Sustainable Development and Agriculture in the Third World

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1 Introduction***

In development studies, much attention has always been focused on agriculture for its strategic importance in determining and driving the dynamics of the development process. It is very often considered as an "indicator" of the development process, through the observation of the trends in its sectoral contribution to GNP and in the composition of the labor force. In general, it is acknowledged in the traditional approaches to development that there is a direct correlation between the development process of a growing economy and the decline of the primary sector. Also, during the process of growth, the differences between the traditional and pre-capitalist agricultural sector and the modern and capitalistic industrial sector tend to disappear, and the primary sector is progressively integrated in the system of capitalistic accumulation.

The birth of the development era is often identified with a specific date, January 20, 1949, when President Harry Truman gave his speech to open his mandate (Sachs, 1992a; Esteva, 1992). It was the first time that certain regions of the southern hemisphere of the world were defined as "underdeveloped" and, as a consequence, two different worlds were compared, from then on defined as the First World and Third World: one developed and able to lead the world economic system, the other characterized by a condition of underdevelopment, the Second being centrally planned economies.

Even if the concept of development is recurrent in the literature, as in the case of the "classic" authors or the theorists of dualism who became popular in those years, the date mentioned is particularly significant because it coincides with the decline of colonial exploitation and with the creation of a strategic process which defined the relationship between rich (developed) and poor (developing) countries. This process has been sustained by many factors: the diffusion of scientific and technological innovations which leads to a renewed trust in the possibilities of transferring modern techniques; the economic and political supremacy of the United States

and the Soviet Union after World War II; the liberalization of trade and the rise of a sort of "one world market", maintained by fast spread of the transnational corporations; finally, the increasing importance on the world scene of the international agencies and supranational institutions in decision making relating to the new world order (Escobar, 1988).

The requirement for creating a complete theoretical body for development studies is a consequence of two main concerns: the need for escaping from the omnivorous power of traditional economic theory (monoeconomics) and the acknowledgment of the benefits arising from an open economic system for the countries involved (mutual benefits) (Hirschman, 1981). The first statement refers to the consideration of the large differences among developed and developing economies, and therefore economic science cannot be treated as a "set" of a few universal principles though extremely powerful, by the same standard as physical or biological sciences. The second point is related to one of these universal principles accepted by the theorists of development economics, the assumption that the economic relations among countries can be regulated in such a way to benefit all the countries involved, either developed or developing.

In the early stages of the theories of development, which came to the peak of their popularity in the late 60's, the most striking aspect is the overlapping of the theories of growth and development (Escobar, 1988). As a consequence of the world economic crisis, brought about by the two world wars, the main preoccupation faced in the new economic agenda was to overcome such crises, through the acceleration of the process of growth and the modernization of the most dynamic sectors. The key elements of this pattern, especially regarding Third World countries, were twofold: a strong program of industrialization on one side, and the support of the cycle of capital, based on the direct relationship between savings and investments on the other (Lewis, 1954)[0].

If, during the last decades, development economics in its traditional meaning reached the top of its popularity, today many scholars tend to underline the unhealthy condition of this science, or even a complete crisis (Hettne, 1990; Manzo, 1991; Esteva, 1992; Sachs, 1992a). What exactly is discussed about the traditional approach to economic development? Some elements

can be pointed out: an increase in the levels of poverty and unemployment, despite increasing production, has been observed in many developing countries[1]; the association of modernization with ecological problems (deforestation, desertification); the impossibility to maintain the same level of consumption as in the First World; and finally the "erosion of the myth that development can create a just and humane society" (Banuri, 1987:8). Besides these, it seems that the overlapping of the concepts of development and westernization has now been questioned, and at the same time new aspects have been taken into serious consideration. These include cultural differences among countries and peoples, possible forms of local and regional endogenous development and the balance between conservation and exploitation of natural resources. In conclusion, there are new theoretical forces tending to reject the concept of forced modernization as a synonym of the development process based on an imitation approach followed by the "backward" countries in order to reach an "advanced" country status. Meanwhile, a search for new approaches which could give a renewed meaning and strength the local social forces is underway.

The acceptance of the limits of the past approaches to development has led to a rethinking of the criteria with which we face the analysis of the Third World. Such rethinking, particularly stimulated by the recent "deconstruction" approach to the concept of development, produced, within the traditional approaches, new theoretical elements, some of them apparently successful, as in the case of Sustainable Development (SD). Is this pattern a "new" feasible one? Or is it just "a new label on old bottles" (Nogueira and Surkin, 1992)?

This paper focuses in some detail on the ability of the concept of SD to suggest a different approch to the problems of development. Our main objective in this effort is therefore of seeing to what extent SD can be considered as the new paradigm of development, providing "the answer" to the many questions that arise from the crisis of the traditional approach. Section 2 highlights the main outcomes of the process of modernization in agriculture, after a brief presentation of the traditional functions of the primary sector in the strategy of development. Section 3 focuses on the supposed crisis of Developmentalism and on the main critiques of the deconstuction approach and presents the concept of SD

in its wide meanings. Section 4 refers to agriculture as a "case study" to test different definitions of SD. In our view, this set of definitions identifies different ways of conceiving "sustainable agriculture".

2 The process of Modernization in Third World countries.

2.1 Development and Modernization.

Different definitions and interpretations have been given to the term "modernization", either with a positive or negative connotation and with a progressive or conservative meaning; in short it has been absorbed by different theories and ideologies, thanks to its lack of a rigid form[2].

In a strictly economic sphere, the definition of the concept of modernization can be related to the early development studies. Such studies led to models that were based on the following two key elements: (1) the development process can be divided into separate stages that show the actual level reached by each single country and (2) development is an endogenous, spontaneous and irreversible process, which each society has to face, but it requires structural differentiation and functional specialization. Given these as the basis of modernization, the concept has endured over time by a continuous process of enlargement, which has made it more and more difficult to define and to be enclosed in one single theory.

