GLOBALIZATION AND SUSTAINABILITY: THE COLLAPSE OF THE MYTH OF COMPATIBILITY

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Abstract

The process of economic globalization and the theme of sustainable development are the products of economic and environmental transformations over long periods. We present and critically discuss the idea of promoting sustainable development through free trade (the agenda of GATT, the Rio Conference and the WTO). We put forward the proposition that the globalization that has taken place over the last decade is not sustainable either for the South, or for future generations, and not even for the North. Sustainable development is defined as necessarily including two dimensions: social sustainability and environmental sustainability. The conflictual network of non-state and state actors can enable a movement towards environmental sustainability. The attainment of social sustainability is much more problematic, because capitalism does not have, and has never had, the self-

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regulatory mechanisms that allows capital accumulation to be oriented towards social progress. We put forward the idea that sustainable development cannot be a realistic objective unless it is promoted as an "international public good". But in the absence of either a hegemon (in the sense of Kindleberger), or of really strong international institutions or regimes, it is difficult to envisage a clear evolution for the future.

Keywords: globalization, economic crises, ecological crises, sustainable development, international regimes, international public good

Résumé

Le processus de globalisation économique et le thème du développement soutenable sont le produit de transformations économiques et environnementales sur longue période. L'argument de la promotion du développement soutenable par le commerce (l'agenda du GATT, de la Conférence de Rio, puis de l'OMC) est présenté et discuté. Il est avancé que la globalisation économique des dernières décennies n'est soutenable ni pour le Sud, ni pour les générations futures, et même pas pour le Nord. Le développement soutenable est défini comme comprenant indissolublement deux dimensions: la soutenabilité sociale et la soutenabilité environnementale. Le réseau (conflictuel) d'acteurs non-étatiques et étatiques peut permettre des avancées en matière de soutenabilité environnementale. Il en va tout autrement de la soutenabilité sociale, parce que le capitalisme n'a pas et n'a jamais eu en lui-même de principe de régulation permettant d'orienter l'accumulation du capital dans le sens du progrès social. Les auteurs soutiennent alors l'idée que le développement soutenable ne pourra acquérir de consistance que s'il est progressivement considéré comme un "bien public international". L'absence d'hegemon (au sens de C.P.Kindleberger), comme d'institutions et régimes internationaux forts, ne laisse cependant entrevoir aucune perspective ou réponses claires.

I Introduction: What are the issues at stake?

We characterize the phenomenon of globalization by the expansion of capitalism on a global scale with a deep penetration into non-Western societies, with a corresponding expansion of the international workforce. This has been brought about because the international division of labour. notably in manufacturing, has provided MNCs and TNCs with new perspectives for profit-making and for trying to expand the Fordist mass consumption model beyond the developed nations. By sustainable development, we understand the most common definition, which is that of the World Commission on Environment and Development: "Environmental protection is...inherent in the concept of sustainable development... Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs...Even the narrow notion of physical sustainability implies a concern for social equity between generations, a

concern that must logically be extended to equity within each generation... The point is that the reduction of poverty itself is a precondition for environmentally sound development" (Brundtland, 1987, p.40, 43, 69, emphasis ours). This definition thus implies that sustainable development includes both "social equity" and "environmental protection". In this paper, we call the first one "social sustainability" and the second one "environmental sustainability". Both in intergenerational equity and in intragenerational equity, the two dimensions are present and interlinked. But we consider that social sustainability is the main issue of intragenerational equity, and that environmental sustainability is the main issue (or the more pregnant issue) of intergenerational equity.

We shall discuss the issue raised in the title of this paper by developing three propositions:

i) The process of economic globalization and the theme of sustainable development are results of profound mutations of the international economic system in the last half of this century.

