

ROLE OF PEOPLES AND NATIONS IN PROTECTING THE NATURAL ENVIRONMENT

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I can find no justification for devoting time to proving what is very obvious: that since the middle of the 20th century, the world, in its most generic and universal sense, has undergone extraordinary economic and social growth, and that this has placed its inhabitants, albeit with great inequalities, at levels of wellbeing that would have been almost unimaginable at the end of the Second World War.

In addition to taking place against the aforementioned background of interpersonal and interregional inequality, this growth has taken place with an imbalance amongst the attributes that the human being should expect of a process of enrichment. It is, therefore, not surprising that by the beginning of the seventies, attention was drawn to the promotion of harmonious development, in accordance with the natural harmony of the human being, as opposed to the disordered and anarchic growth that followed the peace that brought the Second World War to an end.

Be that as it may, what is true is that growth took place and that the improved standards of wellbeing are beyond any argument. However, it is no less true that these greater levels of wellbeing were represented by a greater availability of material goods for the satisfaction of material needs, creating amongst people a culture of *having*, a materialistic culture through which the spiralling road to consumerism began, a road without any foreseeable end. Objectives of pleasure would have greater significant weight than vital pressing needs in the consumerist programmes, not only in developed countries but also in a large number of developing countries.

The limitlessness of needs, which has always constituted the *raison d'être* of the economic question, when associated with scarce resources, has had

*I am very grateful to Prof. Kevin Ryan (Boston University), Prof. Vittorio Possenti (Università di Venezia), H.Em. Card. Óscar Andrés Rodríguez Maradiaga (Archbishop of Tegucigalpa, Honduras), Prof. Stefano Zamagni (Università di Bologna), H.E. Msgr. Marcelo Sánchez Sorondo (Chancellor of the Pontifical Academy of Social Sciences and Prof. of LUMSA University in Rome) and H.E. Ambassador Pierre Morel, for their kind, outstanding and most stimulating comments to this paper. Any responsibility for errors and misunderstandings is exclusively the author's.

such a marked effect on the last quarter of a century that at times of economic weakness, consumerist behaviour has given rise to frustration and anguish, an irrevocable result of the reverence given to the new idol of possessing material goods in abundance.

It is certainly true that greater possession of material goods has also entailed greater access to educational and cultural goods, at least for a significant percentage of the population. This has created greater awareness and appreciation of common goods in members of society, far removed from the ancestral individualism of exclusive and competitive consumption. This awareness of collective needs and the public goods to satisfy such needs, which ultimately configure the public goods of humanity, in turn creates a commitment to the common interest amongst economic subjects i.e., to the needs of the community. Only through the efforts and cooperation of all members of the community can these needs be satisfied.

Having said this, it is worth posing a question that is of undoubted relevance: to what extent does this commitment to the common interest displace individual or private interest? After all, at some point, when the resources available to meet private and common needs are assessed, the two types of needs come into conflict, given that those resources used to satisfy collective needs will not be channelled into the satisfaction of private needs.

And, going one step further: is the environment a good that concerns all of humanity today? Is the environment considered to be a good, a component of the wellbeing of man, of all men? It is true that nobody proclaims the destruction of the environment as a behavioural norm, but, when we speak of conserving the environment, how far does our commitment go? What option is chosen when protection of the environment enters into conflict with the enjoyment of a private good, perhaps a leisure-related good, in the basket of goods of the singular subject? Is it worth reaffirming the quality of private life, without considering the quality of life of the community, the quality of life of those whom we can call *the others*?

I. Introduction

In the margin of, but not forgetting, what has been said about personal commitment, here, today, on these pages, we attempt to relate this sense of commitment of each subject to the environment, configuring it as a good of humanity. In this sense,

... global climate change is a public good (bad) par excellence. Benefit-cost analysis is a principal tool for deciding whether altering this public good through mitigation policy is warranted. Economic analysis can also help identify the most efficient policy instruments for miti-

gation... Two aspects of the benefit–cost calculations are critical. One is allowance for uncertainty (and related behavioral effects reflecting risk aversion)... it has to be assumed that individual prefer to avoid risk. That is, an uncertain outcome is worth less than the average of the outcomes... the possible outcomes of global warming in the absence of mitigation are very uncertain, though surely they are bad. The uncertain losses should be evaluated as being equivalent to a single loss that is greater than the expected loss... The other critical aspect is how one treats future outcomes relative to current ones.¹

Therefore, the environment is a good that belongs to all humanity. In consequence, the subject, each subject, is responsible for its proper use, for avoiding waste and, what is more, for preventing damage to the environment caused by activities in the public or private sphere, for the private and immediate interests of each subject or institution, for this would ultimately be an attack on humanity itself. We have to accept that man,

... by an ill-considered exploitation of nature he risks destroying it and becoming in his turn the victim of this degradation. Not only is the material environment becoming a permanent menace – pollution and refuse, new illness and absolute destructive capacity – but the human framework is no longer under man’s control, thus creating an environment for tomorrow which may well be intolerable.²

This is an issue of great complexity in that it involves very different fields of knowledge. Scientific, technical, political and social fields overlap in a very evident manner, making this a problem or field of study of human dimensions, and one that cannot be considered otherwise. It is ultimately and essentially a question of relating man to the environment in which he lives and determining his responsibility for it, which is tantamount to saying, his responsibility to the entire human family.

Along with this difficulty related to its interdisciplinary nature, a further complexity of possibly even great importance is very clearly perceivable. This is related to the lack of coincidence in the opinions and conclusions of scientists and technical experts on any given environmental issue in terms of its physical consideration. This puts those whose actions might generate undesirable effects on the environment in a state of positive or negative alert.

¹ Kenneth J. Arrow, “Global Climate Change: A Challenge to Policy”. In Joseph E. Stiglitz, Aaron S. Edlin and J. Bradford DeLong (eds) *The Economists’ Voice. Top Economists Take on Today’s Problems*. Columbia University Press. New York 2008, p. 18.

² Paul VI, Apostolic letter *Octogesima Adveniens*. Vatican, 14.05.1971, no. 21.

It is true that the environment, like any other input, presents itself as a scarce resource, though this scarcity, we must remember, is linked to the time, place and knowledge available in each case. The neglect of this constraint led to the first reasonable doubt being placed on the Malthusian aspects forming the basis of many studies, which, in principle, were of the greatest scientific rigour.

The first of such studies worthy of attention is that of Jay W. Forrester,³ which appeared in 1971 and featured a model known as “World 2”, though the development of this model under the tutelage of Dennis Meadows⁴ resulted in the “World 3” model a year later and this had greater impact on the scientific world and the media. There was abundant criticism at the time, and Meadows himself acknowledged that barely one percent of the data used in the model was real data, with the rest simply being estimates bereft of real world evidence.

Thus was born the consideration of the environment in terms of an input called upon to produce food, which, in the studies referred to, was shown to be insufficient to attend to the needs of a population in constant growth. The most merciless criticism of the two studies (whose common origin was the MIT) would be that levelled by the team of researchers led by Christopher Freeman at the Science Policy Research Unit of the University of Sussex. This criticism was published in 1973, under a sufficiently expressive title: *Thinking about the future – A critique of ‘The Limits to Growth’*.⁵

Subsequent to this European response to the initial MIT studies, it was in Europe once again that the Second Report of the Club of Rome would accentuate the Malthusian vision of conflict between population and production. The report was based on a complex mathematical model, in which the world was divided into ten regions. Each region was further divided into sub-regions, which involved sub-models. A large number of variables were used in over one hundred thousand correlations. The study, led by Pestel and Mesarovic,⁶ was published in 1974 and it can be concluded, al-

³ Jay W. Forrester, *World Dynamics*. Wright-Allen Press. Cambridge, Mass. 1971.

⁴ Donella H. Meadows, Dennis L. Meadows, Jørgen Randers and William W. Behrens III, *The Limits to Growth*. Universe Books, New York, 1972; also Earth Island, London, 1972.

⁵ H.S.D. Cole, Christopher Freeman, Marie Jahoda and K.L.R. Pavitt (eds) *Thinking about the Future – A Critique of ‘Limits to Growth’*. Chato & Windus Ltd. Sussex University Press. London 1973.

⁶ Mihajlo Mesarovic and Eduard Pestel, *Mankind to the Turning Point. The Second Report to the Club of Rome*. Hutchinson & Co. Ltd. London 1975.

most forty years later, that the predictions it made have proved to be irrelevant, due to a lack of empirical evidence.

Undoubtedly, these Malthusian threats would cause the aforementioned studies to lose the weight they initially held. To a certain extent, this loss of prestige was a consequence of failure to remember the condition established by Malthus in his work: "It may be fairly pronounced, therefore, that, considering the present average state of the earth, the means of subsistence, under circumstances the most favourable for human industry, could not be possibly be made to increase faster than in an arithmetical ratio".⁷ Malthus's proviso about taking into account "*the present average state of the earth*" lends support to his theories by considering future scientific and technical breakthroughs by humanity, in the same way that the omission of this proviso undermines the studies mentioned.

Nonetheless, the influence of these studies was felt at the World Population Conference held in Bucharest (Romania) in 1974. At this conference, measures were established to slow population growth, resulting in campaigns for mass sterilisation of women in poor, very overpopulated countries. Contraceptive measures were also introduced and these were a central part of the so-called population policies of countries such as the People's Republic of China.