As a reaction to the end of World War II, a wave of optimism invaded the entire world, and the concept of development was associated with economic growth, which in turn needed planning, public action, in a word what Hettne (1990) called an "engineering" effort. Research was highly focused on structural analysis, both from a micro point of view - in relation to the way markets and other institutions work - and from a macro point of view, in the study of the correlated long run processes that go along with growth itself (Syrquin, 1988). As far as the macro aspects were concerned, structural modifications described by variables like the capital accumulation rate, the sectoral composition of the economy, the population growth and the geographic localization of economic activities, were specifically investigated. The processes on which greater attention was paid were industrialization, urbanization and the transformation of the agricul-

tural sector. Such a planning component, apparently vital for the regulation of the economy, is based on an "evolutionist" concept of development: the condition of underdevelopment is nothing more than a stage of the evolutionist path of a country. Besides this, another key element supporting the use of planning, and, indirectly, the overlapping of the concepts of growth and development, was the demand for modernization coming from the Third World countries soon after World War II and directed to the international agencies and the industrial countries. This demand was mainly aimed to stimulate the intervention of those actors in the problems of internal development and to sustain the need for international cooperation, following the principles of "One World".

Neo-Liberalism and other theories related to the Neo-Classical tradition that have marked the last decade have extended the concept of modernization to trade models and to the economic interactions between developed and developing countries. These commercial models, based on the theory of free trade, have tended to draw new economic world maps, following the principles of the globalization of markets and the concept of a "One World System" that drives economic exchanges among countries. To what extent can these principles be considered part of the modernist paradigm? An easily identifiable element is the view, taken for granted, of the leading role of industrialized western countries in the management of this world system. The globalization of markets implies an increasing integration of Third World economies in the capitalist mode of production, but also an asymmetric position of poor economies in comparison with rich ones within this system, arising from the strict application of the principle of comparative advantage (Lappè and Collins, 1986). Moreover, the economic, social and cultural systems of the dominant West is offered once again as the model to be followed, therefore annihilating the existing differentiation. Implicit in this is the possibility of exporting development models. The global economic system, the scientific process which ensures technological transfer and promotion of development, and the internationalization of commercial relations, are modernization instruments that guarantee access to growth and development (Sachs, 1992b; Sbert, 1992).

In traditional Marxist analysis, the main contributions to theories of develop-

ment come from the school of dependency and the theorists of underdevelopment. The key elements in these approaches can be summarized as follows[3]: first, the consideration of underdevelopment not as a natural stage of the development path but rather as a condition created by international relations; second, the assumption that the relations themselves between developed and developing countries, as they have been structured, support the conditions for the underdevelopment of the Third World. Now, such considerations have the unquestionable characteristic of containing some anti-modernist elements, since they try, at least, to free the discourse of development from the tight logic of the imitative models (Manzo, 1991). Notwithstanding this effort, the analysis of the dependency school, based on the relationships between Center and Periphery, seems to fall into the same dualistic opposition as the one between "modern" and "traditional": the Periphery is functional to the existence of the Center, and the latter is, after all, the model to be followed. In other words, these approaches never discuss the criteria of definition of the categories Center/Periphery, Modern/Traditional, but just the mechanisms for determining the relationships among countries.

Why then do scholars speak of a possible crisis of the modernization paradigm? First of all, notwithstanding the apparent globalization of the markets and the celebrated "one world system", the world economy seems to be moving toward a growing polarization of its activities, and the gap between North and South is growing, with an increasing marginalization of the depressed areas (de Bernis, 1991; Emmerij, 1989).

Beyond this intuitive observation, a very interesting analytical element comes to light from the consideration that the crisis that scholars have tried to focus on, is not global, as the dependency school suggests through its theory of the circulation of capital, but rather it appears with different causes and different symptoms in different geographic areas. On one side, the types of development put forward by the modernization paradigm seem to fail, and on the other, the notion of an evolutionary development process makes little sense. If the industrialized West has always been considered as "the model to be followed", from the 80's onwards the model itself grew weaker, threatened by the irrational utilization of resources, by problems of pollu-

tion and degradation, and by the economic and social policies implemented. All this leads to the idea that it is extremely difficult to identify a starting point and an ending point in the path to development. Along with the crises of the North, nowadays other aspects must be reconsidered: the breakdown of the socialist block, which by definition was seen as "the other model", and the countless problems of Third World countries, whose solutions seem much more urgent since they are strictly connected with the subsistence economies and which are partly the result of the development process (Hettne, 1990).

2.2 Modernization in Agriculture.

In the mainstream of development economics, agriculture has always played a secondary role, since it is totally functional to the birth and the growth of a non-rural economic system. Traditionally defined as pre-capitalist and backward in dualistic development models, agriculture consequently ends up being submissive to the sector considered to be capitalist and modern, i.e. industry. With the birth and success of development economics, the contribution of the primary sector to development does not actually change, though more attention is paid to the exchange among economic activities. The approach to the agricultural sector deriving from developmentalism is based on the empirical consideration that

"the declining importance of agriculture is uniform and pervasive, a tendency obviously driven by powerful forces inherent in the development process, whether in socialist or capitalist countries, Asian, Latin American, or African, currently developed or still poor" (Timmer, 1990:47).

In spite of this apparently inevitable decline, the sectoral growth of agriculture is acknowledged as a necessary element, though not sufficient, of the wider development strategy. Briefly, the agricultural sector is expected to play five main roles in a strategy of development (as it is traditionally understood)[4]: fulfillment of food demand; release of labor surplus to be employed in other sectors; enlargement of the market for industrial production; increase private savings; and the inflow of foreign currency.

With the accomplishment of these

objectives, agriculture passes through a number of stages that define, according to the traditional approaches, the transformation of the primary sector in the development process (Timmer, 1990). These stages are characterized by the different ways resources are transferred from agriculture to other activities, and by the consequent integration of the "backward sector" into the mode of capitalist production. In other words, the modernization of the agricultural sector occurs according to two main actions: on one hand the regulation of the flow of resources out of the sector and the rationalization of the resources left within it; and on the other hand, the creation of a series of linkages among rural and urban economies that fill the gap between the two systems.

During the 70's and 80's the modernist approach to agricultural development evolved along new lines and was often substantially criticized. Generally speaking, the theoretical contributions of those years have been focused especially on the micro aspects of social and economic development, and as a consequence show little interest in macro approaches. Examples of this change in studies can be found in the Rural Integrated Development Programs and in the Basic Needs approach. In the second half of the 80's, focus shifted once again back to the relationship between rural development and economic growth, and to macroeconomic reforms as the main form of intervention for the development of Third World countries. This can be observed in the stabilization programs highly recommended by the World Bank and accepted by many developing countries with the structural adjustment plans (Staatz and Eicher, 1990).

