an known substances and detained although they are unconscious. When their relatives ask for them they do not give them information and thus they continue producing disappearances of young Saharawis. Women who visit relatives in prison are humiliated and harassed by officials.

We spoke with Mohamed Daddach - "The Mandela of the Sahara", imprisoned for 24 years in Moroccan prisons, 14 of them hoping that any of those days would be the last of his life. We have discussed with those who are under the weak - in Morocco - Amnesty International's protective umbrella: Brahim Dahan, H'mad Hammad. People who have been fighting for years, supporting a harassed and besieged population.

We want to convey the essence of their messages: They show their great gratitude to the families who welcome their children to the Tindouf refugee camps and, in general, to the Spanish people for their support.

To thank the associations of "Friends of the Sahrawi people" for years of struggle and support and ask them not to give up on their commitment.

They denounce the Cervantes Institute for the null attention given to the demand of studying the Spanish from the Saharawi population. Not only in the occupied territories, but also in the refugee camps.

They denounce torture, disappearances and violations of human rights in general by the State of Morocco. In the words of one of our friends, a poet: Morocco sings a song that has no rhythm because they speak of being a democracy and what it does with the Saharawi people, it has no place in any democracy, because are facts of dictatorship.

They denounce how the United Nations forces, MINURSO, are there on holidays, in good hotels, with good vehicles and on the beaches of the Aiun,. They do not visit the prisoners and look away when violations occur. Violations that have been denounced year after year by International Amnesty.

They denounce the position of the Spanish government which is subject to the ups and downs of King Mohameh VI's. They ask the Zapatero government for a clear commitment to support what the entire Saharawi people want: holding the promised referendum. They remind King Juan Carlos that he has an obligation to repair the damage and crime caused in 1975 when he promoted the signing of the Tripartite agreement, which has brought so much suffering to the Saharawi people and has caused so much shame among the Spanish people.

They denounce the plundering of natural resources (fishery resources, phosphates, oil and the desert sand itself) carried out, on many occasions, by Spanish companies such as the Calvo tuna that extracts tons of fish in business with Morocco.

World organizations of human rights, such as International Amnesty, have repeatedly denounced torture and human rights violations in the occupied territories.

These are some testimonies collected by Amnesty International from Sahrawi citizens at the moment of being arrested or when they were interrogated by the Moroccan police.

Abused upson arrested

Khadija is a soft-spoken, first-year student at Sidi Mohamed Ben Abdellah University in Fes.*

Not an activist herself, she happened to walk past a protest at the university's Dhar El Mehraz campus that was being violently dispersed as she was returning to her dorm room after class on 29 March 2014. She described to Amnesty International her arrest and torture by police officers:

"On my way back from class, three CMI riot police came up to me from behind and tripped me. I fell and they tore my headscarf off and hit me. Then they dragged me by the legs, face down, to their van. Inside, about 10 more officers were waiting. That's when they hit me the hardest. During half an hour or longer, they beat me, called me a prostitute, insulted my mother and threatened to rape her...

"At the police station, they put me in an office with the door open. Police kept walking in and out, pulling me one way and the other, threatening to rape me, trying to pull my

clothes off... Some said: 'If we see you at university again, we'll rape you'. Each time a new officer came in, I hoped he would have some compassion, but he would just threaten to rape me or insult me while others laughed..."

On 6 May 2013, during a protest outside the Fes Court of First Instance in solidarity with students arrested after an exam boycott at Sidi Mohamed Ben Abdellah University, police officers arrested student and VDB activist Mohamed El Harrass. He told Amnesty International that following his arrest, he was put in a blue police van, where police kicked him with steel-capped boots, pulled out clumps of his hair, and attempted to rape him with a baton. He said officers then put him in another police vehicle where further torture awaited:

"[An officer in the van told the others], 'Make him fly away from Morocco' and indeed it felt like flying when they slapped my face violently left and right, again and again, right on my ears... They started beating me hard with their batons all over my limbs, especially on my legs. It wasn't enough for them when I collapsed onto the ground, and they carried on kicking me with their boots until my nose started to bleed profusely. I lost consciousness"

On 27 March 2012, security officers, called in to disperse student protests, beat Progressive Baseist student faction activist Abderrazak Jkaou on campus and left him unconscious. Several witnesses confirmed the following account that the 27-year old student gave to Amnesty International:

"It was brutal violence – as if the perpetrators took pleasure in beating me. Officers surrounded me... Some carried long wooden sticks. They beat me from head to toe. Then a plainclothes officer gripped a handcuff in his fist and punched me between the eyes. I was knocked out and fell. Then the others came and stamped on my bladder until I urinated. They beat me until I passed out, then threw me outside the campus, as a warning to other students. The students thought I was dead."