This process, which began in Bucharest, was to be repeated at successive World Population Conferences, namely those of Mexico in 1984 and Cairo in 1994. However, the conflict between population and food resources, which had given rise to population control, began to deviate from the initial question, giving way to the configuration of the right of the woman to decide, not what to do with her body, as is commonly said, but rather what to do with the human being housed within that body subsequent to gestation. Good evidence of this is provided by the fact that the same issues and identical arguments to those of Mexico and Cairo were once again on the agenda a year later (1995) at the Beijing Conference and this was not a conference on population but rather the World Conference on Women.

The Malthusian approach, which had accompanied initial consideration of the environment, found a new area of reflection in the study coordinated

⁷ Thomas R. Malthus, *An Essay on the Principle of Population*. L.M. Dent & Sons Ltd, London 1973, p. 10. The first edition of Malthus's work *An Essay on the Principle of Population as it Affects the Future Improvement of Society* appeared in 1798. He subsequently revised and expanded the text to such an extent that the second edition (1803) *An Essay on the Principle of Population* almost became a new book in content.

by Jan Tinbergen,⁸ which centred on the inequality and imbalances between the countries and regions of the world. Excruciating problems that affect humanity, that only the commitment of humanity itself to solve these ills would be the only possible remedy. This being the case, it is from that time that studies on the environment, far from putting the emphasis on the capacity to produce goods to satisfy the needs of a population, and in consequence, far from dealing with the production–population conflict, begin to focus on the environment as an object to be conserved. We are presented with an environment that constitutes the *habitat* of humanity and for this reason we must ensure that it continues to be the place in which man, all of mankind and all men, lead their lives in a sustainable manner.

If the prophecies of the aforementioned studies, which warned of the insufficiency of nature and the economy to cater for the needs of the population, proved to be erroneous, the situation of other present-day studies is not so far removed. We speak of those studies which contemplate the necessity of conserving the environment for human life, alerting us of the most foreseeable dangers for nature and humanity if the warnings of those who study the future of the planet are not heeded.

With a vision that falls little short of apocalyptic, the scientific and technical studies of the day contemplate the deterioration of the environment as a consequence of human activity. Human activity that takes place with disregard for the need to protect the environment, in order to provide man with suitable conditions for the habitat of the human family.

This does not mean that there is coincidence of criteria and much less that there is coincidence of results amongst those who devote their efforts and scientific competence to discovering the secrets of the environment and its survival. In effect, as was the case when it was necessary to present the population–resources conflict, there is an official truth, that of the United Nations, through the Intergovernmental Panel for Climate Change (IPCC) and, connected to it, the Climate Research Unit (CRU) of the University of East Anglia in the United Kingdom, and the NASA GISS, based at Columbia University and led by James Hansen.

According to the official version, and at the risk of simplification, the world is progressing along the path of chaos, of the negation of its own interests and natural destiny. The atmosphere we breathe deteriorates by the day and it is therefore foreseeable that man will no longer be able to evolve within the framework that supposedly corresponds to him.

⁸ Jan Tinbergen (Co-ordinator) *Reshaping the International Order – RIO. A Report to the Club of Rome*. Hutchinson & Co. Ltd. London 1977.

On the stage where we go about our activity, constantly rising temperatures, which may become unbearable for man, are to be appreciated. We are immersed in an accelerated process of global warming which leads to the disappearance of species and holds dangers for the human community itself. The frozen surface of the polar ice caps is diminishing at a rapid rate, which will result in rising sea levels, causing the disappearance of coastal perimeters and island areas currently inhabited by man. Ultimately, we are faced by nothing less than the end of the world.

Another line of research contradicts this official truth of the apocalypse and points to the shortcomings of the aforementioned research. With no less scientific rigour than that of the official researchers, the so-called “sceptics” put the spotlight on the research policy of those who, while using all available data, renounce the data that contradicts their own opinions, or, to express it better, do not consider data that might contradict the conclusions that have been pre-established for the studies or research by the centres involved in carrying out this work. In this way, for example, when historical series are used to prove that global warming is taking place at present (the highest temperatures in the entire history of humanity), the high temperatures registered in medieval times, higher than current temperatures, are omitted. If they were taken into account, they would not enable the conclusion of global warming to be arrived at in the way that is intended.

Sceptics also accuse those who promote the official line of boycotting, hindering and persecuting studies that produce conclusions at variance with the official truth, i.e., those who are not faithful to what Ed Regis has termed “The Litany”.⁹ A litany of clichés, repeated time and again to people from a very young age. This litany was afforded sufficient space and criticism in one of the significant works of Bjørn Lomborg.¹⁰ A good example of the tenor of this litany, and reproduced in the cited work of Lomborg, is the following expressive text, published in the *New Scientist*:

We humans are about as subtle as the asteroid that wiped out the dinosaurs... The damage we do is increasing. In the next 20 years, the population will increase by 1.5 billion. These people will need food, water and electricity, but already our soils are vanishing, fisheries are

⁹ Ed Regis, “The environment is going to hell...” In *Wired*, 5(2), February 1997, pp. 136–40 and 193–98.

¹⁰ Bjørn Lomborg, *The Skeptical Environmentalist. Measuring the Real State of the World*. Cambridge University Press. Cambridge 2001; specially pp. 3–33.

being killed off, wells are drying up, and the burning of the fossil fuels is endangering the lives of millions. We are heading for cataclysm.¹¹ There have been many scandals that distance the official truth from that expected of the process of obtaining a scientific truth. Perhaps the most notable was the well known Climategate scandal, which came to light on November 21 and 22, 2009 and which fundamentally highlights two habitual practices in official-line studies: on the one hand, the manipulation of data to adjust them to objectives, making general conclusions based on once-off figures at a given time, and, on the other hand, the destruction of evidence to prevent the checking of results in scientific forums and debates.

The most recent instance of the will to ignore or conceal very significant variables for environmental culture was the alteration, according to other research teams, of cloud height, which would give rise to, always according to technical findings, a general cooling of the planet, thereby contradicting the global warming thesis and its catastrophic consequences as forecast in the official research.

In the final instance, it is of importance to make clear, at very least, that the uncertainties are many and great. How much carbon dioxide may join the atmosphere if nothing is done about it? That depends on projections of population, economic growth, energy technology, and possible feedbacks from warming the reduced albedo – ice and snow cover, for example.

Next, how much average warming globally is to be expected from some specified increases in the concentration of carbon dioxide and other ‘greenhouse’ gases? For a quarter century the range of uncertainty has been about a factor of three. (As more becomes known, more uncertainties emerge. Clouds and oceans are active participants in ways unappreciated two decades ago).¹²

This is why many ask about what lies behind scientific research into the environment and the opinions of people and institutions, who seem inclined to seek the predominance of their opinions, not so much through scientific proof as through the prevalence of their public positions and the pressure brought to bear on those who, with the same degree of legitimacy, disagree with their conclusions.

¹¹ “Self-Destruct”. In *New Scientist*, 2001 (1).

¹² Thomas C. Schelling, “Climate Change: The Uncertainties, the Certainties, and What They Imply About Action”. In Joseph E. Stiglitz, Aaron S. Edlin and J. Bradford DeLong (eds) *The Economists’ Voice. Top Economists Take on Today’s Problems*. Columbia University Press. New York 2008, pp. 5–6.

Is it a case of maintaining formal truths in accordance with an ideology? And if so, with what objectives? Could it be a case of protecting economic interests on a global level?¹³ It is not my intention to continue along the path of musings that might satisfy such doubts, perhaps making them larger, because, if I lack the scientific and technical knowledge to judge the contributions of the research teams on the current world stage, neither do I know what might enable interpretation of the possible interests that lie behind the scientific controversy, if indeed there are interests other than those of scientific knowledge.

What I would like to highlight, from the perspective of the economy, is my disagreement with the apocalyptic pronouncement of the official position (of the IPCC, the CRU and the GISS), according to which the world is on the road to its own destruction, worsening its conditions of habitability and, in consequence, jeopardising the possibility of the life of mankind. The reality, according to what can be deduced from the data of the United Nations itself, as shown in Graph I of the Appendix, is just the opposite.

The figures for a representative group of countries – ten of the richest and ten of the poorest – presented in the graph indicate that, over the last thirty years, all of them, with the exception of Liberia, have experienced significant improvements in human development. Moreover, compared to the average annual improvement rates during this period of between 0.25 and 0.70% for the richest countries, the average rates for the poorest countries have been considerably higher. Particularly noteworthy are cases such as those of Mali (2.37%), Afghanistan (2.28%), Niger (1.67%), Burundi (1.49%) and Malawi (1.27%).

It is true that countries such as Liberia, with a negative average annual rate of 0.06%, the Democratic Republic of Congo, with an average annual increase of 0.05% and Zimbabwe, with a positive average rate of 0.09% are also represented on the graph. What cannot be stated, based on a world limited to the countries considered in this graph, is that living conditions in a macroeconomic dimension were worse in 2011 – the final year considered in the reference data – than those prevailing in the year 1980.

