

Are We an Ethically Sustainable Species? A Reflection Based on the State of Our World

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INTRODUCTION

As many other organisms, we are used to modify the environment for our own profit. Nevertheless, the dimension of our capability of changing it exceeds that of any other species on the Biosphere. We act at a speediness and with a technological capability that no other organism or previous human generation has ever been able to achieved and this capability has increased at an exponential speediness during the last century. 2000, a propitious year to evaluate old attitudes and to develop new projects for the new century and millennium, was the framework of two important events, the 1st World Conference on Bioethics¹ (Gijón, Spain, June) and the 1st FLAD International Seminar on Bioethics² (Lisboa, Portugal, July).

During the closing session of the above mentioned Conference, a reflection that will mark future debates was put to the audience:

“ XXIst Century will be the century of the Bioethics or will be the century of Chaos” (Van Rensselaer Potter videoconference, Gijón, June 2000).

The Future should recognise the existence of an important relationship between our «State of the World» and the tragic events that took place few months after this Conference (September 11th, 2001) *Massif attacks against civil population both after Iran invassion and in Madrid 11th March 2004 should be added to this modfull tendency. I would like to dedicate this paper to the memory of victims. although G7 countries seem unable to react. Few people expected chaos, and the fact that a serious crisis of moral values was going to be inherited from the past by this new century and millennium, in which we thought to enter with renewed expectation. Few of us expected events that would have surpassed all fiction. Desperadoes attacking USA military and economical main interests, or the following American invasion, masked as an “armed

intervention” against a whole society and culture, during which human beings have been simply considered as «collateral effects». A framework that have been developed undergoing the consequences of our unbalanced Western system of values focused on predation and market interests. It will not be easy to forget the people died after such catastrophes, over 3 thousand, but at the same time we easily forget the number of people that daily die due to our unbalanced food distribution: over 24 thousand people every day³. It means that, from the 1st plane impact (08:45) up to 3 hours later (11:45), all over the world the same number of people dead at the Twin Towers died of hunger. But over 3 thousand more people had died 3 hours before and died 3 hours later and so on, hour after hour, day by day; and we forget them every second of our overfed lives. Expert voices have better summarised the real problem of the actual economic-centred globalisation model,

“Today’s use of water, air, land and forests is placing unprecedented pressure on the environment—intensified by urbanisation, globalisation and migration. Already, demand for water exceeds supply in parts of the world and the land available for crops is decreasing. While millions struggle for a decent standard of living, the top one fifth⁴ live a high-consumption, high-waste lifestyle: the richest 20 per cent of the world’s people and countries account for 86 per cent of private consumption” Thoraya Obaid, UNFPA Director for the World Population day (11th July 2001)⁵

«The world needs a global war on poverty and environmental degradation that is as aggressive and well funded as the war on terrorism... Ten years after the Rio Earth Summit, we are still far from ending the economic and environmental marginalization that afflicts billions of people,» Christopher Flavin. Worldwatch President ⁶

When a forest or a fertile valley is destroyed for a dump construction without local’s permission, this is robbery; when a whole culture is massacred, this is terrorism, although it had been supported by international funds. A terrible but historical case affecting Achi Indians in Guatemala has been reported in detail in the «State of the World 2001»

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(8: 156-157) and many others *to fill many books...* (Roodman, 2001); to fill all the books of our own history. In such cases, as in many other military or social interventions, occupations, etc. occurred in underdeveloped countries, we should talk about international terrorism; supported by developed countries, sometimes under democratic governments, but terrorism. Therefore, the *global war on poverty* should be urgently included in this *war* against terrorism. When a whole country dies of hunger due to a non adequate distribution of food resources, we are talking about international terrorism and it surpasses the frontiers of our own dignity. USA government, leaded by his actual president, demands an increase of national funds to struggle against international terrorism regarding as the main target Iran, Iraq and Northern Korea⁷. Perhaps they should look first at their own country and their international politics. Worldwatch Institute is pristine in its denounce: «*Industrial countries produced most of the global warming gases that cause climate change, and yet it is developing countries that are likely to feel the most severe effects*» (Flavin, C., 2001). This increase of 14% in military expenses equal to 379,000 million USA dollars results in detriment of funds for environmental protection, investment for renewable energies to reduce atmospheric gas emissions, development of basic measures ensuring the acceptance of Kyoto climate international treaty. «*If the United States does not assume a leadership role in phasing out fossil fuels, the global effort to stabilise climate is almost certain to fail*» (Brown, L. R., 2001). It is not just a matter of renouncing to a status of comfort, as USA President Bush recently argued to justify the non-accomplishment of Kyoto agreement, it is a matter of global responsibility; of our personal responsibility. The World Economic Forum recently held in New York⁸, in show of solidarity with the hurt city, defended *enterprise solutions to social problems*! Enterprise interests, just focused on economical benefits of multinationals and of other power groups, have never solved social problems, especially when the basis of the problem is a specific model of society. We are nowadays 4½ times richer than our grandparents were, but we are not 4½ times happier (Durning, 1992); we never have enough in our nowhere running, as the rabbit that Alice met in the Wonderland. Independent voices are developing antagonistic opinions analysed at the same time in Porto Alegre (Brasil), out of particular economic interests; *the war against hunger cannot be won with business as usual* (Brown, L. R. *Ibid*). Changes should represent *a revolution as fundamental*

as any in human history, an Econological Revolution to test our technological abilities, our economic capacities, and even our humanity (Flavin, C., *Ibid*). Legislators, governors and educators have to urgently assume their tasks in this revolution, which involves a change in our moral world, our moral standards and a profound revision of our ethical basis. We have arrived to the point of no return. There is no grounds to defend that 3^d Millennium begun on September 11th, 2001, as some important minds have done. It really began on January 1st, 2001. The problem is that we did not react on time. Have we reacted at last?