Violent Interrogations

Police officers arrested 20-year-old Hamza Ljoumai on 4 June 2013 in Smara, Western Sahara and accused him of violence during protests for self-determination that later escalated into clashes with security forces on 22 and 23 May 2013. He told Amnesty International:

"At the police station, officers started insulting me. They took me to an office, handcuffed my wrists and ankles to a chair, blindfolded me and started the

interrogation. They asked about people who were at the demonstration with me while slapping me. Then they took me to a cell with no food, took my jacket and left me a foul-smelling cover for the night. For the first two days, they took me back and forth between the cell and the interrogation room, where they slapped me. On the third day at the police station, officers gave me many pages to sign – they didn't let me read them. They beat me to sign them."

He added that during his second court hearing he told the investigative judge about his treatment at the police station and the forced signature of his interrogation report, but the judge remained silent and disregarded his complaint.

Amnesty International also documented cases of reported use of torture or other ill-treatment to force children to incriminate themselves. Relatives of juveniles arrested by police officers and gendarmes in the three cities said the juveniles were often interrogated without being allowed to communicate with their legal guardians or lawyers, in violation of Moroccan law.⁴¹ They added that the children were forced to fingerprint incriminating reports while being hit and slapped on the head and ears until they were dizzy, while others were given electric shocks.

A relative spoke of one child's visible trauma and how it prevented him from speaking out: *"When we saw him two days after police arrested him, he had not eaten for two days and was terrified. Every time he hears the word 'police' he is terrified. He said that he was beaten but he wouldn't talk about it at first. They put him in pre-trial detention right away and we couldn't see him except from afar."*

Another relative told Amnesty International:

"I saw the children's bruises when they came out of the gendarmes' custody and saw the investigating judge. They said they were innocent and told the court they had been beaten – but no medical examination was ordered, and the judge accepted the interrogation report as fact."

13.3.3. Liberty zone by SADR

In the liberated territory life is almost non-existent due to the weather conditions and stony soil, this area is known by the Saharawis as the Hamada⁸. Here only live some peasants, who graze their sheep or their herds of camels, and it is where the army of the SADR has its bases.

In this photo we can see the typical hamada landscape.

⁸ *In the Sahrawi culture, the Hamada is compared to hell, because of the extreme conditions there.*



Source: nomadic eyes

13.4. Western Sahara and its natural resources.

Like most territorial conflicts, the main cause of the Sahara conflict is the control of natural resources.

Most of the Saharawi natural resources are in the occupied area by Morocco, these resources are mainly fishing, phosphates, oil and agriculture, which we will talk about later.

The zone liberated by the Polisario Front has very few natural resources due to its desert and arid quality.

As mentioned above, the Saharawi resources are illegally exploited by Morocco since the only benefactor of its exploitation is the Moroccan government and its population, in addition to numerous multinationals that have agreements with the Moroccan government. However, all the economic activities carried out in this area by Moroccan are illegal. Facts that also has been denounced on numerous occasions by International Organization and the Polisario Front itself.

There are a large number of companies that plunder the resources of the Sahara knowing that it is illegal. Most of these companies are Spanish. Spain is the country that has the most economic interest in Western Sahara, hence its close political relationship with Morocco.

In addition, Western Sahara is suffering an ecological crisis due to the uncontrolled overexploitation of its resources and environmental abuses. An example of this is the overfishing of octopus in Dajla, located south Western Sahara. This overfishing is causing the extinction of the octopus in the area.

This abuse becomes more noticeable when we realize that artificial settlements have been constructed with the only purpose of capturing this marine species. These facts have been denounced by the CSPRON, Saharawi association that defends the protection of the natural resources in the occupied territories.

Another case of overexploitation is suffering from the underground water wells in Dajla, these wells are overexploited without even having done studies on their sustainability in order to supply the thousands of square meters of agricultural greenhouses in the area. This fact is causing serious environmental problems in the area.