Although the developmentalist model underlines the importance of the agricultural sector as a part of the general economic system, stressing the role of intersectoral relationships, the concept of agriculture as a "reserve of resources" still persists, and after all, its subordination to the process of industrialization has not changed. This submission is shown through a constant structural adjustment of the primary sector to the functioning of the rest of the economy (Hoggart, 1992). Hence, the basic pivot of modernization policies is still the dynamic relationship between agriculture and the rest of the economy, so as to focus on the "optimal growth" strategy (Mellor, 1990). This relationship can be examined at three levels:

technological, institutional, and international. These represent the three strategic variables upon which the process of modernization in agriculture stands, and, together with it - and thanks to this process itself - the possibility to fulfill the roles expected of the primary sector.

Technological change has been one of the main points of the theoretical and empirical analysis of growth in Western countries. This is why technology has become the most stressed variable in studies on the Third World, especially in the so called "induced innovation models" (Ruttan, 1990). These models always seem to rely on the assumption that the dynamic process which happened in the West has gone through technological progress, and therefore they suggest the same kind of path is necessary for developing countries. The debate on the possibility of a process of imitation by adoption of the most efficient technology and on the concept of "appropriate technology" very well fits the case of agriculture in developing countries, where there seems to be a constant trade-off between modernization and the destruction of local systems in technological choices. If even today the adoption of "appropriate technology" is one of the most claimed objectives of development, this should suggest how "inappropriate" the transfer of technology from North to South has been in the recent past (Long and Oleson, 1980).

The second aspect to be mentioned is the role of institutions, and specifically of the State. The key to this debate is the role of government as a promoter of agricultural development and also as an "interpreter" of rural population needs, since the rural population represents the weakest group within the social components of many developing and developed countries. It has been underlined how the theorization of the State as the central institution for a development orientation is one of the strongest areas of debate within the alternative approaches. In spite of this, the theoretical "strength" of such a concept as the State, and also the relative success of some cases of developmentalist States (as in South-East Asia), make the "deconstruction" of this point particularly difficult. Somehow, the problems connected to the idea of a developmentalist state have more of an indirect nature than a direct one, related to the path chosen, the investments financed and the changes supported, rather than to the intervention it-

self (Rao, 1989).

Finally, the third variable is the network of connections initiated with the opening of international relationships. Even in this case, the progressive integration of agricultural activity in the world economy can have a strong impact on the social and economic organization of local rural systems. One example often reported in the literature (Barkin et al., 1990; Onimode, 1992) is the constant dichotomy between export orientation and self-reliance. The agricultural export performance of most developing countries tends to rest with one or a few crops, with little value added activity. Moreover, the export crops, mostly cash crops, are not complementary with the food crops, but rather tend to be competitive for the availability of productive factors, especially land and labor. As for labor, the shift from subsistence agricultural systems to export oriented ones has also had repercussions on the rural social system, especially tied to the gender division of labor. Women, in fact, are traditionally responsible for the activities connected to subsistence farming, but excluded from the control of agriculture when this becomes a monetarized activity.

In spite of these considerations, what can be observed as the probable consequence of the rigid application of the principle of comparative advantage will be the increasing specialization of Third World countries in trade with Western countries based on products which provide them with foreign currency. The main result of this strategy has been the perpetuation of a strong dependency on the rich countries, at least for food availability[5]. In this constant trade off between integration and self-reliance, technology and the role of the state are again strategic variables in shaping feasible development patterns.

3 Crisis of Development and New Theoretical Patterns.

3.1 Rethinking Development.

The acknowledgment of a state of crisis of the Eurocentric development models has been strongly supported by the contemporary rise of studies that proposed to be an alternative to the modernization paradigm. Such studies offer an easily identifiable different perception of the cultural and economic systems of Third World countries, and have focused on the analyti-

cal effort for escaping the direct and indirect dominance of the leading models. Two different levels of this process of rethinking development can be identified. The first operates within the discourse of development and can be seen as the evolution of the traditional theories. It is based on a few crucial elements which define the dimensions of a different approach: orientation toward the basic needs, endogeneity of the process of growth, self-reliance, delinking and rational utilization of natural resources (Amin, 1990a, 1990b; Hettne, 1990). These elements, though not totally unrelated to the more traditional approaches, are especially emphasized by theorists of "another development", even if with a different stress and differentiated aims according to their specific interests.

The second tends to place itself completely out of the developmentalist approach, very often rejecting the concept of development itself as a Western-constructed discourse (Escobar, 1992a). This process of deconstruction, though not alien from exaggerations and extremes, offers very interesting reflections and new perspectives for the rethinking of the theories of development. The fragmentation of the concept of development is spreading not only at a theoretical level, with the identification of differentiated causes and symptoms of backwardness, but also - and especially - through the definitive decline of the typical unity of the developmentalist discourse, and the reinterpretation of concepts like "Third World", "progress", "underdevelopment", and so on. This double action of deconstruction of the economic thought is mainly the result of the dissatisfaction of a number of scholars toward the traditional approaches, which have very often labelled all that is not exactly classifiable into the category of "Western-like development" as "underdeveloped" or "backward". The logical path generally followed is extremely clear in the words of Sachs (1992a:4):

"It is impossible to talk about development without referring to concepts such as poverty, production, the notion of state, or equality. These concepts first rose to prominence during modern Western history, and only then have they been projected on the rest of the world. Each of them crystallizes a set of tacit assumptions which reinforce the Occidental worldview. Development has so pervasively spread these assumptions that people everywhere have been caught up in a Western perception of reality".

Since its beginning, development became the maintenance of the same conditions with which it was born, through the creation of a network of relations among institutions, economic strategies and political matters which ensures its existence. Two mechanisms are considered crucial for its existence: a) the "professionalization" of development, throughout the generation, diffusion and acknowledgment of a discourse of development and the creation of specific "ad hoc" disciplines (development economics being only one of them); b) the "institutionalization" of development, throughout organizations such as international agencies, non-governmental organizations, and bilateral agreements, which are responsible for the diffusion of development practices.

The overlapping concepts of development, progress and growth are the basis upon which the theories of underdevelopment and modernization are built, whose essential structure is always the dichotomy of two elements: Center and Periphery, industrialized countries and poor regions, First and Third World, modern and backward sectors. Within such dichotomies it is always the first of the two elements which assumes a positive connotation, while the second exists just as the negation of the first, thus representing an "inferior reality" (Manzo, 1991).