We often condemn political decisions and curse against governors that act and legislate following our own ethnocentric priorities. Words empty of contents and compromises to develop a sustainable world where much of renunciations is needed; although renunciation is never a priority in our state of affairs. «*A civil society has little formal power compared with government or business. But civil society is crucial in a campaign for sustainability. As consumers and voters, citizens carry immense influence.*» (Gardner, G., 2001) It is just a question of assuming our own responsibility toward ourselves and toward future generations. Only concerned people can expect uncorrupted governments and are urged to safeguard a sustainable model of development. Another world is possible but it is up to you (and me).

Looking for a more sustainable development of our economic system seems to be an ambivalent priority. Firstly, it is obvious that we are more worried about the ecosystem health and we extrapolate this feeling on our economic management. Secondly, we have not an exact definition and we use the term "sustainability" just to defend good intentions but not to assume changes on a society model that is based on unsustainable directives. (cf. Naredo, 1998) In the same way that terms as democracy, ecology or justice have been too frequently perverted in many countries by specific power groups, nowadays concepts as Bioethics or Sustainability run a serious risk of distortion before reaching their suitable maturity and incorporation in human societies. The evolution of the traditional family and mid-sized farms during the last decades, all over the world, must be considered a model of such tendency. As a result of such unsustainable politics the actual situation shows *an increase of intensive monocultures monopolised by large transnational corporations which manipulate markets in their own interests, subverting the roles of democratic governments and creating a neo-colonial South*,⁹

neither ethical nor sustainable at all. We are loosing one of the biggest opportunities, after the turn of the millennium, to develop a new model of society based on solidarity and distributive justice.

ENVIRONMENTAL ETHICS, A MATTER PENDING

«...Yes, but just what and whom do we love? Certainly not the waters, which we assume have no function except to turn turbines, float barges, and carry off sewage. Certainly not the plant, of which we exterminate whole communities without batting an eye. Certainly not the animals, of which we have already extirpated many of the largest and most beautiful species...» Aldo Leopold, *The Land Ethic*

Nothing but an exaggeration can be considered Leopold's generalisation nowadays; I expect few people to exist with such a lack of conscience and knowledge of the environment. Great efforts have been done at educational level to make people understand the real value of the surrounding world. Nevertheless, much more work is already waiting to be done. Much of this work must be focused on the introduction of revised moral values, although I feel disappointed reading Leopold stating *«...The net result is that we have more education but...»*. We may have more information, at least we are nowadays able to have access to more information; to such amount of information, thanks to computers and the web, that in the end we are unable to manage it; but we have it. We may believe that we know more than before because more information has been accumulated after centuries of research and experience, although knowledge should not necessarily and directly depend on the amount of information. Furthermore, is education just a question of quantities? Can we quantify our present education, compare it with the education of our ancestors and conclude that it is greater? Sounds quite close to an intergenerational chauvinism. Moreover, if we could conclude that it is really greater, is it therefore better? Scholars but especially students at the University receive lots of data during their formative periods, information that vanished a few weeks later; but no contents of *education* are included in this amount of concepts. Neither space nor time to make people develop a critical mind to select what is really important, what is really *good*. Moreover, we always lack referential terms. Important and good for whom? Just for me? Just for humans? For animals in general or for the whole biota? This is especially relevant in technical and scientific studies, where people are just

trained to develop and use sophisticated technologies, with no interest in developing critical minds. Just efficiency and productivity are rewarded in our technocratic society. We have lost the concept of scientist in our universities and we seem to look just for technicians. Sophisticated and extremely specialised technicians but just this, technicians.

A worrisome absence of bioethical topics at all education levels urges us to a serious reflection on our main objectives in the Curricula. New Technologies, Genetically Modified Organisms, Neoliberal Patent System, Industry, Waste management, uncontrolled Tourism and many other human activities involve the environment in regard to all our attitudes, benefits and decisions. Politic managers as well as many administrators persistently neglect the environmental impact of their resolutions although being they green-masked. We support nowadays pro-incineration positions arguing that it is the best way to recycle waste! In similar ways nuclear energy can be considered as the *green* alternative to control greenhouse effect as well as many other unsustainable arguments coming out from our politicians and administrations. Very recently, "mad-cows" crisis, tragically nicknamed as «cow-law-chaos», showed us how our governors use to choose quick and drastic measures rather than sustainable solutions. A serious revision of our actual model of intensive food production, where organisms -animals and non animals- are just evaluated as incomes rather than living beings, must be urgently balanced within our econo-anthropocentric value system.

Any time an oil factory or a tanker accident¹⁰ destroys a natural area, this brings us to stand up for nuclear weapons as an alternative energy source environment friendly, pointing out a real moral value crisis. A global crisis that demands the urgent introduction of bioethical topics in science curricula and vice versa - science topics in philosophy and ethics curricula- as well as a direct dialogue and co-operation between scientists and moral educators, in order to develop tools adequate to such a difficult task. A hard but urgent and undeliverable task that must involve professionals from many different areas of knowledge; and Bioethics should nowadays be considered a global multidisciplinary subject within which an orientation on environmental values is urged. This urgency becomes especially evident when the exploitation of theoretically renewable energy sources has become an ecological debate due to a non-sustainable development¹¹ of some *alternatives*; let's develop some models of such peculiar contradictions.

ALTERNATIVE ENERGIES, ENVIRONMENT FRIENDLY?

Spain, as well as many other Mediterranean countries is one of the European States with the highest and longest periods of exposure to sunlight. Solar energy has nowadays been developed to levels adequate to support most of our daily activities according to the energy levels that we actually demand.¹² Nevertheless, the development of solar energy remains below profitable levels at the expense of other renewable energy sources, as may be the aeolian generators emerging as mushrooms on our deforested mountains. An alternative source of energy considered clean and safe for the environment has arrived to such an uncontrolled development - supported by official funds- that is nowadays at the *core of the hurricane* in the whole Iberian Peninsula. A serious polemic has arisen in different communities due to these uncontrolled projects and proposals of specific aeolian parks in natural areas, sometimes close to protected reserve, disturbing bird migratory routes. The increase of mortality that sometimes affects protected species, has conducted us to denunciation to the Courts of Justice¹³. Those aeolian parks are mainly developed in deforested mountain areas with all the problems referred to deforestation of soils, as will be further explained. What is the basis of such unbalanced development of renewable energies? It may be considered a serious charge, but it should be said that whereas aeolian parks are under control of power groups, multinationals or government enterprises, the solar energy might contribute to develop energetically-independent citizens. Developing the solar alternative we can contribute with our excess of production to support further demands of energy, as energetic suppliers are required by law to accept it. For aeolian parks, as well as for other *alternative* parks, placed both on private and on public soils, the situation is the opposite. Citizens will always depend on the supply of energy by these companies, at the expenses of their market policy. Are there just economical or social limitations to the development of an intensive installation of rented solar panels on the roofs of all the buildings of Mediterranean main cities and villages? How can be explained that the same administration, denounced because of its support to such polemic projects regarded unsustainable uses of such alternatives, do not introduce solar panels in all the roofs of the official buildings that have being built during the last decades? No explanation can be found, at least under ethically sustainable arguments.