And as these examples we can list many others, like the overexploitation and illegal sale of sand, mainly to Canary companies like Granitra, that uses the sand for the construction industry. Or cutting the symbolic Saharawi tree Talha⁹, which is extinguishing due to its use by the Moroccan army to make charcoal. The carving is a Saharan symbolic tree, used it mainly as medicine for different diseases.

Here we can see what this tree look likes.



Source: Western Sahara Resources Watch

⁹ *The Saharans use it mainly as medicine for different diseases.*

13.4.1. Main Saharawi natural resources:

Aside from the many other natural resources found in Western Sahara, such as diamonds, gold, iron, zirconia, uranium, sand, gas and water, the most important resources are phosphate and fishing and fishing

- The Phosphates

Phosphate is a product that has multiple functions both industrial and domestic, but its main function is that of its use to produce chemical fertilizers in order to increase the yield of agriculture.

That is why phosphate is a resource on which humanity depends, since it is the main product that makes possible the supply of food for the large population that we live on. That current agricultural production would not be possible without use of phosphate, since it's an essential element to make photosynthesis. A ton of phosphate produces 130 tons of cereal, so if this product is scarce, the consequences would be alarming.

Its importance is also reflected in the human being as it is the second most abundant mineral in the body after calcium.

Western Sahara has the largest phosphate deposit in the world, these outdoor deposits were discovered by the Spanish in 1947. This mineral also accounts for 80% of the wealth of Western Sahara.

Below a picture from Bucraa, where the phosphate deposits were found. These are transported by a tape, the largest tape in the world with these characteristics, at a distance of more than 100 km. On the coast, these are carried by vessels and exported to different countries.



Phosphate bucraa and conveyor tape, Source: Libertad digital

This mineral is illegally exploited by Morocco, which it makes it the world's largest exporter of phosphate. After Morocco, US and China are the main phosphate producers but have established export tariffs in order to ensure the food supply of their population.

Morocco controls the exportation of Western Sahara's phosphate through a company called *Office Cherifien of Phosphates*.

Morocco is unpunished and supported for its crimes and plundering of resources, mainly by France USA, China and Spain since it guarantees the flow of phosphorus. Many companies in these countries and others in Latin America or Europe buy illegal phosphate from Morocco.

However, some companies have tried to comply with the international law such as Lifosa, a Lithuanian company that has been the largest buyer of phosphates from Western Sahara, which has suspended about a year ago its imports in compliance with international law.

- Fishing

The Sahrawi coast has a length of 1200 km and all of it is in Atlantic sea, most of the coast is rocky and steep but there are numerous beaches, it can also find excellent ports. The dimensions of the Saharawi fishing bank are more than 150,000 square kilometers making it one of the most important. In this bank the predominant species are the Sardines, the mackerel, the grouper and the cephalopods.

This coast has always been exploited by foreign fleets mainly by Spain and Morocco.

In 1986, with the entry of Spain into the EU, the fishing agreements they had with Morocco were modified as fishing competition became common, with this agreement fleets from different European countries, mainly Spain, began to exploit the Saharawi waters, For this exploitation Marrueco received financial and commercial financing. The Moroccan power to claim their interests increased in the European commission with this agreement.

The Polisario front has always resorted to these agreements since it argues that Morocco has no decision power in the territory.

In 2011 the European Parliament considered that the agreement was a great expense, for the fact of paying 36 million Euros for 119 licenses of which 100 were Spanish, and voted against the renewal of the fishing agreement with Morocco, reason why European vessels from 15 December 2011 could no longer fish either in Moroccan waters or in Saharawi waters.

In 2012 the trade in fisheries and agriculture between Morocco and the EU was again liberalized.

On December 21, 2016, the European Court of Justice canceled the agricultural and fisheries agreement in the Sahara area that the European Union had agreed with Morocco since 2012. The argument used by the EU for the annulment of this agreement was that the Western Sahara does not belong to Morocco and therefore considers the agreement in this area not considered applicable.

This has been one of the best news the Sahrawi community could receive.

14. Conclusion and personal opinion

Ecological economics is a science that must be appraised today. We are all worried about the potential threat of depletion of natural resources, but we really need a change in our economic and socio-political system that tries to solve the problems we have to face.

Capitalism is an economic system that does not give the necessary answers to apparent problems. We need policies aimed to protect the environment and with it our natural resources that ensure and preserve nature.