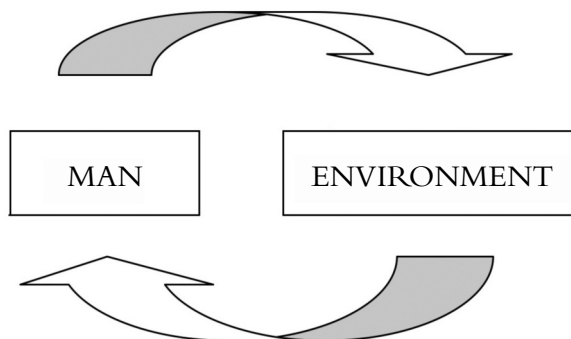
It will be said that the data referred to only shows the trend in the last thirty years, an argument which could not be truer: but it is no less true

¹³ *Vide*, José T. Raga, “De la ecología a la ideología”. In Rocío Yñiguez Ovando, Mercedes Castro Nuño and María Teresa Sanz Díaz (eds) *Jornadas sobre aspectos económicos del medio ambiente*. Facultad de Ciencias Económicas y Empresariales. Universidad de Sevilla. Digital Edition. Seville, 12 April 2011.

that any citizen that might be questioned would indicate his preference for the option of living in the world of today, as against the alternative option of living in any previous century; this is true of both rich and poor and, in both cases, of those living in both rich countries and poor countries.

II. The environment in a physical dimension

Even in a physical dimension, the environment is called upon to relate to man and man to the environment. In this way, man conditions the environment and the environment conditions man. Conditioning factors which are first determined by the attitude of man in terms of his capacity to harm the environment and secondly, in terms of the opportunities afforded to man by the environment, which enable him to satisfy his needs.



Or, expressed in another way, the environment offers man, at every moment in history, resources which are known to be limited, which man can use, in accordance with his knowledge, to satisfy his needs. Meanwhile, man, on occasions, led by the voracity of his cravings, can influence the environment, inflicting damage in such a way that this damage conditions the very availability of resources, limiting them quantitatively or temporarily.

*A correct understanding of the environment prevents the utilitarian reduction of nature to a mere object to be manipulated and exploited. At the same time, it must not absolutize nature and place it above the dignity of the human person himself. In this latter case, one can go so far as to divinize nature or the earth, as can readily be seen in certain ecological movements...*¹⁴

¹⁴ Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church*. Libreria Editrice Vaticana. Città del Vaticano 2004, num. 463.

Let us assume for the moment that this is a physical dimension that deteriorates as a consequence of human activity and that this deterioration is manifested in one way by the announced global warming that can be deduced from scientific studies, though there is no general consensus on this point. Leaving confirmation of the fact to the field of experimental science, it is possible, however, to speak of a

... consensus... to warrant an examination of the economic implications of the problem including alternative policy regimes for its solution...¹⁵

Contrary to the most predominant opinion of radical liberalism, man has no property rights to the environment; it is not an object of ownership by man, because it is called upon to give satisfaction to the basic needs of men, of all men.

A conception of the environment merely as property is (at best) incomplete because it fails to acknowledge the essential role of the physical environment in supplying our most basic needs. In other words, liberals concerned (as they are) about current and future generations of citizens being able to meet their basic physical needs must be committed to a principle of environmental sustainability, which is grounded in a conception of the environment as ‘provider of basic needs’.¹⁶

Conceived as such, the environment immerses us in a problem of greater entity, that of distributive justice. This distributive justice is called into question, in the light of the data presented in Graph II of the Appendix. This graph shows data on the human development index and gross national income *per capita*, the latter in US dollars adjusted for the purchasing power parity of each country. All of this data is for the year 2011. As in the previous graph, the countries selected are the ten with the highest development indices and the ten with the lowest development indices.

Graph I has already shown us the significant improvement of the poorest countries in terms of human development. For that reason, there is nothing surprising about the data in Graph II, in which the poorest countries have a human development index slightly higher than one third of the index of the countries with the highest human development. This is the case of Guinea (0.344), the Central African Republic (0.343), Sierra Leone (0.336),

¹⁵ B.P. Herber and J.T. Raga, “An International Carbon Tax to Combat Global Warming”. *The American Journal of Economics and Sociology*, vol. 54, no. 3, July 1995, p. 266, note 1.

¹⁶ Derek R. Bell, “Liberal Environmental Citizenship”. In Andrew Dobson and Ángel Valencia Sáiz (eds) *Citizenship, Environment, Economy*. Routledge – Taylor and Francis Group. Abingdon, Oxon 2005, p. 27.

Burkina Faso (0.332), etc. amongst the selected countries. The exceptions are Niger and the Democratic Republic of Congo, which have an index of below one third that of the countries with the highest development, such as Norway (0.943), Australia (0.929), the Netherlands (0.910), etc.

We do not wish to say that the results of the poor countries with respect to the rich countries are satisfactory, although if we consider the endemic underdevelopment of these countries in times gone by, the gap is not as great as might be expected. This is undoubtedly because the improvement rates in recent years are much higher in poor countries than in rich countries.

Nonetheless, although the human development indices of the less privileged countries are between thirty and forty percent of those of rich countries, the same is not the case with income *per capita*, however much we adjust it to reflect purchasing power parity. Therefore, the income of a Guinean is just 1.9% of the income of a Norwegian or 2.0% of that of an American; while that of a Liberian is 0.58% that of a Norwegian, 0.62% that of an American, and 0.66% that of a Swiss national.

It is clear that something is taking place in the world that cannot leave us feeling satisfied. There are reasons for inequality amongst peoples and regions that can be explained and even justified, but when the inequality reaches such levels, the human person must question himself about his responsibility regarding how this type of situation is sustained.

Can an economic, political and social model that permits such inequalities be accepted? The inescapable responsibilities associated with these inequalities have their origins in different areas. If we have said, on considering the environment, that we were inclined towards its capacity to offer a means of living for humanity and that for this reason, the environment should not be the property of anybody, but rather be at the service of all men, the first responsibility is to ascertain the reason why the means do not reach all in the same conditions and do not even guarantee the survival of the less favoured.

Along with the traditional responsibility we have to future generations, ever-present when we speak of the conservation of the environment, there is a responsibility which reminds us of and demands our commitment to the present generation. To those peoples of Liberia, Burundi or the Democratic Republic of Congo who, at best, have an income per person of one US dollar per day. Intergenerational responsibility must not be forgotten but our intra-generational responsibility is also a matter of tremendous concern.

This means that the real challenge facing us as members of the human family is not merely the conservation of the physical environment so that it can offer resources for the life of people, but rather to ensure that such resources are at the service of all humanity. To safeguard only the former

would entail maintaining the state of inequality through which a large part of the human community only receives the goods of the Creation in theory. In practice, these people are deprived of such goods, goods which, at the same time, are abundantly available to the more privileged.

II. a) The conformation of environmental citizenship

Whatever the state of the environment, it is unacceptable that man might cause it harm. What can naturally be added to this statement is that neither is waste acceptable, be it deliberate or negligent, in the use of resources by man, who is ultimately the administrator of nature as a means.

When we speak of attitudes, we seek to highlight the greater or lesser disposition of men in terms of their commitment to the environment. This means that we consider the use of possible coercive measures to be exhausted, measures created through the public sector, in the form of compulsory regulations, incentives or sanctions, the sterility of which is set out in an abundance of literature.

These are important steps, but *the decisive issue is the overall moral tenor of society*. If there is a lack of respect for the right to life and to a natural death... It is contradictory to insist that future generations respect the natural environment when our educational systems and laws do not help them to respect themselves... Our duties towards the environment are linked to our duties towards the human person, considered in himself and in relation to others. It would be wrong to uphold one set of duties while trampling on the other.¹⁷

We speak, therefore, of attitudes that are developed from conviction based on the principles and values lived by in community. It is the conviction that, as persons tied by cultural, political and social bonds, we have a personal duty towards the community as a whole. In other words, we are simply speaking of people who feel themselves to be citizens and as such, are obliged by virtue of belonging to the *civitas*.

Is it a spontaneous order that determines coincidence in such attitudes? From a liberal perspective of the problem, it is true that in the absence of coercive regulations, human reason tends towards disperse attitudes, without a real possibility of convergence at a common point, just as there is no single common idea or specific doctrine with aims of general acceptance. However, it is true that, in a community developed on the basis of honest cooperation, in which citizens belonging to it are committed to the common

¹⁷ Benedict XVI, Encyclical letter *Caritas in veritate*. Rome 29.06.2009, num. 51.

good, such citizens lead their lives in community, with respect for what Rawls calls “*the fact of reasonable pluralism*”.¹⁸

This reasonable pluralism

... is essential to being a *reasonable* citizen, and implies a certain kind of self-restraint towards the state (at least in its fundamental aspects). This means that reasonable citizens do not identify the state with their own conception of the good life; they deny that the former should simply be an expression of the latter.¹⁹

It is true that the natural environment is not superior to the human person, but it is no less true that

... it is also necessary to reject the opposite position, which aims at total technical dominion over nature, because the natural environment is more than raw material to be manipulated at our pleasure; it is a wondrous work of the Creator containing a ‘grammar’ which sets forth ends and criteria for its wise use, not its reckless exploitation... Reducing nature merely to a collection of contingent data ends up doing violence to the environment and even encouraging activity that fails to respect human nature itself...²⁰

Therefore, when we are before environmentally reasonable citizens, we are faced by people who constitute a community and who accept the existence of a non-human natural environment, independent of the existence, needs, interests and objectives of the human being. In this way, if reasonable citizens accept the vision of *others*, the regulatory support they provide for basic political issues also encompasses the “reasonability of the environment”. This means that such an attitude impregnates society as a whole, not just aspects or isolated elements of it, and therefore brings to bear its influence not only on the public sector, but also on the activities of the private sector, with respect to both agents of production and agents of consumption.

It is clear that, as Hailwood states,

Economic and business organisations and companies are not founded for sake of justice, as opposed to profitable production and trade. But their ‘legal constitution’, including the relevant property rights and employment practices, is to be regulated by principles of justice.