INCINERATION DOES NOT BEGIN WITH R

A similar problem may be found regarding to the final destination of urban solid waste in many urban areas. Nowadays, mostly all the urban waste is stored in immense but collapsed garbage dumps, sometimes at the risk of our health and lives¹⁴. Intensive, important and expensive campaigns have been developed to re-educate people towards a selective recollection of waste in order to reduce residues and recycle refuses. With a high level of consciousness, confirmed by the civil co-operation, people nowadays observe astonished how politics argue on a theoretical impossibility of reaching a complete separation of organic waste; is it really too expensive? Is it really more expensive than the construction of an incineration plant? Furthermore, there are neither economic nor technical problems to lead back the debate towards new, intensive and expensive campaigns of marketing, trying to convince inhabitants of my village, as well as at many other villages, of the *virtues* of waste incineration¹⁵ as an *alternative* (!) way to a real waste recycling. Politicians '*responsible*' of such peculiar campaigns obtain European awards and funds for their peculiar environmental politics... It does not fit.

Bilbao is a small village surrounded by low but important hills that make the air collapse when dominant winds come from the Northwest. Placed in the Gulf of Biscay, this happens very frequently. Smog succeed to make our village look like London until the industrial crisis contributed to a quick and drastic reduction of that smog. The rainy and windy weather of our country makes inadequate the project of an incineration plant in the urban area. No alternatives of renewable energy resources seem to be in our politicians minds although they have been proposed several times. A village with an important university population finds no interest in the models of sustainable development of farm schools neither compost plants as an alternative educational model of development. Are those the standards for other urban areas? I fear they are.

WATER, THE SAME FOR EVERYBODY¹⁶?

70% of human body is water, while for other species this percentage may increase to 90%. Water is the basis of our diet and our lives. We can survive to starvation for weeks but water will always be needed. We live surrounded by water, under gaseous form in the atmosphere, liquid in rivers and lakes, solid on our mountains, and we just believe that it

will always be there. Every time a tap is turned on, the miracle happens and it flows by through it and take our problems far away. Such stupid reduction may be the basis of this historical disregard; «...*certainly not the waters, which we assume have no function except to turn turbines,..., and carry off sewage...*» (Leopold, A. *Ibid*). Going on with some more percentages, a 75% of the Earth' surface is covered by water¹⁷, nearly every day it rains somewhere on the Earth and this makes us believe that water will always be there to *solve* our future. Nevertheless, rainfall seems to have lost its traditional routine, with unprecedented tendency to overflows and droughts, conducting many areas of the Earth to a hopeless future. Simultaneously, we continue doing an abusive use of the water to *solve* our problems and our lack of solidarity.

We have carried on this abusive use of the free and natural water to control other people, to dominate and sometimes destroy whole cultures, as Nabatheans in Petra. The problem above-mentioned, which conducted to the destruction of the Achi Indians, was related to the Western avidity of water. And due to this avidity, thousands of people daily die because of the lack of food and the lack of water. This problem has been increased exponentially due to our lack consciousness of this problem, the destruction of the natural reserves with pollutants and global warming. Polar ice, icebergs, glaciers and groundwater are the water incomes for future generations and a *lost* of 51 billion cubic meters of this sources of water are estimated to happen every year (Brown et al., 2001) due to the greenhouse effect caused by global warming. Cities as Mexico D.F. are under the risk of sinking due to an over drain of their underground aquifers. A moderate use of water means 5 l. per day per person on survival conditions. The lost of water just due to the actual tendency of global warming is about 140 million liters per day, the equivalent of the basic needs of 28 million people. Summing up the surface and underground water pollution we may finish the water reservoirs of our sons and daughters in few years. We act not only as an unsustainable but also as unmoral species.

IS ECOTOURISM ETHICALLY SUSTAINABLE?

Tourism is going to be the main contributor to the exhaustion of natural resources in the near future. Spain has been for decades one of the main destinations of people looking for sun and fun. The benign weather added to an intensive urbanisation

of the coast -where long beaches and warm water has been traditionally used for tourist attraction-makes the Mediterranean coast an area of special interest for leisure and relax. The Mediterranean coast is actually included in the area of maximum risk of extinction, probably due to overpopulation, inadequate use of the soil and massif tourist promotion. Green taxes have been promoted to control tourist activities in protected areas but they have resulted in unpopularity. Does tax payment allow us to arrive wherever we want and act up to our personal criteria? The lack of a *culture* for the environment, as Aldo Leopold denounced in his Land Ethics, contributed to an unsustainable development of the coast. New alternatives have been developed as feedback during the last decades in order to satisfy selected demands. The offer of alternative destinations and activities, for which Nature has played an important role, has increased during the last decades as well as the demand. Ecotourism is arising as a paradigm of a new and alternative leisure model. His postembryonic status requires a specific supervision of this new activity. High risks of uncontrolled expansion at the back of vulnerable communities (rural, indigenous, endemic, etc.) are arising. Nowadays, people can, and many times is allowed to, massively arrive to areas that were naturally protected from our presence few years ago, with a consequent impact on them. An increasing percentage -actually 40 to 60%- of tourism activities may be classified as green-tourism¹⁸. This alternative tourism can improve the economical conditions of developing countries (Burger, 2000) as well as depopulated places of our countries, like rural areas. Nevertheless, this *alternatives* tend to enrich specific power groups lodged in 1st World Countries or corrupted administrations rather than addressed countries, places or cultures (Scheyvens, 1999). Many problems referred to disturbing protected fauna disturbances have been denounced during the last years (Gutzwiller, K. J. and Anderson, S. H., 1999; Orams, 2000). A special mention should be done to the recent denounces for corruption, Mafia and sexual tourism within some of this «*alternative*» offers (Duffy, 2000). And the biggest menace to these programs, which may help the bio-development of these countries, is coming from the local conflicts. Many of these countries have been definitively condemned, with no future due to the landmines that have mortgaged their future; landmines that are built and sold in our developed countries. This is ecologically and ethically unsustainable.