A mechanism like the one described above inevitably leads to one result, no matter what theoretical contextualization: The disappearance of cultural and social differentiation and the homogenization to a single dominant model. As Sachs (1992a:4) suggests: "The 'Other' has vanished with development". The "voices of resistance" stress exactly this point, that is, the effort in recovering this diversity which seems to be more and more suffocated by an apparent homogeneity of the social and economic dominant models.

The development discourse, as generally intended, is mainly based on a series of relations built on a few variables like capital, technology and resources. Once those relations are highlighted, a "space" of development is defined, within which concepts like industrialization, planning, green revolution and macropolitics, can be easily located. Such a space is so well defined that it seems almost impossible to even conceive a social reality different from the one shaped by those variables (Escobar, 1992a). The deconstruction process does

not deny the tragic living standards of a large part of the Third World population; it rather tries to underline how the conditions of poverty, backwardness and rurality have been "constructed" as underdevelopment. In other words, their definition of a "problem of underdevelopment" led to the institutionalization of solutions like the industrialization process, international aid and so on.

What is left out of the space defined by capital, technology and resources? According to the supporters of the "deconstruction" view, all those aspects connected to the endogenous and local processes of a country which are considered as part of the Third World are not included in traditional models. These processes, sometimes conscious, but mostly unconscious, are a fragmentation of the reality defined by the categories of development; they bring into light some social categories that are made invisible by the traditional approaches: peasants, women, environmental movements, or simply the actors of the local traditions and cultures. These "new" categories make the counterposition between "modern" and "traditional" become unbearable and obsolete. As Escobar put it:

"the distinction between 'modernity' and 'tradition', one of the major dualisms through which development operates, is showing clearer signs of obsolescence, despite the fact that the current restructuring of the world economy ... seems to imply that capitalist 'modernization' is the only alternative left in the Third World" (Escobar, 1992a:423).

So the emergence of "new" social actors and the proliferation of grassroot movements in Third World countries weaken not only the interpretative effort of developmentalism, but also that of "alternative" theories such as dependency and marginality.

What are the possible outcomes of such a direct deconstruction of the traditional theories of development and of the acknowledgment of a crisis in development economics? Although it does not seem reasonable to talk about "the death of development" (Raffi, 1990), this process of rethinking has the indisputable merit of having stimulated a deep reformulation of the approach to the study of the Third World, opening up the way to new feasible theoretical issues. The conciliation of the mainstream with the "voices of resist-

ance" is very often just apparent, and limited to a process of absorption of the language and the actors, which turns up to be of a lifting more than a real opening to new ideas and needs. A very good example of the last issue is the concept of SD, which includes environmental aspects in the approach to the Third World. Are we really facing a new way of conceiving development, or is it just a formal process, that leads to the appropriation of the discourse of environmentalism, and that celebrates the "happy marriage" between development and environment? In the next paragraph, entirely devoted to these issues, SD is considered to be "the battle ground" between the mainstream and the new approaches to development.

3.2 Sustainable Development: "a New Label on Old Bottles"?

Since the end of the Eighties, in view of the *redevelopment* of both the First and the Third World, the concept of SD has proved to be the new ethos of development (Esteva, 1992) - a role that, as it is shown below, may appear too ambitious, notwithstanding its indisputable merit of having proposed the environmental aspect as an integral part of the development strategy and not merely as a secondary concern of the strategy itself.

As a starting point it should be recognized that, aside from criticism, SD is the most successful idea in terms of environment and development. The reasons for such a success are clearly connected to its conceptual flexibility, which allows it to acquire different meanings and nuances according to the theoretical, political and social context in which from time to time it is inserted. Such flexibility allows an apparent merging of shapes and objectives:

"from the profit-minded industrialist and risk-minimizing subsistence farmer to the equity-seeking social worker, the pollution-concerned or wildlife-loving First Worlder, the growth-maximizing policy maker, the goal-oriented bureaucrat, and therefore, the vote-counting politician" (Lele, 1991:613).

We will attempt to clarify the different positions of SD, from the most significant to the most irrelevant ones: our goal being not that of providing a final definition, but rather that of ascertaining, on the basis of an historical analysis of such a concept, whether one or more (or none?) new theo-

retical bodies are contained in the mist of definitions.

The historical period under analysis runs from the United Nations *Conference on Human Environment*, held in Stockholm in 1972, to the *Earth Summit* of Rio de Janeiro (1992), a time in which SD, though still unconvincing in terms of an attained level of "maturity", has nonetheless gained the central position it currently holds both in the *mainstream* and in alternative approaches.

3.2.1 A Short History.

The 1972 *Conference on Human Environment* is usually considered to be the key event in the recognition of a "global" environmental problem: under the pressure of the acknowledged "global crisis" of the Sixties and Seventies, ecology and environmentalism began, at least in intention, to cross national borders. The Conference however was unable to indicate global solutions: the environmental issues and those related to development were considered separately and the sense of integration and sharing of the problems between North and South was overlooked (Adams, 1990).

In this period, literature was dominated by works of Neo-Malthusian imprint (Ehrlich, 1968; Meadows *et al.*, 1972), based on the principle that the population cannot trespass the availability of resources without facing famine and environmental degradation. Such an approach, strongly criticized because of its lack of reference to distribution problems, appeared rather suspect to the less developed countries. In the proposal of "global" solutions they saw an attempt to avert national resources from national control (Adams, 1990) as well as a possible involvement in problems for which they held themselves only secondarily responsible[6] (Nogueira and Surkin, 1992).

It was at the meeting held in Cocoyoc, Mexico, in October 1974, that the concept of SD was explicitly used for the first time. On that occasion, possibly the birthplace of an "alternative trend" in the theory of economic development (Hettne, 1990), the environmental problem was faced for the first time from the standpoint of the Third World and especially of the poorest countries. The conclusive declaration underlined in fact the uneven resource distribution and the existence of a double bond in the development process, an internal one due to human needs, and an external one

due to resource exploitation.

The official document that gave a wider international resonance to the concept of sustainability, thanks in part to the media propaganda at the time, was certainly the 1980 *World Conservation Strategy* (WCS). Although presented as a first attempt to demonstrate the indivisibility and the compatibility between environment and development, the WCS involves development only marginally, focusing its attention on sustainability essentially understood as conservation (IUCN, 1980).

In spite of the unquestionable influence of the WCS on the following studies[7], its micro approach, the accent on the importance of local cultures and technologies, and its technical reference to ecologically "sound" agricultural practices led the *mainstream* to associate the document with localism, underlining its lack of global view[8]. Such criticism was widely accepted by the subsequent and perhaps most influential document in the field of SD: the 1987 *Brundtland Report* (BR). As a product of the *World Commission on Environment and Development*, that report was in fact centered on a decidedly global approach, on multilateralism and inter-dependency among nations, its aim being to fit the environmental problem into a political economy framework[9].