¹⁸ *Vide*, J. Rawls, *Political liberalism*. Columbia University Press. New York 1996.

¹⁹ Simon Hailwood, “Environmental Citizenship as Reasonable Citizenship”. In Andrew Dobson and Ángel Valencia Sáiz (eds) *Citizenship, Environment, Economy*. Routledge – Taylor and Francis Group. Abingdon, Oxon 2005, p. 40.

²⁰ Benedict XVI, Encyclical letter *Caritas in veritate*. Rome 29.06.2009, num. 48.

Members and employees do not relate to each other solely in terms of equality of opportunity, yet their activities are committed to as citizens... Similarly, respect for nature (as other) is to figure as an external political requirement rather than an internal commitment for such associations.²¹

In this way, we have a citizenship model capable of generating and reinforcing human and social values for a life in common, for a harmonic life, a life in which the private “*I*” is transformed by the power of the conviction in the “*we*” capable of meeting global objectives for the building of a better society, for the achievement of the common good. These are the values lacking in citizens who are faithful to the limited and partial vision of industrial economicism and for whom the environment or, simply, the world in which we live, is merely an object that can be subjected to transformation.

II. b) The figure of the environmental consumer

To assume that consumption is a neutral act, performed in a mechanical manner in response to a human need that desires satisfaction, is a simplistic reduction of the action of men. Consumption, like any decision taken by the human person, is the result of a decision-making process, in which alternative solutions to desires are contemplated and the subject opts for that which seems best to him. The subject does not act in the manner of an automaton that responds to whatever stimulus (need) with an action determined by a previously established programme.

Mises is particularly expressive on this matter, contemplating the economic action of man:

Acting man is eager to substitute a more satisfactory state of affairs for a less satisfactory. His mind imagines conditions which suit him better, and his action aims at bringing about this desired state. The incentive that impels a man to act is always some uneasiness...

But to make a man act, uneasiness and the image of a more satisfactory state alone are not sufficient. A third condition is required: the expectation that purposeful behavior has the power to remove or at least to alleviate the felt uneasiness. In the absence of this condition no action is feasible. Man must yield to the inevitable.²²

²¹ Simon Hailwood, “Environmental Citizenship as Reasonable Citizenship”. In Andrew Dobson and Ángel Valencia Sáiz (eds) *Citizenship, Environment, Economy*. Routledge – Taylor and Francis Group. Abingdon, Oxon 2005, p. 43

²² Ludwig von Mises, *Human Action. A Treatise on Economics*. William Hodge and Company Limited. London 1949, pp. 13-14.

It is in this process of reflection, which encompasses objectives and the means to achieve them, that man employs his criteria and his values. Criteria and values that enter into play when determining the ends and criteria and values that will also decide the choice of the means capable of achieving such ends. Therefore, consumption cannot be seen as an external or neutral act, but rather one that forms part of a decision that involves the deep inner being of the human person.

Benedict XVI has reminded us that,

...*the consumer has a specific social responsibility, which goes hand-in-hand with the social responsibility of the enterprise. Consumers should be continually educated regarding their daily role, which can be exercised with respect for moral principles without diminishing the intrinsic economic rationality of the act of purchasing.*²³

These moral principles are present both in the initial decision as to which needs to satisfy (choosing from amongst an infinite number of them), and in the type of goods chosen to satisfy them (bearing in mind the means of production, fair remuneration of the productive resources, the due conservation of the environment...).

With respect to this latter aspect, it is respect for the environment that conforms a type of consumption that has come to be called “*sustainable consumption*”. This can be defined as

The use of services and related products which respond to basic needs and bring a better quality of life while minimising the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life-cycle of the service or product so as not to jeopardise the needs of future generations.²⁴

This being so, sustainable consumption has been configured as the suitable terrain for the recreation of the environmentally reasonable citizen and as a platform for environmentalist demands. There are opinions that are truly representative of the point we are making:

I believe passionately that humanity must reduce its impact on the world. Using local organic food is just one way, but for many it is the most visible and accessible way.²⁵

²³ Benedict XVI, Encyclical Letter *Caritas in veritate*. Rome 29.06.2009, num. 66.

²⁴ OECD Environment Directorate – Environment Policy Committee, “Policies to promote sustainable consumption: an overview”. Working Party on National Environmental Policy – Policy Case Studies Series. ENV/EPOC/WPNEP(2002)18/FINAL. 2 July 2002, p. 9.

²⁵ Gill Seyfang, “Ecological citizenship and sustainable consumption: Examining local organic food networks”. Elsevier. *Journal of Rural Studies*, 22 (2006), p. 390.

It is probable that this judgement corresponds to the average rationality of man today, and undoubtedly that of the environmentally reasonable consumer, a fact that does not prevent it from presenting difficulties.

Amongst these, the most sensitive difficulty is that arising from the externalisation of environmental costs on the part of producers of conventional goods and services, which do not allow for such costs to be transposed to the market, i.e., that the prices of goods produced with little or no consideration for the environment only represent the production costs of those resources transmitted by the market neglecting the costs of damage caused to the environment. This means that such costs are borne by the community as a whole, in the form of environmental deterioration, exhaustion of natural resources, etc.

Therefore, the consumer of such goods does not receive correct market information about these costs and, consequently about the prices they would be sold at if, in terms of equal consideration, the social costs had been taken into account. From this, it is deduced that

The first obstacle to sustainable consumption in the mainstream strategy is the misleading price signals given in the market. The current price system externalises social and environmental costs and benefits, and this, together with current subsidy systems for intensive pesticide-dependent agriculture, results in local organic produce costing more than conventionally grown imported food.²⁶

We are confronted by fictitious, subsidised and manipulated markets, which do not reflect the reality of the economic processes of production and consumption.

Confronted by this skewed information, the consumer does not always include the environmental variable in his consumption decisions, even when he is disposed to do so. However, this awareness in the choice between goods produced with respect for the environment and others, whose production has not taken account of such conservation, is insufficient. It is necessary and it is an inescapable obligation to go a step further at a historic moment such as the beginning of the 21st century, despite the difficulties being experienced in most economies. Consumption, including that of goods produced with respect for the environment, requires resources for production; resources that are scarce by nature. Moreover, every good consumed also produces waste which must be processed. This processing may

²⁶ Gill Seyfang “Ecological citizenship and sustainable consumption: Examining local organic food networks”. Elsevier. *Journal of Rural Studies*, 22 (2006), p. 390.

involve availing of waste by recycling, if possible, and in any case to avoid, insofar as possible, the polluting effect of such waste.

We must bear in mind that

... the major cause of the continued deterioration of the global environment is the unsustainable pattern of consumption and production, particularly in industrialized countries, which is a matter of grave concern, aggravating poverty and imbalances.²⁷

One year prior to the Rio Summit, John Paul II had warned of the dangers of the high consumption of individuals, families and nations that were particularly favoured by economic fortune.

To call for an existence which is qualitatively more satisfying is of itself legitimate, but one cannot fail to draw attention to the new responsibilities and dangers connected with this phase of history... A given culture reveals its overall understanding of life through the choices it makes in production and consumption. It is here that *the phenomenon of consumerism* arises. In singling out new needs and new means to meet them, one must be guided by a comprehensive picture of man which respects all the dimensions of his being and which subordinates his material and instinctive dimensions to his interior and spiritual ones... *Thus a great deal of educational and cultural work* is urgently needed, including the education of consumers in the responsible use of their power of choice.²⁸

Hence the call of the United Nations at the Rio Summit in 1992, highlighting the problems arising from that consumerist attitude which, along with basic needs, seeks to satisfy, with complete profusion, random and clearly contingent needs, and encounters superfluous goods with which to satisfy them. This is still more serious when only an insignificant portion of the needs satisfied by prisoners of consumerism correspond to essential needs for the life of persons. The Summit Reports says:

Special attention should be paid to the demand for natural resources generated by unsustainable consumption and to the efficient use of those resources consistent with the goal of minimizing depletion and reducing pollution... consumption patterns are very high in certain parts of the world... This results in excessive demands and unsustain-

²⁷ United Nations Conference on Environment and Development, "Report of United Nations Conference on Environment and Development". Rio de Janeiro, 3-14 June 1992. United Nations. New York, 1993. Volume I, *Resolution Adopted by the Conference*, Annex II – Agenda 21, paragraph 4.3.

²⁸ John Paul II, Encyclical Letter *Centesimus annus*. Rome 01.05.1991, num. 36.

able lifestyles among the richer segments, which place immense stress on the environment.²⁹

That educational and cultural work of which John Paul II speaks is essential to change the models in which the human being is immersed at this moment in time. It is necessary to appeal for greater emphasis to be placed on spiritual values than on material values. It is true that we live at a time in which materialism has invaded human life. It can be said that today, what has no weight and cannot be measured is considered not to exist. Everything is quantitative, meaning that qualitative, spiritual and transcendent aspects are considered to be sterile references that lead to nothing.