2002 has been declared the International Year

for Ecotourism¹⁹. We have an urgency to revise and redefine some of our supposed priorities and rights.

WILL BIOTECHNOLOGY PRESERVE SPECIES FROM EXTINCTION?

On January 6th, 2000, the last female of the Pyrenean goat, locally called "Bucardo" (*Capra pyraenaica pyraenaica*) was found dead in the "Parque Nacional de Ordesa y Monte Perdido", Spain. Blood samples were extracted from the goat and studies focused now on cloning it have been proposed. A paper recently published in Scientific American suggests clonation as a way to restore lost biodiversity (Lanza et al., 2000). High amounts of funds will be destined to research programmes in one of the main swindles of the century. There are no ecological basis to argue that clonation will help any species to survive. I fear I have to disagree with some optimistic proposals of a Bank of Genotypes to preserve menaced biodiversity (cf. Vlavianos-Arvanitis, 2000). Focusing the effort on collecting samples without ensuring the preservation of adequate habitat conditions is simply expensive and ineffective. The supporters of nuclear energy as the solution to reduce toxic emissions in the atmosphere or to solve energetic crisis use systematically similar arguments. In the same way, biotechnologists support transgenesis as the panacea to solve the hunger and the environmental crisis in the world. People can breathe a sigh of relief; biotechnology will save us from our own evils and disorders! We lost God's reference with the conversion into modern societies but we will always need to trust on external powers saving us from our misunderstandings instead of assuming our responsibility to amend our mistakes.

The problem is neither in species nor in their genes but in our attitudes towards them; in inadequate prevention programmes, in inadequate attitudes towards endangered species, in unbalanced distribution of natural resources, aspects that transgenesis supporters do not include in their priorities. We can speak about environmental sustainability only when the risk of damage to the system is both prevented and repaired... and repairing it requires awareness of the damage (cf. Cairns, 2001). We need an urgent revision of our priorities in our development model. "*Extinction is forever, there is no return...*" (Bellés, 1998). We have to develop, urgently, protection programs and renewed attitudes in people. Particular decisions affect people all over the world as well as many other organisms.

Human beings are inconceivable as an isolated entity in a self-sufficient sphere. As a social species we depend on other people to develop a balanced existence but as living beings we need a balanced environment for a correct development as individuals, and we have forgotten it. Auto-promulgated landlords of the Earth, we consider ourselves inheritors of the Earth and carvers of our own destiny. Ancient cultures' wisdom left to Westerners, years before the first attempts of an environmental ethics, genuine «ethics of the land» that we try to obviate as we «... have not inherited the earth...»²⁰. We are urged to realize that our actual decisions and attitudes may ensure or condemn the existence of future generations. We have a special responsibility, perhaps bigger than before, as we have been able to pick up the information from the past and develop the adequate levels of freedom and independence to decide about our own future. We are able to measure better than ever the consequences of our decisions and those of the past. Nowadays we may be at the point of no return. This involves a special transcendence of the level of our decision-making capability. *Bioethics should go beyond ethics boundaries* (Casado, *Ibid*). We have to urgently involve our own society, politicians, lawyers, local communities, etc into adequate environmental education programs *uplifting our social basis to higher levels of individual and collective consciousness and responsibility* (Zoeteman, 2001).

FURTHER INTRA- AND INTER-SPECIFIC EXAMPLES INVOLVING HUMANS

Similar problems may be found in the extreme competition for space or food (Amensalism) between species. A traditional model is that of the wolf, with the displacement and competitive exclusion of this species by human being. Competitive exclusion has frequently been the result for one of the species in conflict; a result that means extinction. Extremely serious is this exclusion when it happens to protected species, such as whales and many other mammals (the wolf itself). And we have to denounce it when countries, protected by their governors, mask this predation under other activities as has been denounced for the «scientific hunt» of marine mammals.

With our displacement capability, other species migrate with us and colonize foreign areas, very often causing serious environmental problems, as we know from plagues and illness. As models let's mention the historical epidemic flue of Amerindians or the actual invasion of *Caulerpa taxifolia*, the killer alga

that expands through our future *death-sea*, at least if we do not react and change our attitudes toward the Mediterranean Sea. Many other problems related to pollution may be considered in this context but I would like to mention just this two as a basis to demonstrate that pollution has no frontiers. Hence, problems caused by a country (acid rain, radioactive residues, genetic pollution, etc.) may affect non-responsible others.

New problems have been actually posed by the research on new bio-products in medicine, pharmacy, etc., and this is bringing too many species to extinction. Nowadays, many countries in tropical areas forbid the recollection of plants and animals in their territories to prevent **BIOPIRACY**. Related to this serious problem, a new but no worst risk is coming out because of our capability of modifying the genetic structure of organisms and because of our hypothetical right of patenting life. Such unsustainable ideas are directly related to the denounced previously developed, when life is presented as simple objects in economical interests' service.

A new concept called genetic pollution has already been arisen and has to be urgently regulated and controlled, as well as policy to prevent lost of biodiversity or new ways of local impoverishment is needed. Pollen and seeds do not recognise neither political nor economical barriers.

We should never forget that «... *extinction is forever; there is no return and it is not enough just to fear about past loss...*» (Bellés, *Ibid*). The Mediterranean basin is one of the areas of maximum risk with highest levels of biodiversity lost, as well as many underdeveloped countries (Myers et al., 2000).