- ii) Economic globalization as it is currently happening is not sustainable, neither for the population of the South,or for future generations, and not even for the North.
- iii) This is so since capitalism - a fortiori because it penetrates almost all the nations of the planet - does not have within it the regulatory and self-equilibrating mechanisms that can orient the process of capital accumulation towards progress for all and for the preservation of the environment. Sustainable development thus has to be a "public good", which has to be created at the international level. This raises questions on regulatory mechanisms and governance structures of great complexity, which, at least for the moment. do not present any clear perspectives or clear answers.

These themes and propositions will be developed in three parts. However, it is not our objective to discuss rigorously the phenomenon of

globalization as such, neither in its financial aspects nor its points of crises.

- II. Economic globalization, sustainable development and economic and ecological crises
- 1. Long-term economic transformation and the process of economic globalization

Throughout history, all the major mutations have concerned the economy, the relationship of society with nature, and the political organization between great powers. The current period has witnessed a major transformation. Globalization is a process, that of the extension of the international workforce (Aglietta, 1997). At the same time, it is also a phase of capitalist development, a period of deconstruction and reconstruction of the existing system, of its rules and its international structures.

In order to explain succintly this long-term economic transformation, we use here some elements put forward by the "French regulationist school"

of Paris (Aglietta, Boyer, Lipietz), which is both well known outside France and has a certain pertinence. Between the post-war period and the beginning of the 1970s, the development of the Western world was characterized by continuing gains in productivity, compromises between capital and labour, by mass production and mass consumption. It was a period of exceptional growth based on intensive capital accumulation whose foundation was mass consumption. This mass consumption was based on the internal markets of the industrial countries: profits were reinvested to spur mass consumption even more. This post-war growth enabled, at least in the developed nations, a regular increase in wages and consumption of the salaried classes, and a rise in the share of wages in national income. This growth was, at least partially, "socially sustainable". This regime was also the result of the post-war compromise on the Welfare State in the industrial nations. which led to the sharing of productivity gains in exchange for the acceptance of Fordist production methods. This "Fordist" growth was therefore based on a new type of social relations and salary negotiations between firms, trade unions and the state.

This "virtuous circle" lasted till around the late 1960s. The United States was the pivot of the international system of trade and production, and was capable of defining the rules of the game and the international structures. Since the end of the 1960s, there was a gradual diminution of productivity gains and in the profits of firms, which brought about a crisis in the Fordist model. first of all in the United States. The United States was no longer able to play the lead role in being the catalyst of growth as it had done in the 1950s and 1960s. This weakening of the United States first manifested itself in the monetary domain; the delinking of the dollar from gold deteriorated international monetary relations, the USA's share in world trade began to fall, and there was a substantial increase in the share of imports in its home market. Competition in international markets increased substantially, with an ever-increasing opening up of most economies, a growth in world trade and in foreign direct investments and increased financial investments abroad. But this growth was "environmentally unsustainable": it created extensive pollution and put pressure on resources, with existing technology being incapable of minimizing the throughput; it was totally unfeasible and impossible to generalize this type of growth to the whole planet.

2. Long-term environmental transformation and the theme of sustainable development

Each stage of capitalist development corresponds to a new techno-economic paradiam and specific environmental problems (Mioset and Kasa, 1994). Technological progress enabled the resolution of certain problems but created new ones. For example, progress in chemical and plastic technology enabled the replacement of nonrenewable raw materials, but created enormous problems of disposal of non bio-degradable goods.