It is Mises himself who, with total clarity, from an economic perspective, contemplates man in this dual dimension, from which emanate, naturally, material needs and spiritual, or at least non-material, needs. He says that:

It is arbitrary to consider only the satisfaction of the body's physiological needs as 'natural' and therefore 'rational' and everything else as 'artificial' and therefore 'irrational'. It is the characteristic feature of human nature that man seeks not only food, shelter, and cohabitation like all other animals, but that he aims also at other kinds of satisfaction. Man has specifically human desires and needs which we may call 'higher' than those which he has in common with the other mammals.³⁰

These "higher" needs, which are precisely those that distinguish man, should serve as a reference to launch the change of model and attitude in the consumption of goods by man. The solutions, which were already profiled in the Rio Summit of 1992, include

... promoting eco-efficiency and using market instruments for shifting consumption patterns, but it was also recommended that governments should develop 'new concepts of wealth and prosperity which allow higher standards of living through changed lifestyles and are less dependent on the Earth's finite resources and more in harmony with the Earth's carrying capacity'.³¹

²⁹ United Nations Conference on Environment and Development, "Report of United Nations Conference on Environment and Development". Rio de Janeiro, 3-14 June 1992. United Nations. New York, 1993. Volume I, *Resolution Adopted by the Conference*, Annex II – Agenda 21, paragraph 4.5.

³⁰ Ludwig von Mises, *Human Action. A Treatise on Economics*. William Hodge and Company Limited. London 1949, pp. 19–20.

³¹ Gill Seyfang, "Shopping for Sustainability: Can Sustainable Consumption Promote Ecological Citizenship?" In Andrew Dobson and Ángel Valencia Sáiz (eds) *Citizenship, Environment, Economy*. Routledge – Taylor and Francis Group. Abingdon, Oxon 2005, p. 139.

An educational and cultural project to which we are all called. Each one of us, in his singularity, with power to manage his decisions as a consumer, but each one, also, as a member of the community, and families, the essential cells of that community, in order to disseminate environmental values throughout society as a whole, with a view to transforming consumption habits towards more sustainable consumption. Public and private institutions and the public sector itself must also develop their own activities in the interests of achieving a better world, a world in which values other than purely material ones are respected, values that distinguish man as a human person, and a world in which greater respect for the laws of nature predominates, even at the cost of exercising discernment with respect to need and rationalising consumption to make it more sustainable.

II. c) Productive investment and the environment

In the preceding section, we looked at the decisions of the subject with respect to the acquisition of goods for consumption, with the possible effects that such decisions might have on the environment. Now it is time to consider the other spending alternative for singular persons, and public and private institutions. This is expenditure on investment goods, which we assume are productive investment, believing that the criterion of economic rationality underlies the decision.

If we pointed out previously that consumption was not a neutral act, bereft of evaluation, neither is such neutrality to be appreciated in the decision to invest or in the act of investing. John Paul II says that

...the decision to invest in one place rather than another, in one productive sector rather than another, is always *a moral and cultural choice*. Given the utter necessity of certain economic conditions and of political stability, the decision to invest, that is, to offer people an opportunity to make good use of their own labour, is also determined by an attitude of human sympathy and trust in Providence, which reveal the human quality of the person making such decisions.³²

It could not be otherwise, given that it is an act carried out by the person himself within the scope of his liberty and responsibility. We have already pointed out that there is no place for subdivisions in the activity of the human being, insofar as all his acts gestate in the womb of his own personality. It is this human nexus that frames the responsibility and moral evaluation of his acts. In the words of Benedict XVI,

³² John Paul II, Encyclical letter *Centesimus annus*. Rome 01.05.1991, num. 36.

...justice must be applied to every phase of economic activity, because this is always concerned with man and his needs. Locating resources, financing, production, consumption and all the other phases in the economic cycle inevitably have moral implications. *Thus every economic decision has a moral consequence.*³³

It is precisely this deep-rooted moral aspect of the acts emanating from the human person that results in monetary benefit not being the only behavioural norm to which human activity of an economic nature must be subject. It is, therefore, by no means surprising that Vatican Council II establishes that “Investments, for their part, must be directed toward procuring employment and sufficient income for the people both now and in the future”.³⁴ Hence the reflection of Pius XI on investment as an act of liberality when it meets these requisites of moral action:

Expending larger incomes so that opportunity for gainful work may be abundant, provided, however, that this work is applied to producing really useful goods, ought to be considered... an outstanding exemplification of the virtue of munificence and one particularly suited to the needs of the times.³⁵

The question we would like to ask at this point in time is whether there is room for environmental commitment within this attitude of liberality of which the Pope speaks. In other words, from the perspective of our responsibility for the environment, could we ask ourselves if goods whose production processes are damaging to the environment, limiting production possibilities for both future and present generations, can be classed as useful goods.

We are convinced that no investor would reject an investment due to the fact that it tended towards the conservation of the environment. Moreover, it would not be rejected in favour of other investment alternatives, as long as the pro-environment choice took place in *ceteris paribus* conditions with respect to return on investment. The question, however, presents more doubts if the expected return on a conservationist investment is lower than that of competing investments. If this were the case, it is worth asking about the limit threshold beyond which the investor is not willing to sacrifice greater returns due to the fact of having invested in activities that protect the environment. And, in this case, another question is of relevance: i.e., if there is a difference in attitudes between the individual and the institutional investor.

³³ Benedict XVI, Encyclical letter *Caritas in veritate*. Rome 29.06.2009, num. 37.

³⁴ Vatican Council II, Pastoral constitution *Gaudium et spes*. Rome 07.12.1965, num. 70.

³⁵ Pius XI, Encyclical letter *Quadragesimo anno*. Rome 15.05.1931, num. 51.

We are all aware that company commitment to what is known as Corporate Social Responsibility (CSR) is growing day by day. This is the commitment to objectives of a social nature, which are assimilated into business goals and which, in principle, could be thought of as being in accordance with the general profit-maximising objective of economic activity which, in the case of positive results, serves for the capitalisation of the company, making it solid and ensuring its long-term survival or, alternatively, serves the purpose of returning the capital invested by partners or shareholders through the issuing of dividends.

Furthermore, the assimilation of these objectives in the business activity has created a differentiation between companies which assume such commitments and others which maintain the radically economic position of producing accounts with the most favourable results possible. The former companies have even reached the point of labelling themselves “*ethical*” and, as a result, classed their different specific activities as being such. In this way, there is frequent talk of ethical investments in the case we are examining. To class an isolated activity, of the many activities carried out by a company, as “*ethical*”, seems to us to limit the concept of what is ethical to an area that might be but an insignificant part of the business activity as a whole. Hence our rejection of “*partial ethics*” as opposed to the global ethical attitude that informs all human action, both in the individual sphere and in business activity.³⁶

In the face of this proliferation of formal ethics in the economic world, the warning of Benedict XVI could not be more opportune:

Today we hear much talk of ethics in the world of economy, finance and business. Research centres and seminars in business ethics are on the rise; the system of ethical certification is spreading throughout the developed world as part of the movement of ideas associated with the responsibilities of business towards society. Banks are proposing ‘ethical’ accounts and investment funds. ‘Ethical financing’ is being developed, especially through micro-credit and, more generally, micro-finance. These processes are praiseworthy and deserve much support... It would be advisable, however, to develop a sound criterion of discernment, since the adjective ‘ethical’ can be abused. When the word is used generically, it can lend itself to any number of interpre-

³⁶ *Vide*, as a case of partial ethics, referring exclusively to the environment, the work of Neil Carter and Meg Huby, “Ecological Citizenship and Ethical Investment”. In Andrew Dobson and Ángel Valencia Sáiz (eds) *Citizenship, Environment, Economy*. Routledge – Taylor and Francis Group. Abingdon, Oxon 2005, pp. 101-18.

tations, even to the point where it includes decisions and choices contrary to justice and authentic human welfare.³⁷

In the light of this warning from the Pope and from the notorious abuse of the label “ethical” in the business, financial and economic world in general, the question arises as to whether ethical formality has not become a source of income. It is possible that some companies

... will be pushed to concern themselves with CSR as a result of the increasing active engagement by individual and institutional shareholders. The combined effect of changing public awareness and attitudes, pressures from social and environmental NGOs and government regulation and legislation, is to make companies more susceptible to business risks related to their social and environmental reputation.³⁸

It is indisputable that we live in an interdependent world with an abundance of information. This implies that the action of any notorious businessman in his investment policy, or that of an institutional investor, apparently guided by the objective of maximising profits for clients and shareholders, does not remain within the limited framework of his own sphere of decision. Everybody influences everybody and everybody feels influenced by everybody. This creates a situation in which the investment decisions of all are taken with consideration for what society, and clients and shareholders consider to be priority values, whether they be of a social or an environmental nature.

So much so that,

... even if corporate management remains unconvinced by the ethical... arguments, there are still strong and growing pressures on them to change their behaviour that may indirectly nurture individual ethical investment. Whether ethical responsibilities are taken on by companies because they are persuaded by the ethical case, or simply in response to regulation... or for business reasons, the change in behaviour contributes to the recursive relationship between ethical investment and CSR. The more the companies change (for whatever reason) the more encouragement there is for ethical investment, and as ethical investment grows the more likely is to be influential. In short, if individual ethical investments flourishes, than maybe the motivations of companies do not matter.³⁹

³⁷ Benedict XVI, Encyclical letter *Caritas in veritate*. Rome 29.06.2009, num. 45.

³⁸ Neil Carter and Meg Huby, “Ecological Citizenship and Ethical Investment”. In Andrew Dobson and Ángel Valencia Sáiz (eds) *Citizenship, Environment, Economy*. Routledge – Taylor and Francis Group. Abingdon, Oxon 2005, p. 114.

³⁹ Neil Carter and Meg Huby, “Ecological Citizenship and Ethical Investment”. In Andrew Dobson and Ángel Valencia Sáiz (eds) *Citizenship, Environment, Economy*. Routledge – Taylor and Francis Group. Abingdon, Oxon 2005, p. 116.