IS ENVIRONMENTAL ETHICS A BIOETHICAL TOPIC?

The first time I read about Environmental Ethics was few years ago, as I was looking for ethical principles focused on non-human animal experimental models (cf. chapter 18). A private University in the United States offered a course on this matter. Reading the program I came to fear possible sects involved in such a peculiar program. As Biology student, no Professor made me thought about any potential concern referred to the environment, just technical or scientific descriptions about how it can be interpreted and how it can be manipulated and managed by our technologies; as Lecturer no ethical debates were ever arose between my colleagues. My surprise came at the conference that I mentioned in

the first pages of this work. I have to say “my surprise” as I got absolutely astonished when I realized that the first session of the congress was focused on Environmental Ethics. 3 weeks later, invited to the 1st International Symposium in Lisbon²¹, I had to confess that I didn't know, since then, that I had spent my whole professional life working on Environmental Ethics; and I ignored it since then. I ignored it because nobody talked to me before about Environmental Ethics. A change is urged, as well as the inclusion of matters focused on Bioethics at all the formative levels, University, Secondary and Primary Schools, so to help students to develop ethical reasoning in their future work on Nature.

Just to make a brief but important summary, Environmental Ethics has been said to developed at the end of 60's, beginning 70's by North-American philosophers, due to special pressures done by some environmental specialist that demanded the need of values in environmental education. 2 papers published in Science and a book can be mentioned as the “enzymes” that catalysed the process: White, L., 1967; Hardins, G., 1968 and a re-edition of a classic, Leopold, A. (1949) with his proposal of a Land Ethic.

But I fear I would be unfair to Amerindians, Greek and Oriental philosophers, not mentioning them in the origin and discussion of Environment within Ethics. «...*We know that white man does not understand our ways. One portion of the land is the same to him as the next, for he is a stranger who comes in the night and takes from the land whatever he needs. The land is not his brother but his enemy and when he has conquered it he moves on. He leaves his father graves, and his children's birthright is forgotten...*» (Chief Sealth, Seattle, to President Franklin Pierce, December, 1854, *Ibid*)²²

We have forgotten the important task inherited by the West from other cultures. Why Philosophy and Ethics evolved just towards ethnocentric or anthropocentric values is clearly demonstrated by Gómez Gutierrez (2001). A short analysis of our own evolutionary process shows how despotic and artificial values were systematically selected and favoured in a society that evolved isolated at the back of natural and moral values. «...*intelligent is displaced by brave whose attitude is propitiated by ignorance*» (Gómez Gutierrez, *Ibid*). A society with no interest in making a serious compromise to get involved in a global project of itself, where Nature should be consider the main factor that defines Humanity as a whole. We came to believe that the Biosphere could

be excluded from our own evolutionary process. An imprudent, fatuous, non-sensical and spoiling species without any solidarity with other members of its own species. We have based our economy on the maximum predation of natural values without any correspondence. Blinded by marketing, we focus our needs on secondary elements with artificial added values whereas basic needs -water, food, soil, etc.- are undervalued and neglected. «*Environment is reduced to a simple object under man service... reduced to an object has no quality and is degraded to measurable quantities, enabled to be manipulated by those who bear power... reduced to an object is submitted to a process of non substantiation and depotentiation, disqualifying it to be neither a subject of rights nor a support of values.*» (G^a Gómez-Heras, 2001) The person *itself* is reduced to a market value with no other interest except productivity and income capability. We assign the control of our destiny to powerful people rather than intelligent and common share minds, contributing to the actual model of unsustainable distribution of resources. We have forgotten that the whole humanity is board on the same vessel, sailing with a damaged or bad designed compass, with no reference about the real North and with no life-boats.

Although Oriental philosophers and German descendants of the *Naturphilosophie* have traditionally defended natural values within our moral community, it seems to be in 1971 when Van Rensselaer Potter²³ first used the term Bioethics, at least in print, suggesting a «*New discipline that combines biological knowledge with a knowledge of human value systems, which would build a bridge between the science and the humanities, help the humanity to survive, and sustain and improve the civilised world*» (cf. Gillon, 2000). Rigorously reading the definition, there is no reason not to consider the environment besides our value system as well as a main component of our own concept of person and therefore, Environmental Ethics as a main part of Bioethics. However, since then Bioethics has evolved once again towards present-anthropocentric values, mainly focused on biomedical problems, forgetting the importance of the environment in the origin and development of some of these problems and in the core of the concept. Just as an example, look what “Britannica” -a referent as Encyclopaedia- defines as Bioethics. If you look into Micropaedia or the Index you will appreciate the fact that Environmental Ethics is considered marginal to Bioethics, a different concept, whereas Bioethics is considered nearly

synonym of Medical Ethics (Singer, 1988; Crease, 2000). Going further on and referring to the tasks considered as part of Bioethics, nearly all are biomedical ones directly focused on egocentric standards of well-being, in vitro fertilisation, surrogate mothers, sperm banks, abortion, euthanasia, etc. defending a particular concept of quality of human life.

How do we define “quality of life”? Just a healthy and medical-assisted life? Let’s go back to the beginning of our own history and explore it through human evolution, with the anthropization process as reference model.

HUMAN EVOLUTION AND THE “QUALITY OF LIFE” CONCEPT

A quick look to the landscape of evolution shows an exponential trend towards deforestation processes that have supposed a direct loss of biodiversity, with an increase of pollution levels and waste of energetic expenses (Margalef, 1989). We can observe frequent examples of deforestation due to many different reasons in our countries and a lost of biodiversity immediately observable (cf. Saloña & Iturrondobeitia, 1993) as «*the lost of forests, which normally intercept rainfall and allow it to be absorbed by the soil, permitted water to rush across the land, carrying valuable topsoil with it.*» (Abramovitz, 2001). Forest are the main “long-term funds” for soil, water and food, both for us and for future generations: we are directly stolen their future.