We cannot talk about ecological economics without reference to the economy for the common good and the evolution it is having.

Economy for the common good is an economic alternative to the already known traditional economic systems such as communism or centrally planned economy, capitalism or free market economy, or the so-called mixed or market economy.

Christian Felber defines the Economy for the Common Good as that alternative economy that follows a series of basic principles like equality, solidarity, cooperation, trust, generosity, responsibility and honesty. The Common Good Economy is governed by the following main ideas:

1. To change the pursuit of profit and competence, and instead create cooperation and contribution to the common good. Thus, companies that practice cooperation will be rewarded. On the other hand, competitive behavior will have disadvantages.
2. Economic success is not measured by monetary indicators such as the Gross Domestic Product, but by the balance of the common good (at the enterprise level) and the product of the common good (at the system level).

The balance of the common good becomes the main balance of all companies. The more social, ecological, democratic and solidarity the activity, the better the results of the balance of the common good achieved. Improving the results of the balance of the common good of the companies in a national economy will improve the product of the common good.

3. Companies with good balance sheets of the common good will enjoy legal advantages: reduced tax rates, advantageous tariffs, cheap credits, privileges in public purchase and advantages when research programs are distributed. Market entry will therefore be more favored for ethical actors and their products and services than for non-ethical, indecent and non-environmental actors.

4. The financial balance will be the secondary balance sheet. The financial benefit goes from being an aim to being a mean. Balance sheet surpluses should be used for: investments with social and ecological added value, repayment of credits, deposits in limited reserves, bonuses to employees on a restricted basis, as well as interest-free

loans for cooperating companies.

On the other hand, surpluses will not be used to subsidize people who do not work in the company, hostile takeover of other companies, investment in financial markets (these will cease to exist), or contributions to political parties. In return, the corporate profit tax will be eliminated.

5. As financial profit is now a means, and ceases to be an aim, companies can strive towards their optimum size. They do not have to fear being acquired or feel compelled to grow to be bigger, stronger or with greater benefits.

6. With the possibility of vacuuming without fear of optimum size, there will be many small companies in all branches.

7. The income will be a maximum of 20 times the minimum wage. The economy for the common good will not allow for salary differences that are ten times higher between the highest and the lowest wage.

8. In large companies with more than 250 employees, the rights of decision and ownership pass partially and progressively to employees and citizens.

9. This is the same for democratic goods, the third category of property, together with a majority of small and medium-sized entrepreneurs and large mixed-ownership enterprises. For democratic goods we mean public economic institutions in the fields of education, health, social action, mobility, energy, or communication: the basic infrastructure.

10. Nature is given its own value and therefore it cannot be transformed into private property. Whoever needs a piece of land to live in, agriculture or commerce, is given a limited area for free or paying a usage fee. The use of the land is conditioned to ecological criteria and to the specific use. This will mean the end of property speculation.

11. Economic growth ceases to be an end. A new objective will be to reduce the ecological footprint of private individuals, companies and nations, towards a globally sustainable and fair level.

12. The paid work schedule will be reduced step by step towards the brand, which is desired by a majority, of 30 to 33 hours a week. In this way, there is free time for three other fields of work of great importance: work of relationships and care (children, the sick, the elderly), personal growth work (personality development, art, garden, leisure), work in politics and public activities. As a result of this more equitable distribution of different activities, lifestyle will become more sufficient, less consumer, and more sustainable.

13. Every tenth year in the profession is a "sabbatical year" that will be financed through an unconditional minimum wage. During that time, people can do whatever activities they want. This measure unloads the labor market by ten percent of the

unemployment rate in the European Union.

14. Democracy will be complemented by direct democracy and participatory democracy. The sovereign citizenship should be able to control and correct their representation, enact laws by themselves, modify the Constitution and be able to control the supply infrastructures: railroads, energy, water, mail, banks.

15. In order to strengthen the values of the economy for the common good in children and to be able to practice them, the education system should be equally oriented towards the common good. This requires another form of teaching and other content, such as: ethics, communication, democratic education, experience of nature and bodily sensitization.

16. Since in the economy for the common good, business success has a very different meaning to the one it currently receives, other management competencies are demanded. Companies are no longer looking for the toughest managers and executives of "quantitative efficiency," but the most responsible and socially competent, the most empathetic and sensitive, who regard determination as an opportunity and a benefit for all.