In other words, what is important are attitudes and without new attitudes there will not be a new world.

*Serious ecological problems call for an effective change of mentality leading to the adoption of new lifestyles, 'in which the quest for truth, beauty, goodness and communion with others for the sake of the common good are the factors that determine consumer choices, savings and investments'. These lifestyles should be inspired by sobriety, temperance, and self-discipline at both the individual and social levels. There is a need to break with the logic of mere consumption and promote forms of agricultural and industrial production that respect the order of creation and satisfy the basic human needs of all.*⁴⁰

The order of creation tells us that the earth and all its goods and resources were created by God to serve all humanity, all men and all mankind, and for this reason it is inadmissible that, with disdain for justice and charity, part of humanity, those privileged for diverse reasons, possess an excessive portion of those resources and those goods to the detriment of the less favoured, who are deprived of even the most essential necessities.

Investment is an efficient mean by which that principle tends to be fulfilled amongst men. But investment is also very unequally distributed, although it cannot remain independent of the ethical considerations we have made. If we observe the data in Graph III of the Appendix, we cannot avoid interpellation. The insignificant figures for foreign direct investment are a confirmation of the inequality that hinders the possibilities of development in the poor countries; the ten poorest countries in terms of GDP in 2009.

Direct investment is the best test of the commitment to ethical investment. It does not only imply the provision of capital, but is also accompanied by the contribution of know-how, technology and the opening of markets at which to aim excess products. The same graph also shows figures of official aid to development, which is important of course, but less efficient than direct investment. It cannot be guaranteed that the aid given ends up in productive investments and that these are for the benefit of the community it seeks to help. There is a long road to travel, judging from the scarcity of direct investment, which shows a resistance to the moral change of attitudes, because the moral of the human being cannot be subdivided, but rather it commits the person in his entirety in all facets of his individual and social action.

⁴⁰ Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church*. Libreria Editrice Vaticana. Città del Vaticano 2004, num. 486.

III. The environment beyond the physical dimension: the commitment to man

Let us change now the hypothesis we established at the beginning of the third paragraph of section II, “The environment in a physical dimension”, in order to continue our analysis of the problem by introducing man as an active and passive subject of what might occur in the environment, and going further by accepting that man is important in the extent to which this presumption may modify the field which traditionally has been attributed to environmental problems by a large proportion of the scientific literature.

That is to say, the preservation of a vegetable or animal species in danger of extinction, or reducing CO₂ emissions to the atmosphere, or recycling domestic or industrial waste makes sense to the extent that it is the life of man that is at stake, the life of man today and the life of the men of future generations. The mandate to subdue the earth,⁴¹ by which the dominion of man over all other created beings is established, is followed by another which complements it and bestows responsibility on he who exercises such dominion: “Yahweh God took the man and settled him in the garden of Eden to cultivate and take care of it”.⁴² Because it was in the *garden* where man would find the means of subsistence; the first man and all his descendants, following the mandate established of “Be fruitful, multiply, fill the earth and subdue it”.⁴³

A *garden*, therefore, at the service of all humanity, which entails a dual responsibility: on the one hand, its conservation and tending so that it can accomplish the mission entrusted to it as the means for an end; on the other hand, the responsibility that it attends to the needs of all humanity, the humanity of today and the humanity of generations to come. Therefore, the use of resources today must not be excessive because, given their scarcity, the abuse or appropriation of some will imply the deprivation of others. Hence, the concept of sustainability and *sustainable development*.

This is a responsibility of a global nature with respect to future generations so that they do not find themselves in worse conditions than those we live in today. This does not eliminate the problem of those who, today, find themselves in clearly inferior conditions to part of the present generation. This universalism of the problem

... also requires that in our anxiety to protect the future generations, we must not overlook the pressing claims of the less privileged today.

⁴¹ Genesis, 1²⁸.

⁴² Genesis, 2¹⁵.

⁴³ Genesis, 1²⁸.

A universalist approach cannot ignore the deprived people today in trying to prevent deprivation in the future.⁴⁴

Often, the greatest argument outlined by environmental literature with respect to the conservation of the environment is precisely that the present generation does not limit, with its abuses, the possibilities of life of future generations: in other words, that the present generation ensures that future generations enjoy similar opportunities to those currently existing.

However, this *macro* concept of commitment to global sustainability becomes difficult to sustain when we divide it by population groups, amongst which we find people deprived of what is most essential. The aspiration that future generations are not in a worse situation than present generations, when present generations lack what is most essential for a dignified life, should not be established amongst the aims of a responsible humanity committed to the human person.

To aspire to maintaining the poverty of many cannot be a goal of humanity because it means that the distributive injustice of today will be perpetuated, if not exacerbated, in future generations. The objective with respect to future generations cannot avoid the necessary commitment to the present generation. We are not only faced by an intergenerational problem, but also by intra-generational injustice, which, in turn, conditions the objectives set between generations.⁴⁵

In a world of opulence and hyper-consumption, with great waste of resources by part of the developed world, we find alarming poverty rates in the present generation, as can be seen from the data in Graph IV of the Appendix. In this graph, three poverty indicators are shown for the ten poorest countries in the years of the latest available figures: the multidimensional poverty index, the percentage of the population living in conditions of severe poverty and, finally, the percentage of the population living below the poverty line, set at 1.25 US dollars per day, calculated using the criteria of purchasing power parity.

It is difficult to accept that in the 21st century, after all the technical breakthroughs and the disproportionate economic growth of the developed world, almost 82% of the population of Niger lives in conditions of severe

⁴⁴ Sudhir Anand and Amartya Sen, "Human Development and Economic Sustainability". *World Development*. Vol. 28, Num. 12. December 2000, p. 2030.

⁴⁵ *Vide*, José T. Raga, "Medio ambiente y pobreza". In Mercedes Castro Nuño, Teresa Sanz Díaz and Rocío Yñiguez Ovando (coords.) *Jornada sobre Economía y Sostenibilidad Ambiental*. Dep. de Teoría Económica y Economía Política. Universidad de Sevilla. Digital Edition. Seville 2011.

poverty, or that just under 66% of the population of Burkina Faso and over 62% of the population of Guinea live in the same alarming conditions.

It is similarly distressing that 83.7% of the population of Liberia lives on less than 1.25 US dollars per day, while the figures for Burundi and the Central African Republic are 81.3% and 62.8% respectively; only the two most favoured of the countries considered, Niger and Guinea have figures of 43.1% and 43.3% respectively, while in the rest of the countries featured in the graph, more than half the population has a daily income that falls short of 1.25 US dollars.

The income and poverty figures expressed in the above graph, while dramatic and compromising, represent no more than indices that drag and condition other equally or more expressive indices of the distributive injustice afflicting the poorest countries in relation to the most developed. A set of interpellations arise in the light of the figures presented in Graph V, which shows 2009 data for the ten most and least developed countries with respect to indicators such as infant mortality (children of less than five per thousand born alive) and life expectancy (expressed in years). The figures carry an impact that pains the human heart.

The questions arising from the data presented in the graph are quite evident. Does it belong to the order of creation that while in Norway or Sweden only three of every one thousand children die prior to reaching five years of age, in Chad and in the Democratic Republic of Congo 209 and 199 children die, respectively. We do not believe that any kind of privilege can be argued to justify that in the best of the countries with low human development considered in the graph (Liberia), 112 children of every thousand fail to reach the age of five, while in the worst of the countries with high human development featured in the graph (United States), eight children die before reaching this age. It cannot be accepted that the geographic location of birth is what determines the possibilities of life of a population.

Analogously, if we focus on life expectancy, the other series of data presented in the graph, the interpellant questions are of the same type as in the aforementioned case. There is no argument to mitigate the responsibility of humanity today, when a child born in Switzerland in 2009 can expect to live seventy-five years, while if it had been born in Sierra Leone, its life expectancy would not be more than thirty-five years. It should be observed that we maintain the same countries in all cases (greatest and least human development) rather than selecting the most and least favoured countries for each of the indices contemplated. Even so, the highest life expectancy for the countries of least human development contemplated (Liberia) stands

at forty-eight years, while the lowest life expectancy of the countries with the greatest human development (United States) is seventy.

Looking to the future, the hopes of a change in trend in the poor countries are still small. One of the determining factors for higher incomes, for improvement in development indices, in essence for a dignified life for the population in poorer countries, is access to culture, to information, to increased knowledge and to the benefits that the world can offer and must offer to every creature present in the current world and the world to come.

In this sense, the comprehensive data for education is still of a very insufficient range for the objectives to which we should aspire. Graph VI of the Appendix shows adult (fifteen years and over) literacy data as a percentage of population, as well as matriculation in third level education for the countries we have been analysing (the ten with the lowest human development and the ten with the highest human development). The data shown is for the period 2001-2010.

Full literacy is assumed for the countries with the highest human development so this data is completely omitted on the graph. However, in the countries of least development, we find situations like those of Niger and Burkina Faso, with a literacy rate of 28.7% of the adult population, which is equivalent to illiteracy of 71.3%, followed by Chad and Guinea, with adult literacy percentages of 33.6 and 39.5 respectively, representing illiteracy rates of 66.4 and 60.5 percent.