Although official reports often show a positive tendency for forest surface in our countries, this increase has been mainly due to intensive afforestation using foreign species, too many times supported by European funds, i.e. in order to reduce milk overstock in northern Spain. Such an aggressive environmental politics has had collateral effects not only on confirmed soil impoverishment and lost of soil fauna diversity²⁴ but on a serious increase of forest fires, placing the humid North at the top of fire statistics in Spain. Periodical natural fires are reported to be an adequate way to restore minerals to the soil of specific kind, such as Mediterranean (Abramovitz, *Ibid*), but the frequency and intensity are absolutely unnatural in temperate areas. Frequency and intensity of rainfalls takes the solved nutrients off the uncovered soil, impoverishing the *edaphon* year by year and increasing rivers pollution. This is ethically and ecologically unsustainable. Atlantic regions have lost more than 90% of primary forest surface during the last centuries and the desert

advance has actually reached a dramatic extension in the Mediterranean countries.

Deforestation is extremely severe in underdeveloped countries, especially in tropical areas. All the effects previously mentioned are maximised due to environmental conditions. Tropical rains are concentrated in time, intensive and extremely aggressive with the soil. Tropical trees act as a natural barrier against the direct impact of rainfall on the soil retaining part of the waterfall in water plots naturally developed in epiphytes; here some species, as amphibian larvae can finish their life cycles protected from predators. When a forest is destroyed a natural story ends without return. This happens at special speed in tropical areas where the soil, unable to retain the organic matter, let leaves be quickly destroyed and decomposed due to high temperature and humidity levels. Tropical forest destruction due to tropical wood market, agriculture pressure and, nowadays, drugs production, bio-prospecting and aquaculture activities has been frequently denounced and it is directly contributing to an intensive tropical deforestation. Temperate countries contribute to the destruction of tropical areas with the uncontrolled demand of tropical wood; with our over-consumption of tropical goods, forcing local communities to deforest their areas, kidnapping their future and that of future generations, in order to satisfy our whims. An inadequate distribution of food contributes to aggravate the problem. Brazil has been proposed as model of such a paradoxical situation. Brazil, the 4th country in the world in the ranking of GNP per person (Flavin, 2001) is internationally known for the group 'sin tierra' (without land), a social movement that claims for the right of the farmers to have free access to the land for cultivating their own food. A high percentage of Brazilian soil is private and is actually not cultivated, simply unproductive. Famine is forcing the farmers to clear-cut big extensions of tropical forest to harvest. But tropical soil is unable to be productive for more than 2-3 years due to the particular conditions previously mentioned. Such particular characteristic forces the farmers to cut and burn more forest every year, with the consequent lost of fertile soil going into a spiral of destruction and impoverishment. The 4th world country in GNP per person, Brazil, has over 3 million people (3% of total census) undernourished, the same percentage as Ghana, Nigeria or Thailand among others. The indifference of many governments -as well as our own indifference- contributes to decelerate the development of adequate measures to control famine situations. 24,000 people daily die of hunger,

equivalent to 1 thousand people every hour. Satellite images report an increase of forest fire extensions, especially in Indonesia, West Africa and Latin America, some of the main hotspot areas for conservation priorities, including the Mediterranean basin (cf. Myers et al., *Ibid*). FAO reports that for the period 1980-1995 a 10.5% of forest surface was lost in Africa and a 9.7% in Latin America and Caribbean Islands. If we follow the unbalanced distribution of food and other basic resources, the process of deforestation will continue in underdeveloped countries. Forest is not only the main oxygen producer but it is fundamental for retaining greenhouse gases, especially CO₂, for the rainfall control and water deposit for future generations thanks to water retention by the soil; it offers a refuge to biodiversity and a habitat to many human cultures that have co-evolved with it and, finally, it is the main producer of organic soil. If we go on with the actual tendency, demand of tropical wood and unbalanced distribution of basic resources, the tropical forest can disappear during this century. With deforestation, lost of fertile soil and groundwater, unbalanced rainfall, extreme temperatures and many unexpected alterations of our environment will develop and we will be the responsible of such unsustainable inheritance.

11th September 2001. The 1st plane crashed on the 1st Tower at 08:45; it fell down as a castle in the air. At 10:28 the second Tower disappeared undermining too many dreams and projects. Over 3,000 people died in such a fatal day. It will always remain in our astonished minds. As Jewish people claimed after Nazism holocaust, 'We'll never forget'. Nevertheless, we easily forget that nearly during the same period of time, 3 hours, the same amount of people die every day of hunger, hour after hour, day after day, arriving to the estimation above reported. 24,000 people die of hunger every day. We should urgently become aware that although civil society has little formal power compared to government or business, we are crucial in a campaign for sustainability. As consumers, as voters, as citizens, we carry immense influence (Gardner, 2001). Man should be considered too the main enemy of his own species. We have developed the actual hierarchical system, ethnocentric and segregationist model of humanity. We have the capability to develop a renewed moral system based on integrative co-operation rather than excluding competition, in mutualism rather than parasitism. We have to assume the responsibility although some authors, i.e. Gómez Gutierrez, *Ibid* defend our incapability to do it after analysing our

evolutionary process.

The Food and Agricultural Organisation of the United Nations (FAO) have reported a detailed analysis of this problem '*At the world level, there is abundant food, yet there are distribution and access problems that result in about 800 million of people not having enough food. For some, access to food can be assured by providing direct access to land...*' (FAO, 2002). Together with deforestation, the advance of the desert and the lost of fertile soil in tropical areas increasing famine situations force people to abandon their houses, their lands. With intensive forest fires and clear-cutting not only deforestation but also the immediate lost of fertile soil, lost of biodiversity and local impoverishment arises. The lost of primary forests is arriving to a dangerous point of no return for the lost of biodiversity and fertile soil, as shown by the extensions of fire map of tropical forests. Local communities are then displaced to overcrowded urban areas, increasing socio-political conflicts that evolve towards massif migrations to well-standing countries where immigrants are refused and displaced to marginal employment. Only multinationals, placed in developed countries, get enriched by these activities too many times supported by official funds, although governors forget too many times familiar and sustainable models of development. The same organisations that nowadays promote transgenesis as a way to solve a problem not based on the bad quality of genotypes but on a non-adequate distribution of basic food products.