Christian Felber

Felber, is a specialist on sustainable economics and alternatives for financial markets. He has developed a new international model called Common Good, whose bases we read above. More and more companies and local governments are trying to include clauses on the Common Good and carrying out the balance of the Common Good Economy.

One of the basic principles of the economy for the common good is to endow nature with its own value by which it cannot be transformed into private property.

This is an advance in the theme of ecology, but it is not enough. We need a change in the most common habits of our daily lives that helps to contribute to the planet.

An example of this could be:

- Participate actively in recycling, not using pollutant products such as the use of aerosols or pesticides.
- Fight against the indiscriminate cutting of trees, as these are the largest producers of oxygen on the planet.
- Use public transportation and non-polluting means of transport such as bicycles or electric cars.

Europe must strive harder in the fight to preserve the environment. An example that allows us to know the importance given to nature in some countries is in Ecuador, where the Constitution formalizes the recognition of the rights of Nature, recognizing it as a subject.

Among the constitutional articles referring to the environmental issue we can cite the following:

Art. 14. It recognizes the right of the population to live in a healthy and ecologically balanced environment, which guarantees sustainability and good living.

Art. 71. Nature or “Pacha mama”, where life reproduces and exists, has the right to exist, persist, maintain and regenerate its vital cycles, structure, functions and its processes in evolution. Every person, people, community or nationality, will be able to demand the recognitions of rights for nature before the public organisms. The application and interpretation of these rights will follow the related principles established in the Constitution. The State will motivate natural and juridical persons as well as collectives to protect nature; it will promote respect towards all the elements that form an ecosystem.

Art. 414. The National Government will adopt adequate and cross-sector measures to mitigate climate change by placing limits on greenhouse gas emissions, deforestation and atmospheric contamination. Measures will be taken to conserve forests and other vegetation and to protect human populations at risk.

Ecuador thus works to reduce the impacts of climate change and other events of natural origin on the population and ecosystems.

There is therefore an alternative to the conventional economy, which gives priority to nature and strives for its protection and preservation.

It is important to emphasize that a green economy has a vision centered on ethical principles with society and the environment. It is an economy that rescues traditions as a form of innovation in productive processes, we should remember that some innovations have a negative effect on the environment. It is an economy that sees the impossibility of valuing natural resources, which sees them as limited and stipulates that the negative effects which already dumped on the environment are now irrecoverable. Ecological economics also tries to avoid or limit the waste dumped in an amount that can be absorbed by the ecosystem. Instead, we currently find a capitalist

vision that sees natural resources as unlimited and incompatible with the idea of economic development.

Well, the ecological economics is not opposed to economic development, since it is possible to coexist between economic growth and an economy that values natural resources. It is possible to move towards an alternative economy, oriented to the common good; but to achieve this, countries must develop policies committed to natural resources and their conservation.

To conclude, and in regards to the Western Sahara's conflict, it is clear that this is a totally unjust conflict due to the fact that its people have been waiting for the promised referendum by the United Nations since 1991. It is also evident that this referendum of self-determination has not been held yet because of the economic and the political interests Morocco has with the great world powers; something that shows the inability of the UN to solve the problem and fulfill its obligations and how interests in the control of natural resources is more important than human rights.

Despite this, we do not lose hope of recovering our lands. The fact that we have settled in the refugee camps has allowed us to organize and form a society that never tires of struggling to claim its rights. However, it is sad that, although no one recognizes Western Sahara as part of Morocco, the peaceful solution is far from close, above all if we take into account the increasing tensions between the Polisario Front and the Moroccan government since the recent death of the former Sahrawi president Mohamed Abdelaziz on May 31st, 2016.

As a Sahrawi myself, I have lived the conflict in first person and I have to recognize that the peaceful solution is what every Sahrawi wants. Nonetheless, and after more than 40 years living in the middle of the desert or under the Moroccan oppression, we are all are running out of patience. Therefore, if the UN does not fulfill its obligations soon, the armed struggle seems more than possible.

It is necessary to take into account that, despite of not having the support of the Spanish government, the Sahrawi people have more than the 90% of the Spanish popular support. Thus, and from my point of view, if the conflict reaches its limits, I have no doubt that the Spanish population would put great pressure on their government in favor of the Sahrawi cause.

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