If we turn our attention to the population enrolled in third level education, a level which should form the basis for social and economic transformation in each country, the situation is perhaps less promising. While the ten countries of greatest human development featured in the graph all have enrolment rates of over fifty percent, the best of the ten countries with the lowest human development has a rate of barely over nine percent (9.2%) as is the case of Guinea, followed by the Democratic Republic of Congo with a six percent rate of formal schooling. However, countries such as Niger and Mozambique have rates of 1.4% and 1.5% respectively. The remaining countries have rates of between two and three percent, with the exception of Burkina Faso, which has a rate of 3.4%.

If the data on this graph is taken together with the figures of the immediately preceding graph, the gravity of the situation is greater. Thus, in Sierra Leone, where educational opportunities are extremely limited and only two percent of the population gains access to third level education, the situation is more complex when we bear in mind that the life expectancy of this population is 35 years. This means that the expected benefits from the small portion of the population that receives education are very limited by the

short period of return on educational inputs. And the same can be said of Niger, where, with 1.4% of the population in third level education, life expectancy is barely 44 years.

There is a substantial contrast in the countries with the highest indices of human development, such as the case of the United States, where 85.9% of the population receives third level education and life expectancy is 70 years, or Australia, where 82.3% of the population receives third level education and life expectancy is 74 years. These long life periods enable a high return on educational investment, which in turn covers a high percentage of the population.

This data, of necessity, forces us to consider two shocking denouncements. One is that doing nothing to enable future generations to live at least as well as the present generation is inadmissible in the context of a human and environmental commitment based on sustainable development. But if this denouncement is shocking, no less so is that which refers to the commitment to the present generation itself, where inequality is not merely an offence to humanity, but also represents accepting a playing field whereby the commitment to future generations will be an unachievable objective. This will, therefore, become merely one of the many fallacies with which the humanity that does not feel those needs is capable of living.

This commitment to justice for the present generation leads us to a policy of redistribution at a universal level, between nations, between the developed world and the less developed world, and between people. Redistribution in favour of the most depressed

... in the form of improving their health, education, and nutrition is not only intrinsically important – in enhancing their capabilities to lead more fulfilling lives – but it is also instrumentally important in increasing their ‘human capital’ with lasting influence in the future. A general increase in education levels, for example, will raise productivity and the ability to generate higher incomes, now and in the future... Thus human development should be seen as a major contribution to the achievement of *sustainability*.⁴⁶

What is more, along with what we have just said, the World Bank has said that everything that signifies mitigation of poverty will represent an important contribution to the conservation of the environment.⁴⁷

⁴⁶ Sudhir Anand and Amartya Sen, “Human Development and Economic Sustainability”. *World Development*. Vol. 28, Num. 12. December 2000, p. 2038.

⁴⁷ *Vide*, World Bank, *World development report 1992: Development and the environment*. Oxford University Press. New York 1992.

Looking at Graph VII of the Appendix, we can observe that the data which confirms this thesis could not be clearer. The graph shows the available indices for environmental performance for the ten countries with the highest human development and the ten with the lowest level of development. The indices range from zero, for minimal achievement of objectives, to one hundred for the greatest level of success.

As can be seen, while Switzerland has an index of almost ninety percent (89.1%), Sweden 86% and Norway 81.1%, countries like Sierra Leone, the Central African Republic and Niger have indices of 32.1%, 33.3% and 37.6%, respectively. It can also be seen that none of the countries with the lowest human development featured in the graph achieves an index of 55.0%, while none of the countries with the greatest human development has an index of less than 63.0%. This is despite the expected pollution from energy-intensive industrial production processes and agricultural production, which involves significant use of fertilisers and pesticides.

The determining factor for the differences centres fundamentally around the education, know-how, skills and competences of some populations with respect to others. It is ultimately a cultural factor which demands long-term investment in what is of priority importance, sacrificing in the short-term what is most incidental or accessory. Human development, as an objective ... must take full note of the robust role of human capital, while at the same time retaining clarity about what the ends and means respectively are. What has to be avoided is seeing human beings as merely the means of production and material prosperity, taking the latter to be the end of the causal analysis – a strange inversion of objects and instruments.⁴⁸

In effect, what is at stake is man in his complete dimension. His dignity cannot be relegated to the status of a simple instrument to achieve other ends of a material nature, not even when the material objects tend to benefit a community or part of it. The dignity of the human person and its contribution to the ends of man and society as a whole cannot be used as currency in an economic or environmental macro-equation.

Having said that, I would like to look at a concept intensively developed by the doctrine of the Catholic Church, which has taken the concept of human development a step further towards what is known as *integral human development*. A development associated with the vision of man in his dual

⁴⁸ Sudhir Anand and Amartya Sen, “Human Development and Economic Sustainability”. *World Development*. Vol. 28, Num. 12. December 2000, p. 2039.

consideration as material body and spiritual soul. Satisfaction cannot be given to one facet, whilst forgetting our duty to the other. In order to be integral, the development has to encompass the human sense of the person, which is precisely what sets him apart from the other beings of the creation.

In the words of Benedict XVI,

... it should be stressed that *progress of a merely economic and technological kind is insufficient*. Development needs above all to be true and integral. The mere fact of emerging from economic backwardness, though positive in itself, does not resolve the complex issues of human advancement, neither for the countries that are spearheading such progress, nor for those that are already economically developed, nor even for those that are still poor, which can suffer not just through old forms of exploitation, but also from the negative consequences of a growth that is marked by irregularities and imbalances.⁴⁹

We are in no doubt as to the complexity of what we are saying, but it is the conviction of what has been said that sustains the argumentation. In a world in which materialism prevails, where, at whatever income level and in whatever location, men slide with great facility down the slope of consumerism and hedonism, giving prevalence to the pleasurable over the satisfactory action of the spirit, it is complex to speak of spiritual values having preference over material values in whatever choice that may present itself.

However, it is these spiritual values that will provide man with greatness of spirit, that will provide him with elements of fraternity for a better society, that will ultimately nurture him with that sense of moral responsibility to all the children of God, rich and poor, so that from that internal mandate he can attain what coercive measures or economic incentives cannot achieve. Proximity to the community and responsible experience of the political, economic, social and environmental problems that may affect it is the most effective instrument to seek the correct solution.

A better life in a better conserved environment will not be possible without a revolution in the consciences of men that shows the possibilities for good and our responsibility to pursue it. Ultimately, we are calling for that *new man*, impregnated by the supreme Truth and, therefore, committed to men, knowing himself to be the brother of every singular man and member of the entire human.

⁴⁹ Benedict XVI, Encyclical letter *Caritas in veritate*. Rome 29.06.2009, num. 23.

IV. By way of conclusion

Our aim was to outline, in the preceding pages, the role of people, in their singular dimension, and nations, in the current objective of protecting the natural environment, an environment made for man, an environment in which man lives and from which he obtains what is required to attend to his needs.

It is evident that, regardless of creeds or ideologies, the most effective medium to achieve this objective is conviction. A conviction that some live by and put into practice through simple commitment to nature itself, due to reverence for the landscape, due to the call to protect what they consider to be in danger of extinction. A responsibility to ensure that self-interest does not harm the common interest, the interest of the community as a whole.

But the environment is something more than matter upon which is conferred a life of its own, because all that is created, nature itself in all its grandeur, is at the service of man and hence, the responsibility of man to safeguard it and make it fruitful. This great link between man and nature implies a classification of one and the other.

Only man can be related to the world. It is the mandate to safeguard and cultivate the garden that imposes this relationship, in which nature serves man and it is man's duty to conserve nature. In the present circumstances,

Care for the environment represents a challenge for all of humanity. It is a matter of a common and universal duty, that of respecting a common good, destined for all, by preventing anyone from using 'with impunity the different categories of beings, whether living or inanimate – animals, plants, the natural elements – simply as one wishes, according to one's own economic needs'.⁵⁰

As the text says, the challenge has two dimensions: firstly, the challenge of custody over the environment as a collective good and, no less important, the challenge of the destiny of the environment, aimed at everybody, all humanity, without scope for privileged conditions for some, which of necessity would be to the detriment of the conditions of others.

On speaking of the environment, the concern is the human development of all men, of each man and of each people or nation. A human development which must be integral, pervading the entire human person, in his corporeality and in his spirituality.

⁵⁰ Pontifical Council for Justice and Peace, *Compendium of the Social Doctrine of the Church*. Libreria Editrice Vaticana. Città del Vaticano 2004, num. 466.

A prosperous society, highly developed in material terms but weighing heavily on the soul, is not of itself conducive to authentic development... *There cannot be holistic development and universal common good unless people's spiritual and moral welfare is taken into account, considered in their totality as body and soul.*⁵¹

To the extent that the protection of the natural environment, that is proposed, will not be guaranteed either. It will not be guaranteed due precisely to the lack of that moral dimension that lies inside man and settles within his spirituality, far from materialism and hedonism.

From the simple environmental citizen, committed, temporarily at least, to the conservation of the environment, to the man who feels the call, due to his own responsibility, supernatural in its origin, to protect nature as a means of protecting man, there lies the great distance of a space which, in a certain sense, is not sterile for the mission entrusted to humanity as a whole since the creation.