Spain is one of the 1st World Countries to import tropical shrimps as well as many other tropical goods. We, 1st World Consumers, are responsible of most of these activities. With local impoverishment and lost of fertile soil, communities are brought to hunger and forced to immigrate to our countries. Nowadays, we have a serious problems referred to migration movements into our countries. When politicians and economists defend globalisation and sustainability as a development model they mainly get focus on economic efficiency measured on benefits obtained by specific power groups or countries, forgetting collateral impoverishment and segregation of the people. The crisis recently arose in Argentina is a clear example of such an unsustainable model of development.

We can analyse it from an socio-economic point of view too. At the beginning of our evolutionary process, the 1st human settlements, just familiar units, were self-sufficient with a minimal demand of energy for transport and a sustainable use of goods and waste

that were mainly re-used and recycled. With time we have evolved to big urban areas where nearly all the goods, especially raw stuff, have to be imported with a big demand of energy and waste exported when not directly burned and destroyed. Nowadays, the global economic model defended by WTO is evolving toward this model going to extremes, with 2 main areas clearly differentiated. A 1st World that produces goods with a basis of raw stuff imported mainly from underdeveloped countries and offers his overstocks, obsolete models and "wastes" to this countries, overwhelmed by a never ending economical dependence from their Creditors; the 1st World Producers. When most advanced administrators speak about sustainability they always refer to a local point of view, to our own economical sustainability. Underdeveloped sectors of our society are never taken into consideration within such sustainability estimations. We are urged to take our responsibilities in the context of environmental degradation, '*...We may realise a responsibility for the return of an item we have borrowed, for payment when purchasing a good or for carrying for an elderly relative...*' (Heyd, 2002). Although the 80% of primary goods are in underdeveloped countries the 80% of richness is accumulated in the 20% of 1st World Countries. This cannot be considered an ethically sustainable percentage.

Nowadays, our globalisation model is evolving towards

- Societies *educated* to assume themselves to be no longer self-sufficient
- Countries economically dependent from distributors rather than from their own production
- The energetic demand maximised for the transport of resources and waste
- An increase of economical differences between the countries and, within them, between specific communities, with the final result of an
- Exponential increase of marginal and displaced people

IS THIS QUALITY OF LIFE?

Unfortunately, We have to agree with Nicole Fontaine when she recently said, "*we have to reinvent Europe*". I fear that we have to reinvent not only Europe but also the whole world, especially 1st World countries whose development models have to be revised as main responsible of this imbalance. We are urged to evolve from the actual tendency of an

econocentric model of globalisation towards a sustainable model of Society through a co-operative process of development where all the socio-biological levels are involved in the distribution of benefits. A big opportunity will be lost if we are not able to develop alternative moral standards and social models based on equitativity, promoting small and medium producers engaged to develop respectful models of production, especially in countries where whole families are displaced due to earth speculation, drugs or military conflicts.

THE DECLARATION OF BIZKAIA ON THE RIGHT TO THE ENVIRONMENT

The framework briefly exposed provide a special meaning to a Declaration signed in 1999 in my village, Bilbao (Bizkaia, Spain) known as the "Declaration of Bizkaia on The Right To The Environment". An International Seminar on the Right to the Environment, held in February 10-13, under the auspices of UNESCO and the United Nations High Commissioner for Human Rights, declared the Right to the Environment for ALL human beings. We cannot miss the reference to our organic condition. As living beings we depend on Nature for our correct development, for feeding, for respiration, for our own concept of human being, of person. If we lost this reference we will continue advancing nowhere, with no time, without hope, without future. Environment should be in the core of the concept of sustainability and we have to assume our responsibility towards it, at least if we want to claim for our rights.

People can reach it through the web address and choose their own language; English, French, German, Spanish and some other languages are offered. Within the text, a clear concern of the relationship of environment and quality of human right is developed:

- *EMPHASISING that the right to the environment is inherent to the dignity of all persons and is necessarily linked to the guaranteeing of other human rights, including in particular the right to development;*
EMPHASISING the universality, indivisibility, and interdependence of all human rights; ...
...REQUESTS to the international community, in particular the United Nations and other universal and regional organisations in particular, that they examine the Declaration of Bizkaia on the Right to the Environment and adopt suitable measures for the recognition of

this right"

To summarise, a clean and safe environment is a right for all human beings as basic as the right to life. We can not obviate the importance of a healthy environment for a healthy quality of life. Western human being has evolved at the back of a healthy and safe environment, forgetting the interdependence of Human-Nature for welfare and a healthy development. Nevertheless, Nature will always pass invoice to our selfishness. The more we try to get ourselves isolated from the surrounding world the less standards we are able to reach. Nowadays illnesses related to confinement, stress and unhappiness are alarmingly increasing. We invite the whole community to join us supporting this Declaration with his/her signature to be added through the web site (see address in the footnote). A declaration that goes further on than a simple declaration of rights but is a serious commitment to assume urgently our responsibilities, since we cannot understand the defence of any right without accepting the assumption of our duties. Ethnocentric arguments based on the welfare of dominant social sectors cannot be tolerated when the future of the whole humanity is under risk. We are not talking about apocalyptic menaces of illuminated eco-visionaries. We are talking about international agreements (Rio, Kyoto, etc.) obviated by the selfishness and historical lack of solidarity of countries that auto-claims "Safeguards of the Humanity", arguing selfish arguments as the welfare of an overfeed society. Countries with increasing levels of obesity, with the highest emissions of greenhouse emissions, with an origin and development based on the displacement and extinction of indigenous cultures...

FINAL REMARKS

'*Another world is possible*' summarises renewed attitudes of people concerned about the present state of the world, but reflects our ancestral attitude of refusing any responsibility too. The world is one and is not needed of any change. What should be really demanded is that 'another human being is possible'. We have to assume urgently our responsibility (cf. Jonas, 1979) and develop a renewed moral value system based on co-operation and solidarity, including the environment in our own concept of person and assuming its balance as a basic human right, as basic as the right to a safety life. Only through an adequate information and education of the people it will be possible to develop protective and sustainable programs. And the first to react and to act ethically

have to be our own administrations and governors that should be just managers of our decisions, without paternalistic attitudes. We cannot simply delegate to foreign decisions; we have to assume our responsibility in developing a new model of society, otherwise we will never change our evolutionary process as Gómez Gutierrez and many contemporary thinkers denounce. Without ethical biases, governors have no moral standards neither to convince society about the importance of preservation programs, alternative energies, etc. nor to demand their implementation. An excellent model of social integrative project has been developed in a Greek Region, near Kerkini Lake (cf. Pyrovetsi and Daoutopoulos, 1989).