One of the major ruptures that helped create environmental consciousness was probably the explosion of the first nuclear bomb: Worster (1992, p.365), the historian of environmental movements. believes that the "ecological age" begins with the testing of the first atomic bomb in New Mexico in 1945, Osborn (1948) pointed out that there were no new terrritories. The theme of "spaceship earth" (Boulding), of a world that was finite and that existed as one holistic unit began to take root, and social evolution was considered as becoming a worldwide phenomenon (Nations Unies, 1972, p.22 and Dubos and Ward, 1972). The rhetoric of "common problems" reached a peak in the 1980s. with the ideas of common crisis (Brandt, 1980), common security (Palme, 1982), common future (Brundtland. 1987). M. Gorbatchev (1986, pp. 24 and 27), also jumped on to the environmental bandwagon just before Tchernobyl, and referred to global contradictions that threatened civilisation, and the existence of universal human interests in a world that was both contradictory and interdependent. At the same time, for experts in geo-politics and military strategy, developments in nuclear and space research capabilites would begin to give the world a geo-political identity, and reinforce the finite nature of the earth (Pignon, 1989). As a result, the management of the whole planet as a system and "global sustainability" (a World Bank formula) became both ambitious and crucial questions.

The crisis was not just environmental: it also extended into the social domain, particularly in developed nations. The last two decades, which has seen the expansion of the international workforce in manufacturing on an unprecedented scale, has considerably increased competition between nations, particularly between the salaried classes of the developed nations and the salaried classes of the newly industrialised countries and developing countries. An increase in the industrial salaried workforce in the developing nations has helped to transfer Fordism, at least partially, to the developing and

newly industrialised countries. It has increased incomes and consumption in these countries. But the nature of technological progress in the developed countries, and the very uneven distribution of the gains between the different productive classes of the developed nations, has led to the perception that the salaried classes of the developed nations have been net losers in the new international division of labour. For the first time since the Second World War. they have been forced to accept unemployment and stagnating or declining real incomes over a fairly long period. Even though Krugman (1997), in a remarkable piece of polemics, minimizes this phenomenon, the fact remains that the ideological fallout of the Reagan-Thatcher years resulted in the dismantling of the post-war social consensus, and a new model of social compromise is yet to be constructed in some of the major developed nations. The election of a large number of social-democratic governments in Europe after a long phase of right wing governments probably represents the search for such a consensus, at least in Europe. It is true that the idea of "social crises" we present here is, we think, a relative one. We do not, of course, mean to say that there are no social crises in the developing nations. Of course there are, and such crises are the manifestations of the tensions and contradictions between economic and political development in the international capitalist order.

Thus we see that the worldwide environmental crises become compounded with different types of economic and social crises (but difficulties remain in articulating rigorously the relationship between economic and environmental crises). The first liaison between economic globalization and the environment dates back to the Stockholm Conference of 1972; however, it would only be at the Rio Summit. 20 years later, that economic globalization would be proclaimed as compatible with sustainable development. The declaration of this compatibility is not borne out by current happenings, to which we turn in the next section.

III. Sustainable development cannot be a by-product of unregulated free trade and globalization

The GATT-Rio-WTO agenda, in its liberal interpretation. visualizes sustainable development as a natural by-product of free trade policies and a free trade regime that will be arowth promoting throughout the world. It is worthwhile examining how this idea took root. The World Commission on Environment and Development, which published the Brundtland Report in 1987, drew attention to the relationship between income levels and the protection of the environment, laying particular stress on poverty reduction as a necessary condition for environment-friendly development. The Report stated that international and inter-governmental agencies had not analysed the relationship between international trade and the environment, and demanded that the mandate of organisations such as GATT and UNCTAD should explicitly include the objective of sustainable development by analysing the impact of trade

structures on the environment. In early 1992, the GATT bulletin (GATT Focus, no. 88. March 1992) put forward an initial version of the idea of environmental protection through trade. It stated that the growth of world trade would bring about an increase in per capita incomes worldwide. which, in turn, would enable all countries to allocate a larger part of their national budgets to the environment. In the same year, a larger study by GATT (International Trade 90-91) presented a first version of the research of Grossman and Krueger (1993) on the relationship between income levels and pollution, where they postulate an empirical relationship stating that increasing levels of income are associated with decreasing levels of pollution. These different contributions resulted in the statement of Agenda 21 of the United Nations: "Environment and trade policies should be mutually supportive: An open, multilateral trading system makes possible a more efficient allocation and use of resources and thereby contributes to an increase in production and incomes and to lessening de-

mands on the environment. It thus provides additional resources needed for economic growth and development and improved environmental protection. A sound environment, on the other hand, provides the ecological and other resources needed to sustain growth and underpin a continuing expansion of trade. An open, multilateral trading system, supported by the adoption of sound environmental policies, would have a positive impact on the environment and contribute to sustainable development" (United Nations, 1992, p. 19 and 22). The chain - trade liberalization - increasing incomes - greater environmental protection - sustainable development - is explicitly stated.