Our Common Future (WCED, 1987) provides the first explicit definition of SD as a kind of development "that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987:43). This definition is essentially based on two concepts: the requirement to satisfy *basic needs* and the existence of some limits in the expansion of economic activity. In such a view, it should be stressed that the limits stated in the BR, are not those imposed by the environment as such, i.e., absolute limits, but are those "imposed by the state of technology and social organization on the environment's ability to meet present and future needs" (WCED, 1987:43).

Thanks to such a definition, the concept of SD undergoes a subtle but important change, being pushed towards the socio-economic context of development in the guise of an efficient *management* of natural resources. Also the WCS proposed a certain form of environmental *management* starting from the (essentially moral) assumption of the maintainance of the ecosystem and subsequently trying to demonstrate that such a behavior was right also

from the economic standpoint. Conversely, the BR inverts such relationships completely and, focusing directly on humanity, discusses the environmental policies required to attain pre-fixed socio-economic goals. One seems to have shifted from the Seventies, the days of the *limits to growth*, to an era of *growth to limits* (W. Sachs 1988, as cited in Escobar, 1992b).

The BR's analysis is exclusively centerd on economic growth and its role in solving the problem of poverty, which is considered the main cause of environmental degradation. A world economics' revitalization in an otherwise ill-defined *ecologically sound* framework is in fact hoped for, aiming at eliminating the plague of poverty and, together with it, its "damaging" effects on the environment. These solutions, which do not explain how the *balancing trick* (Adams, 1990:60) with the environment could be achieved within their context, lie in fact in a "more rapid economic growth in both industrial and developing countries, freer market access to the products of developing countries, lower interest rates, greater technological transfer, and significantly larger capital flows, both concessional and commercial" (WCED, 1987:89).

If the limit of WCS can be detected in its scarce attention to the political and economic forces active behind (un)sustainable development practices (Redclift, 1984, 1987), then the BR seems to be exclusively interested in the effects of environmental degradation on effective and potential growth, neglecting the negative consequences of economic growth on the environment (Adams, 1990; Escobar, 1992b). What was considered a "romantic" view in the WCS, gains in the BR the shape of the most "rational" economism: it is not directly the environment, but economic growth and the hope in its beneficial effects that seem in need of being sustained (Illich, 1989). Thus in the last years a substantial change in behavior towards the environment from a "moral" to an "efficientist" approach has shown up (Batie, 1989).

We would like to conclude this brief history, with a few words on the Earth Summit of Rio de Janeiro held in June 1992. Even in that context, SD has put to a profitable use its many nuances to gain a central position in the North-South debate. In spite of this, the results may be considered deceiving as no new position has been postulated and all the known approaches have failed to give any original contribution to

the debate on the possible role of SD. Moreover, the well-known conflicts among nations - more specifically, North vs. South - which characterized the Rio meeting, seemed to throw for the first time some doubt on the success SD had enjoyed until then: in fact the political consent that had always appeared to accompany and sustain the SD diffusion collapsed, as we will see in the next section.

3.2.2 Sustainable Development: a New Paradigm?

The promoters of SD found themselves facing the dilemma typical of every program of political action and social change: the choice between an incisive and unambiguous position about the goals of the program or the maximization of political consent. In contrast to *ecodevelopment*, which was declared rapidly "out of fashion" as it focused on environment's problems too "radically", SD aimed neatly at the second choice, often sacrificing its precision to a wider popularity (Barbier, 1987).

Entirely different and historically opposed political and social forces found shelter under the ill-defined shadow of SD. On the one hand, the environmentalist movements went back to the concept of SD in the attempt to demonstrate the relevance of their ideas about correct management of natural resources and to combine the "half-spiritual" idea (Sachs, 1992c) of ecology with the rationality of economic theory. On the other hand, international agencies and development theorists saw in SD the long awaited wedding of development and environment. The last World Bank's Development Report (World Bank, 1992), clearly states that the reasons pushing for the compilation of works such as *The Limits to Growth* (Meadows *et al.*, 1972), in which the necessity to put a restraint on economic growth was emphasized, belong by now to the past and that to-day, thanks to the idea of SD, only a "false dichotomy" (World Bank, 1992:25) exists between development and the environment since in fact the two goals are concurrently attainable. Moreover, they are simply defined as "complementary aspects of the same agenda" (World Bank, 1992:25).

According to Buttel (1992), SD represents the success of the "greening" of the institutions assisting development: embodying "opposition" topics, such as the ecological and feminist issues of the 70's,

the 90's *mainstream* appears renewed, at least in its form. To what extent is such an internalization of environmental problems a sign of change or just a variation of language? If both "development" and "sustainability" show definitional difficulties, it is obvious that their joint use can generate an unbelievable proliferation of different meanings. In fig.1, an attempt has been made to sketch how such concepts, according to the different features, can spawn many "forms" of SD.

The first definition suggests that SD is a synonym of *sustaining growth*. Such an accepted meaning, apart from neglecting the well known criticism about the inadequacy of growth as an equivalent to development, appears highly inconsistent (Lele, 1991). In fact, if growth is intended in strictly physical terms, as in the growth of consumption, the hypothesis of its unlimited sustainment collides with the acknowledgment of an existing impassable limit, certainly already reached, in the use of resources (Goodland, 1991; WCED, 1987).

In other instances, the word "sustainable" is often used to underline the relevance of certain categories of economic policy objectives within development programs: in fact if we analyze the recent literature in the field of development, either Neoclassical, Marxist or Radical, and the Environmentalists' programs, we find references to "sustainability", though differently interpreted, everywhere. According to this kind of approach, different priorities are in fact identified: fulfillment of the *basic needs* of the poorest populations, maximization of inter-generational equity, maintenance of resource productivity, safeguard of genetic diversity, respect for different forms of culture, maintenance of social equilibrium, improvement in access to resources, social and institutional justice. As we will see in the concluding section, even if every single approach seems to propose an absolute priority, we believe that the goals acquire a different relevance according to the economic and social contexts to which they are referred and therefore particular attention must be paid to the inter-relationships and reciprocal influences existing among them.