Most of the above-referred problems are frequently justified by a hypothetical need to supply an overfed society with dispensable goods. Going further on to more dispensable and hypothetical rights, we demand the right to be wherever we are able to arrive, just for pleasure. And we are nowadays allowed to arrive and very quickly modify isolated areas of the planet unreachable for us just a few years ago.

Administration, legislators, politicians have the main responsibility to act according to ethical principles and we have a specific responsibility in their election. An adequate law is not enough if it is not correctly applied; too many examples of corrupted interventions done in nature under "legal" supervision can be found in daily press. International Courts and Ethical Committees should be urgently defined and adequate curricula developed to train impartial and independent specialists to control our activities and ensure a sustainable model of globalisation. Otherwise we run a serious risk of developing a wicked and abject model of bioethics serving specific power groups to justify particular *moral tendencies*.

A single question is true, World can perfectly survive without us but none of us will be able to survive without other living beings, without water, without oxygen or without fertile soil. It depends on us if we want to assure not only our survival but also that of our children and of the children of our children. It is not a question of human rights, it is just a question of Human Responsibility.

CONCLUSIONS

A crisis of moral values has arisen after centuries of Human evolution behind Ecocentric moral values. We have lost the reference to our sustainable development arriving to a level of unhappiness that we try to

solve increasing our needs, our production and our consumption without measuring the long-term consequences of our acts. We should never forget that future is in and for the people, and future generations should be included. Environment is the basis of our development and a basic part of our own as well as other organisms' development. We have to develop a Global Concept of Bioethics, including Environmental Ethics in this concept (Vlavianos-Arvanitis, *Ibid*). Bioethics should nowadays be a multidisciplinary topic, involving Life Scientists, Researchers, Lecturers; Politicians, Legislators and Diplomatic people; Farmers and Industrials, Local communities, Tour operators and Tourists. We should be able to develop a *multidimensional value system* following B.I.O. proposal, with multidimensional ways to work towards it (cf. Vlavianos-Arvanitis, 1992). Otherwise, we will be advancing towards a century of chaos.

Future generations may not be able to ask us for any responsibility. Nevertheless, there is the great difference that makes us special, not superior but different to any other creature in Biosphere; We are here to ask for it.

KEYWORDS Environmental Ethics. Globalisation. Sustainability. Biotechnology. Quality of Life

ABSTRACT Actual tendencies of globalisation shows an increase of unbalanced distribution of resources with basic Human rights suppressed to preserve standards to specific social sectors or countries. Whereas the 80% of Human population survive with less than the 20% of world resources, a reduced elite inhabiting 1st world countries accumulate more than 80% of richness. Education in consumption, water and energy demands maximised with an increase of economical differences, marginality and displaced people urges a critical reflection of the moral standards of our society towards a real sustainable and global future where all the cultures and social sectors should be involved. A revision of traditional but manipulated concepts such as sustainability, globalization, ecologism, terrorism, etc. are revised. A new concept of Humanity should be developed with a critical revision of our moral standards, to develop a multidimensional system or moral values. A Global concept of Bioethics, with an environmental friendly basis is urged to be developed. Otherwise, rather than advance towards the century of Bioethics we may be going into the century of Chaos.

NOTES

1. <http://www.sibi.org>
2. www.flad.pt/us/bioethic.html ; 2nd edition took place in 2001 (30th June - 6th July)
3. Estimation at the web sites <http://www.thehungersite.com> http://www.planetfunds.com/english/articles_en.asp?idarticulo=10
4. That means the 20% above referred
5. <http://www.unfpa.org/modules/wp01/consump.htm>
6. <http://www.worldwatch.org/>
7. Local press, world section, 31st January 2002

8. February 2002
 9. <http://www.oneworld.net/guides/agriculture/front.shtml>
 10. lets briefly refer to the oil spill occurred at Galapo's Islands or the recent accident that has affected the whole coast of Galicia and may pollute Portugal and Northern Spain (Prestige, December 2002)
 11. Cf. <http://www.natuweb.com/paginas.asp> Contenido. asp?ID=1075&Nombre=Noticias, <http://club.teleopolis.com/iceba/iceba/energeol/energeol.htm>
 12. More information may be found in <http://www.soldelamancha.com>
 13. <http://teleline.terra.es/personal/kirke1/ntndmn13.html>
 14. A tragic example has been reported by Christopher Flavin for Manila's Promised Land in *State of the World 2001*, 1: 6.
 15. 10th November 2001, Bilbao citizens demand a study on the environmental impact of the waste incineration plant "Zabalgardi" www.bioforum.net/actualidad/25.02.00/zabalgardi.shtml
 16. A maxim of Corbin Horney, spiritual leader of Shoshone ethnia.
 17. Not potable but water; just 1% is fresh water, potentially drinkable if not polluted.
 18. SAARC-Regional Conference on ecotourism. cf. http://www.sikkiminfo.com/ecoss/saarc_regional_conference_on_eco.htm
 19. 1998/40 U.N. Declaration cf. <http://www.un.org/documents/ecosoc/res/1998/eres1998-40.htm>
 20. cf. RedHearts Native American Indian Homepage Weblink <<http://home.talcity.com/.../NativePrayers.html>>
 21. Organised by the Iowa State University and the Luso-American Development Foundation (FLAD)
 22. <http://victorian.fortunecity.com/degas/455/seattleen.htm>
 23. South Dakota, 1911 - Wisconsin, 2001
 24. 2-3 points of Shannon-Weaver diversity index in the Basque Country (cf. Saloña & Iturrondobeitia 1991)
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