This statement of Agenda 21 amounts to a great deal of wishful thinking. Even if an open multilateral trading system led to more efficient resource allocation and increased production and incomes, it does not automatically imply that demands on the environment would be lessened in a reasonable space of time. Quite the contrary might hap-

pen, notably as regards eneray consumption by developing countries, which is still at relatively low levels as compared to developed countries. There would have to be a great deal of planning and policy coordination at national and international levels to bring about improved environmental protection; to postulate it as a "natural result" of economic growth and development is far fetched and completely ignores the experience of the developed nations in the matter. A strong role of government to fine tune economic and trade policies to environmental protection objectives is anathema to many governments, industrial groups and lobbies, in both developed and developing countries.

We shall analyze the chain mentioned above in greater detail. This "naive chain" (see Figure 1) of sustainable development through free trade, or sustainable development as a natural "by-product" of free trade, could be a slippery crossroad of ideology and wishful thinking. First of all, the signature of the Marrakech Accord, which ended the Uru-

guay Cycle and marked the transition from GATT to the WTO, saw 120 nations commit themselves to progressively liberalizing their trade through a series of measures: namely, a 40% reduction of customs duties on industrial products by developed nations; and for agricultural products, a combination of reduction of customs duties, a 36% reduction of export subsidies and commitments on minimal access to markets. These were the commitments. Consider what actually happened. For agricultural products, the Uruguay Round had visualized the replacement of nontariff barriers by tariffs. In fact, the OECD countries retained 1986-88 as the period of reference for the conversion from non-tariff barriers to tariffs, which was a period when the level of internal support to agriculture was very high in the developed countries. This enabled the developed countries to impose tariff barriers whose average level was even higher than the non-tariff barriers they were supposed to replace. If we consider the trade liberalization that was proposed in the Uruguay Round, one can

make out that its objectives are still far from being attained, unless there are very real and substantial reductions in agricultural protection (Ingco, 1995).

More generally, one observes an increase in commercial conflicts in the 1980s and 1990s. In the last years of GATT, the conflicts involving Europe, the United States and Japan in automobiles. consumer electronics, semiconductors and aeronautics are well known. There have been more than two thousand trade complaints that have been submitted in the last decade (Hatem, 1995, p.81). It is now well-known in economic theory that "strategic" trade policy can generate gains for individual nations in the presence of market imperfections and economies of scale. It is also well known that a large gamut of non-tariff barriers are still used by the developed nations, and notably by the United States, and there is strong pressure for such barriers in Europe. So there remains a large gap between free trade discourse and the real trade policies practised by

major nations. Hence the idea that free trade is going to rapidly install itself throughout the world and bring about substantial increases of real incomes worldwide seems unlikely in a short span of time. A simulation by GATT (1994) for 2005 predicts that 13% of the world population (of the 24 OECD countries) would share between themselves between 71% and 95% of the world's increase in incomes. This level of increase in inequality hardly leaves open the possibility that the increase in incomes of developing nations will be strong enough to induce a demand for environmental protection.