Finally, sustainability is called for as a "successful" feature to the development process: "for economic development to be truly 'sustainable' requires tailoring the design and implementation of projects to the needs and capabilities of people who

are supposed to benefit from them" (Uphoff, 1985, quoted in Barbier, 1987:103). This assertion seems to be a trivial one, in that every development program should obviously be oriented towards its own beneficiaries. Furthermore, it does not clarify at all in what way SD differs from development.

3.2.3 Economic Growth: a Non-Objective of Sustainable Development.

If the uneasiness acknowledged so far in treating development sustainability and its meaning stems from an analysis of the primary sources, it is not surprising that some secondary sources taking the problem into consideration propose it in extremely simplified terms. The 1992 World Bank Development Report does not hesitate to dismiss the problem in few words: "sustainable development is development that lasts" (World Bank, 1992:34)[10]. In fact, after mentioning the "absorption" of non-economic factors such as literacy, life expectancy, etc. in the definition of development, and underlining the risk that environmental degradation can represent to the attainment of these development goals, the World Bank reduces the problem to a matter of efficiency in the natural resources management and to the choice of a "well-chosen" rate of discount to be employed in the cost-benefit analysis[11].

In such an "efficientist" view of the environmental problem, however strongly hoped for in the BR, the main instrumental goal identified by the *mainstream* in order to achieve SD is economic growth. Such a choice however raises some doubts. If on the one hand it is reasonable to believe that growth and environmental safeguards are not necessarily antithetical, on the other hand one could ask why, in the absence of such a correlation, the accent continues to be put on growth as a solution. The answer generally given to such a question lies in the hypothetical relationship existing among growth, poverty and environment; given the "responsibility" assigned by many to poverty in environment degradation (World Bank, 1992), economic growth appears to be considered a solution to the problem of poverty and, consequently, to the ecological question. Such a statement seems to oppose the fact that, at the beginning of the Seventies, the *basic needs* approach was indeed proposed in consequence of the observation that economic

growth alone was unable to solve the problem of poverty. According to several authors, in fact, economic growth should be a "non-objective" for SD, in that it does not necessarily imply environmental sustainability nor the removal of poverty. What on the contrary could be of some relevance is the reversal of the phenomenon: the implementation of policies aimed at solving efficiently the problems of poverty, of unemployment, of environmental degradation, of rural development, could bring as a consequence, especially in the Third World, a GNP increase and a still more hoped for growth of investments. Anyway, "economic growth may be the fallout of sustainable development, but not its prime mover" (Lele, 1991:615)[12].

3.2.4 The "Commoditization" of Nature, or, How "Resistance" Encounters Sustainable Development.

Many heterodox scholars criticize the concept of SD mainly because the model reproposes through the "greening" of economic theories and of the institutions propagating its contents a "green" version of the same paradigm, once again centered on the benefits of capitalism, on the drive/model role of the West and on a managerial approach to the environment. According to Sachs (1989), the only aspects separating *eco-developers* from traditional economists are the direct acknowledgment of environment's limits to production and the need to overtake them. In fact their common character is an "economic worldview that fails to appreciate cultural limits to the predominance of production, cultural limits that reduce the importance of production and, in so doing, also relieve environmental pressure" (Sachs, 1989:18). Following the ideology typical of ecological sciences and system theory, development is essentially proposed as a process of resource management, where a slight reform of "traditional" instruments is considered sufficient to ensure "optimal" results (Adams, 1990), without discussing the concept of development in itself.

Furthermore, the voices of resistance criticize the scarce consideration in which are held the "other" cultures, and the entire group of economic agents only partly or not at all interested in what happens in the market. Once again, as in the days of the Green Revolution, development seems to address the groups prone to be more and

more integrated into the national or international economic system, leaving apart the poorest fringes, up to their definitive disappearance.

According to several scholars (Sachs, 1992a, 1992c; Shiva, 1992), the first and most necessary step toward the realization of the formal reconciliation between development and environment has been the so-called "commodization" of nature. Through its progressive capitalization, nature gets into the economic process as a "production condition", as something that, even if non-capitalistically produced, has to be considered in the same way as any other good subject to value and market laws (O'Connor, 1991). Thus, turned into "environment", "raw material", "natural resources", nature acquires within the traditional economic theory a manageable shape: what is not economically relevant is bound to disappear and ethical values are systematically degraded to technical values, the so-called "externalities"[13].

Such a *desacralization* process (Shiva, 1992) from Mother Nature to Environment has its roots in a modernist and Western approach to science: from a Baconian perspective, the role of humanity can be seen in the control exerted over natural processes. In affirming the universality of such supremacy in the relationship between humanity and nature - typical of the European cultures of the Judeo-Christian tradition as a consequence of the fear instilled by the exogeneity of the "natural" in the human world - the *mainstream* shows the main limits of its action. In fact, although the "sustainability" of local cultures is often present in official documents, all communities pursuing strategies other than that of efficiency in the use of resources are not considered at all or at best are judged implicitly irrelevant.

The above-mentioned scholars' contribution to the discussion is that they consider resources only as far as they are used in the production of goods and in capital accumulation. In this way, are ignored both the relevance of natural processes regenerating resources apart from human activity, and the vast necessity of natural resources of most of the world population, whose needs are not satisfied through the market mechanisms. Such a partial view of nature turns out to be "the reason why ecological destruction and threat to human survival have remained hidden negative externalities of the development process" (Bandyopadhyay and Shiva, 1988:1227).

As often underlined in this article, the relevance of the "voices of resistance" lies in having offered new motives of reflection on the general questions of development. Apart from this indisputable merit, two possible negative aspects can be detected in such approaches, especially if totally antithetical to Western ones: on one side the danger of flowing out into a sort of pro-Third World and anti-West ideological fundamentalism, which could contribute to the worsening of the polarization among world regions, on the other the risk that these forms of opposition crystallize in a sort of "Purism", which is but the expression of an "upside down" cultural élite.

4 Sustainability in Agriculture.

In this final section, an attempt will be made to combine the definitions of SD with different ways of theorizing the role of agriculture in economic development. This is aimed at gaining a further parameter to evaluate the theoretical strength of SD through the use of agriculture as a "case study".

In section 2 we highlighted the main processes of agricultural modernization. If one considers SD as *sustaining growth* (left definition in fig.1), such strategies may fall into the category of sustainability. As previously pointed out, this definition of SD focuses on the effects of an increase of growth as a solution to poverty and, as a consequence, to environmental degradation. Therefore even the transformation of agriculture along the modernization path can be understood as "sustainable".