Appendix of Graphs (see p. 646)

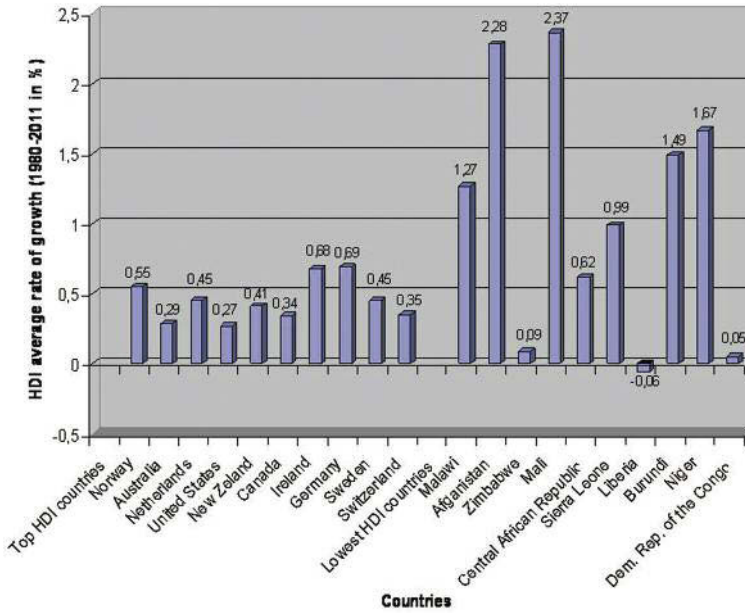
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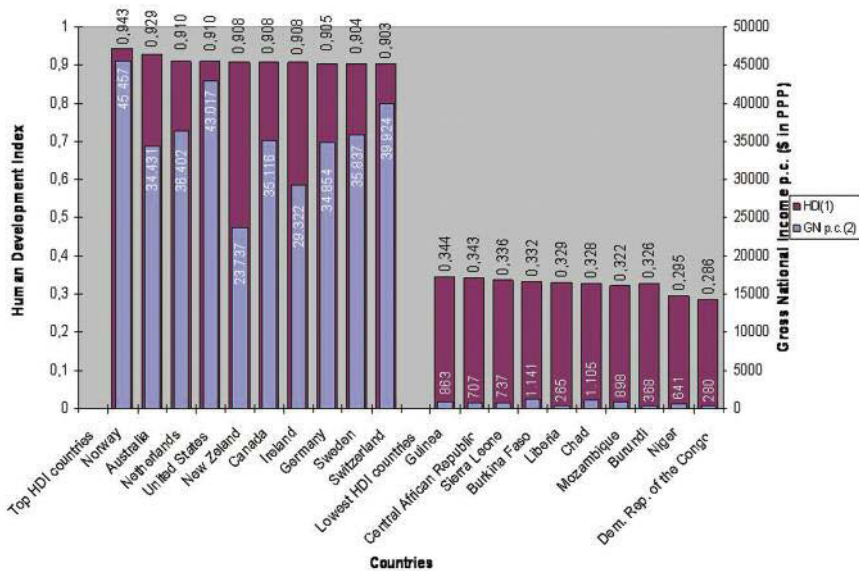
⁵¹ Benedict XVI, Encyclical letter *Caritas in veritate*. Rome 29.06.2009, num. 76.

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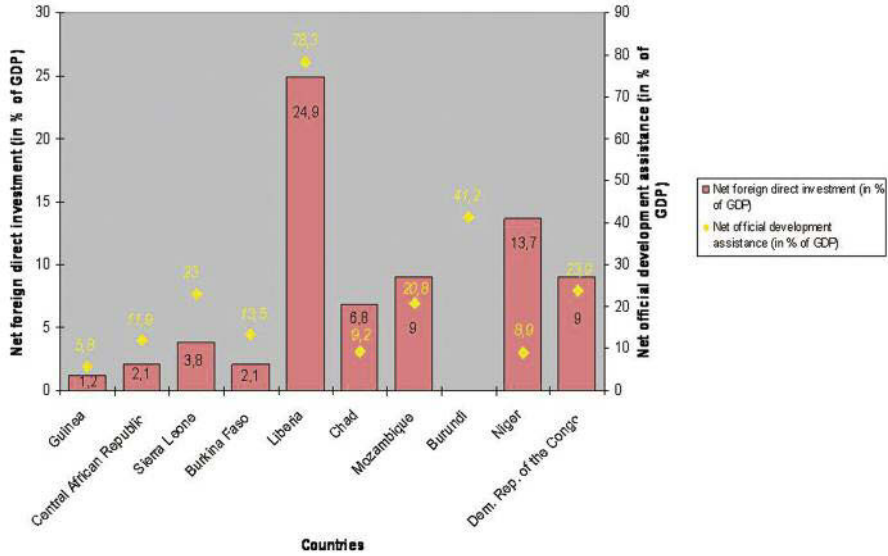
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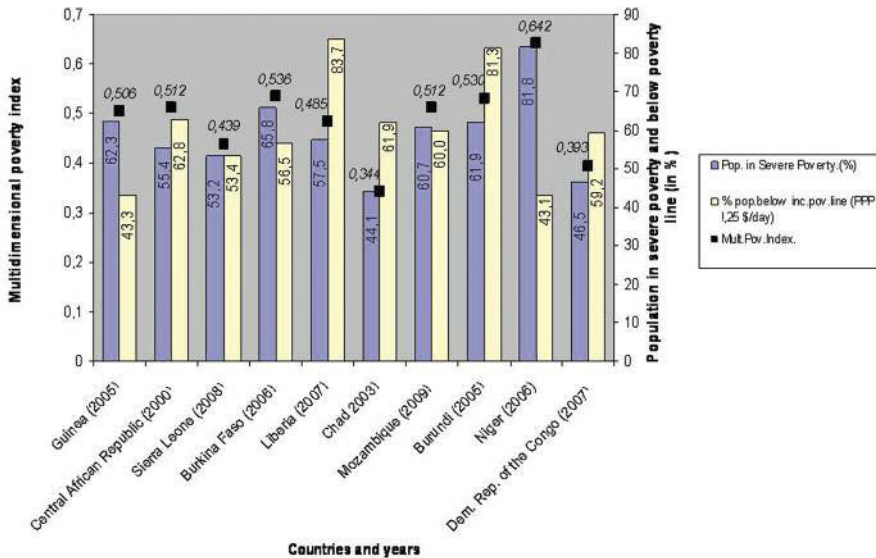
Graph I. Human development index annual average growth rate (1980-2011, in %).



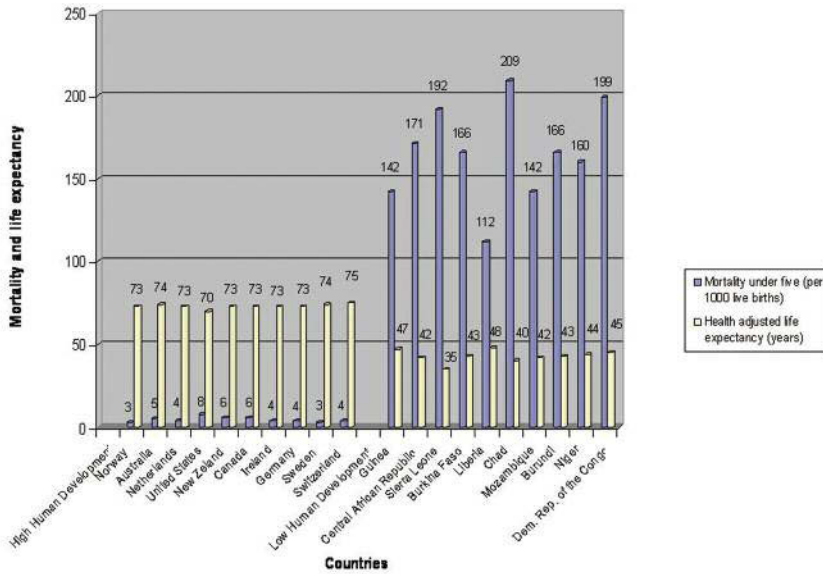
Graph II. Human development index and Gross national income p.c. (year 2011).



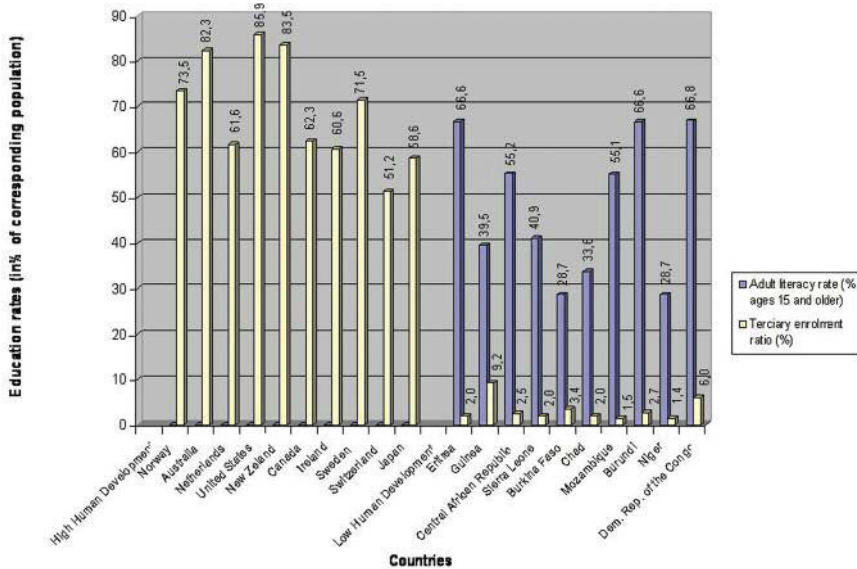
Graph III. The concern with lowest human development countries (year 2009).



Graph IV. Poverty references: multidimensional index and population % in severe poverty and below poverty line (poorest countries).



Graph V. Mortality and life expectancy (year 2009).



Graph VI. Education rates (period 2001-2010).