If one wanted to be really positive, it could probably be said that if free trade leads to increased growth and a general rise in living standards that generate a demand for a better environment across a very wide range of countries and populations, then free trade might be compatible with improved environmental quality. But there are a lot of conditionals in this statement. Critics of the free trade argument point to the negative effects of free

trade on the environment and on the international workforce coming from several sources:

i) demand-side sources: the demand for Western -style consumption from the developing world, which is energy and resource-intensive, makes sustainability difficult to achieve because consumption as such is more important than the "quality of life" for a considerable period; there is no agreement on rich and poor nations as to what constitutes a "quality of life" (the Bhagwati argument on legitimate differences of values and priorities);

ii) supply-side arguments: the search for comparative advantage in a situation of greatly increased competition among many more producing nations leads to the use of environmental and social clauses that serve as bargaining and protectionist weapons by richer countries against poorer countries with less negotiating clout; poor countries, in order to gain comparative advantage, might be forced to use natural resources destructively and use cheap pollution creating technologies (ecodumping):

iii) in a situation where capital is internationally mobile but labour is much less so, labour in developed countries (particularly less skilled labour) is vulnerable to competition from developing countries (this is often used by protectionists as an argument against free trade as such);

iv) Alic (1997) develops the argument that automation, work reorganization and product redesigns contribute to a simplification and deskilling of manufacturing processes that required skilled labour. Hence "world class manufacturing can now be achieved with a relatively poorly educated work force"; in principle, this would bring about an international reorganization and location of the world's manufacturina industries in developina countries, as Krugman has suggested in several theoretical papers. This directly contradicts the Lucas criteria that there is a "critical minimum threshold of human capital" for capital to flow from rich to poor countries (see Lucas, 1990 and Damian, Chaudhuri, Berthaud, 1997), and that capital transfers from rich to poor countries do not take place till such human capital has formed in developing nations. This is related to our previous argument that there is, in some sense, a new international labour class that is different from the Fordist working class (where the social compromise between labour and capital, with governments as arbitrator, had fuelled the Second Industrial Revolution through the mass consumption society by continuous rises in real wages). The expansion of manufacturing in the newly industrialised nations has stopped this rise in real wages of the workers of developed nations (there is a decline in real wages in the United States, and a stagnation in many anglo-saxon countries, whereas in Europe real wages are relatively protected by rises in unemployment); developed country multinationals use the argument of increased competition and the necessity of more investments to argue against increases of wages in developed nations. This acts as a break against greater growth and more free trade in which an increasing number of developing nations can export to developed nations.

Thus the progress towards an equitable free trade regime, with a concomitant rise in incomes and a demand for a better environment, is still quite far away. It is difficult not to end on a totally pessimistic note, specially after examining whether sustainable development can emerge either as a "club good" or as an "international public good" in an equitable and negotiated free trade regime.

IV Sustainable development through global governance as an international public good?

Strategies for economic globalization are national strategies formulated by individual countries. Having said this, one has to add several caveats. Multinational firms (MNCs or TNCs), mainly from developed nations, operate quasi-independently with their own economic, technological, management and financial strategies; however, they do take into account, through collective negotiations, the strate-

gies of their own (parent) nation or of the economic and regional bloc to which they belong. Developing countries and the newly industrialised countries (NICs) formulate globalisation strategies as a response to the strategies of developed nations and of MNCs. In some cases (for specific sectors and industries), they had even succeeded - just before the beginning of the "Asian crisis" - in becoming major players in the international arena. However. developed nations remain the main "agenda setters" on both the issues of globalization and its relation to the environment.

If we are willing to accept the idea that national economic policies are "endogenous", in the sense that in democratic or at least, "rational" political systems, they represent a balance of interests between conflicting groups, then it can probably be asserted that environmental concerns represent the capacity of consumers as citizens to affect policies of firms and governements towards better environmental management in order to preserve and improve

the quality of life and to develop concern for future generations (intergenerational equity). This is the principal "rationalist" explanation of the concern for sustainable development. The unexpressed and latent interests of poor or fragile populations (the excluded stakeholders) in developing countries find expression, at least partially, through some of the more vocal and powerful interest groups of both developed and developing nations.