The traditional analysis of development tends to focus on environmental degradation as a direct consequence of merely exogenous shocks, like demographic pressure, adverse climatic factors, and external debt that leads to an uncontrolled use of the resources. These factors, however important in the determination of the causes of environmental problems, become particularly powerful once they act on a system already damaged by some of the effects of modernization[14].

It is not our intention to romanticize the pre-modern organizational forms, but still it is important to acknowledge that a subsistence system is often a "closed", possibly backward system, but with some very effective mechanisms of control on the environment and on the social relations that

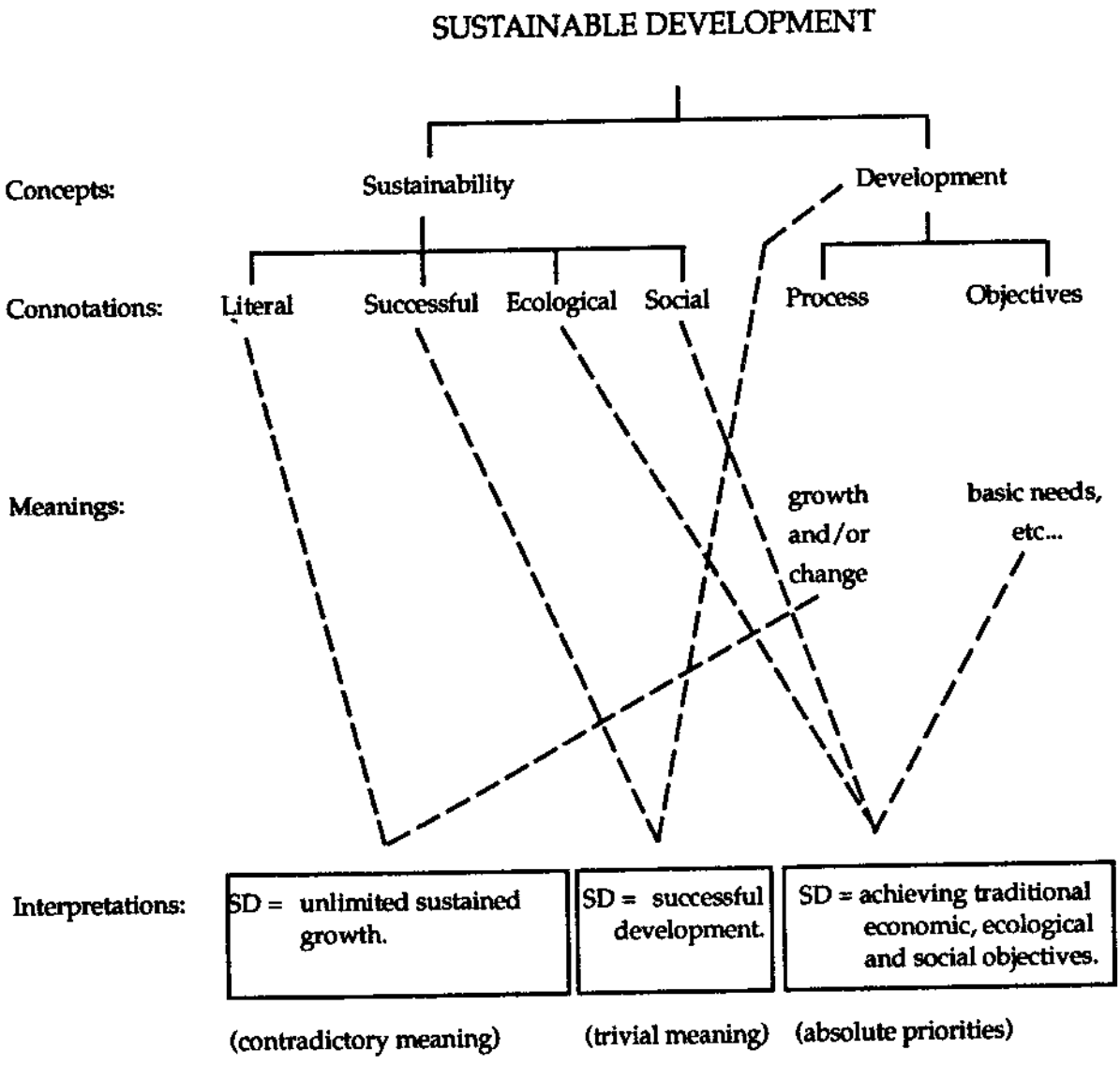

Figure 1 - Sustainable development semantic map (adapted from Lele, 1991).

establish a balanced working of the whole society. The problem often posed by the modernization process is precisely that of the opening of such a system, which loses its internal balance and collapses, if not coherently supported.

What we have discussed up to this point inevitably leads us to reconsider the roles of the agricultural sector in developing countries. In such countries, the traditional function of the primary sector as a resource reserve seems to be perpetuated. Such a function, typical of the modernization perspective, is the main cause of a number of problems, which includes an increasing social and economic polarization between export-oriented agriculture embodied in the global system, and subsistence agriculture, increasingly marginalized and condemned to disappear, however high the human and social cost.

The sustainability of the agricultural sector seems to be posed in a transversal way on three main systems: economic, social and environmental (Barbier, 1987). However, each system relies on different objectives which, although individually relevant, are not always simultaneously attainable. Evident trade-offs exist amongst them: for instance, between the necessity of augmenting agricultural production and the restraint of environmental degradation, between the improvement of the social condition of women and the safeguard of the traditional family values, or between the introduction of new techniques and the conservation of the local culture. For this reason it is difficult, if not impossible, to establish an absolute hierarchy in the priority of objectives (right definition in fig.1). The concurrent presence of so many objectives, that, as we have seen, constitutes the basis for the political success of SD, is thus also the main reason for its limited and controversial attainability.

In conclusion, it seems important to state on one side the multidimensional aspect of development, as a consequence of the interaction among the three systems mentioned before, and on the other the variability of the objectives of development in time and space. In this regard, a particularly interesting example is provided by the Punjab area of India, one of the acknowledged "successful" cases of the Green Revolution. In that region, the positive achievement of short-term objectives, such as the increase of cereal production through the use of genetically selected varieties, was

followed by long-term effects on the social, political and ecological order of the area, the value of which is at the least questionable (Shiva, 1991).

By analyzing the different agro-systems, from local to international ones (Conway and Barbier, 1990), the interactions among the economic, social and environmental systems, and between these and the implied instruments, vary according to the level to which one is referring. In other words, when an attempt is made at defining which role of agriculture in developing countries (but not only in these) is "sustainable", the level of the agricultural system to which one is referring must be indicated. Very often in fact an agriculture "sustainable" at a certain level of the hierarchy can turn "unsustainable" at the next one and vice versa. In this regard, many examples may be recalled. Strongly export-oriented agricultures can be seen as an example of "sustainability" at the international level, but their "unsustainability" at the national and regional level can be a problem in social and economic terms. Cropping techniques of the *slash and burn* type, particularly sustainable if limited to areas characterized by a reduced demographic pressure and adequate fallow intervals between each harvest (which allow the regeneration of soil fertility) become highly harmful when intensified, because of the scarcity of land or the effect of demographic pressure. Furthermore, agricultural systems based on subsistence and self-consumption can be seen as sustainable if single rural systems are considered, but show their limits as soon as one tries to stretch them to a general model, in that, through the reduced supply of food, they tend to put a penalty on poverty, having no direct access to the land.

Therefore, it seems very difficult to identify generic sustainable approaches to agricultural development. They might only be defined by paying attention to the many dimensions of development, but this takes us back to the trivial space of the fig.1 (SD as "successful development"). In other words, the terms "sustainable" and "unsustainable" seem to have here no other particular meaning than "good" and "bad".

5 Concluding remarks.

The main outcome of this paper is that SD, far from being "the new" paradigm, appears to be an extremely ductile and flexible instrument of economic policy. Such properties allow its merely formal absorption into often contrasting approaches of several kinds, and offer the possibility of using it as a *new label on old bottles*.

The way the *mainstream* has dealt with sustainability seems to be nothing more than a make-up operation, leading to an environmentalization of old approaches that gain a renewed success. Such an operation has involved not only the theories, but also the institutions like states, international agencies, political movements. This aspect is very effectively underlined by the theorists of "resistance", whose main merit is that of monitoring the real quality of the mainstream's effort of the mainstream to renovate itself.

On the other hand, the stress on such a partial aspect of development as the environmental issue, leads very often to a form of "deep ecologism" that tends to emphasize only one of the three main systems on which development lays (economic, social, environmental). This attitude is shared by both some of the "voices of resistance", such as the advocates of conservation and *sacralization* of Nature (Bandyopadhyay and Shiva, 1988), and some green movements of the Western countries.

Finally, the definition of SD as "successful development" seems to be redundant and the association of sustainability with the concept of development can only be seen as a way of acknowledging that the policies implemented have not really been "sustainable". If on the one hand SD is no more than a *label*, on the other the real problem, in our opinion, is still represented by the *bottles*, that is, by the way the many developmental issues are faced and confronted.

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Notes

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[1] According to the 1992 World Development Report (World Bank, 1992), GDP growth rates range from 0.5 for the Middle East & North Africa to 7.8 for East Asia & the Pacific.

[2] For a wider discussion of the concept of modernization and its possible uses, see Best and Kellner, 1991.

[3] For a detailed rewiev of the underdevelopment and dependency theories, see Palma, 1978; Kay, 1989; for a critical approach Manzo, 1991.

[4] These main actions are considered by Timmer (1990) to be the takeover of the *functional contribution* of the primary sector to growth, as generally stressed in the dualistic models, and a stress on the *role* of agriculture in the development process

[5] This seems to be the consequence of the implementation of structural adjustment plans strongly supported by international agencies. The agricultural sector is particularly involved because of competition between food crops and cash crops, and

also because the primary sector is a policy-taker in most countries, as in the case of policies of devaluation, and trade liberalization.

[6] The unequal contribution to pollution by developed and developing countries has been one of the main topics of discussion in the twenty years leading to Rio 92.

[7] A typical example is *ecodevelopment*, which owes much to the moral considerations of the WCS. Ecodevelopment is originally defined as "an approach to development aimed at harmonizing social and economic objectives with ecologically sound management, in a spirit of solidarity with future generations; based on the principle of self-reliance, satisfaction of basic needs, a new symbiosis of man and earth; another kind of qualitative growth, not zero growth, not negative growth" (I. Sachs, 1978, quoted in Glaeser, 1984:25).

[8] The perhaps excessive use of moral points of view in support of environmental protection and the misbelief that preservation itself could outflank power structures and social disparities have operated in such a way that the WCS was also defined by the *mainstream* as a romantic, ideological and eventually *naive* strategy.

[9] The BR is part of a series of studies commissioned by the United Nations in the Eighties, having as a common trait an approach of the *one world system* kind. On such an approach are based two reports of the Brandt Commission, *Programme for Survival* and *Common Crisis* as well as the Palme Commission's *Common Security*.

[10] For a detailed rewiev of 1992 World Development Report, see Taylor, 1993.

[11] A contribution to the understanding of how much the international institutions took up the environmental problem is clearly provided by the assertions of L. Summers, the World Bank chief economist, about the opportunity to encourage an increasing displacement of polluting industries towards developing countries. In this regard, Summers offered three reasons in support of a positive answer: 1) since the pollution cost is determined by the lack of earnings due to death and disease, and as the earnings are lower in the poorest countries, such losses turn out to be less important; 2) since the cost of pollution is expected to be augmented in proportion to its increase, the contamination of still clean regions of the world could be considered less injurious; 3) as people attribute a higher value to a clean environment as their revenues increase, if polluting industries move from wealthy to poor countries, the global cost of pollution will fall (The Economist, 1992:7).

[12] Although listed as a "high priority" to achieve sustainability, also population control will be a consequence of such developmental policies, through improved labor incomes and reduced poverty.

[13] An example of neoclassical "rationality" and "internal coherence" is offered by W. Beckerman (1992), a World Bank consultant for the World Development Report 1992 on the environment. Talking about the increase in the atmospheric temperature caused by the accumulation of industrial gases, he rejects any suggestion of a slow down of the industrial production because the cost of such a reduction would be "greater than the cost to Bangladesh of the sea level rise (Bangladesh is seriously in danger of being flooded), it would *obviously* be in everybody's interests to abstain from this drastic action and to compensate Bangladesh *generously* out of the savings that would be made" (p.486, emphasis added).

[14] It is extremely important to underline here that we are using the concept of environment in a very broad sense, not limited to the natural aspects, but including the social and economic relationships involved. We also believe that this is a very meaningful way of approaching the problem of sustainable development.