We have tried to show that existing trade regimes by themselves will not lead to either social or environmental sustainability. However, there is the beginning of a regulation of ecological contradictions. There are more and more protocols, conventions and Multilateral Environmental Agreements, leading to something like the "structuring of a World Environmental Regime" (Meyer et al., 1997). In a more general way, there is the development of many "regimes" (in the sense of "regime theory", Litfin, 1993), with the strategies and environmental policies of nation states, regional blocs, firms and international organisations beginning to play an active role in the globalization - sustainability debate.

Economic globalization and global concern for the environment seems to be giving rise to a hesitant beginning to the search for sustainability. But the internalisation of social costs in international prices seems to be a difficult and unrealisite objective right now (see the works of Kox, 1991, 1997). The Committee on Trade and Environment of the WTO, at the Ministerial Conference of Singapore failed to advance the search for compatibility between trade and the environment (WTO, 1996, Shahin, 1997). Even the analyses and proposals of some ecological economists on this topic are not convincing and remain questionable (Rosewarne and Damian, 1997, Berthaud et alii., 1998).

For globalization to be sustainable, it has to enable a worldwide expansion of a real concern for populations (in Amartya Sen's sense of enabling them to develop and

exercise their capabilities), and for the environment. For this to be so, we need sustainable development: that is, both environmental sustainability plus social sustainability. The response mechanism of capitalism to social pressure and international public opinion could make environmental sustainability possible. As far as environmentalists are concerned, this would be a weak environmental sustainability, because the coalitions and pressure groups that make MNCs respond to public opinion are probably too unstable to give a permanent or long-term orientation towards environmental sustainability; progress will be gradual and in small steps. But social sustainability is a great deal more problematic. Social equity or social sustainability has never been a primary concern of capitalism or of international public opinion.

Could capitalism therefore be in some sense environmentally sustainable? Rosenau (1990, 1995) has put forward the idea that there is a bifurcation of world politics because of the multiplication

of non-state actors. There has been a real emergence of a world civic politics (Wapner, 1995), with an important role of non-state actors such as NGOs in the constitution of different "regimes". In the words of Gale (1998, p.261), "the regime concept... identifies and names a terrain of contestation in the international sphere that is analogous to struggles at the national level between different social forces over the content of government legislation and policy". DeSombre (1995) has pointed out that unnatural alliances have sometimes helped the progress of international environmental legislation. Activist environmental groups that suceeded in imposing anti-pollution legislation on firms in developed nations teamed up with these firms to push for the imposition of this legislation on other countries or at the international level. The firms obviously did this for their own gain (forcing competing firms to internalise pollution costs), and the groups did it to attain their objective. DeSombre dubbed this the alliance of the "Baptist and the Bootlegger". However, such

alliances, which are issue-specific, are unlikely to be able to lay the foundations of a large environmental sustainability. They verify the theories of Olson and Russel Hardin as to how motivated interest groups can create public or club goods, but the problem remains that their action very often does not take place in truly democratic structures (in the sense that they represent particular interests), and reflect their informational advantage and lobbying clout. We cannot present or discuss here the current rise of corporate environmentalism. We shall just remark that in the last publication of the World Business Council for Sustainable Development, the chairman of one of the world's largest multinationals used the words of Nicolas Georgescu-Roegen in the seventies in order to define "eco-efficiencies": "ways of doing more with less" (De-Simone and Popoff, 1997, p.ix). From our point of view, this attitude is not just ideological. As a result, a network of non-state and state actors could make some progress towards environmental sustainability.

Could capitalism be in some sense socially sustainable? That is the more fundamental issue. Alic (1997, p.3 and 10) clearly raises this critical point: "most discussions of the future development of the global economy, and of sustainability, skirt the problem of job creation, and particularly the creation of large numbers of "good" jobs for people now employed in subsistence agriculture or the informal economy of casual labor, categories which in many countries account for well over half the work force... there are almost as many agricultural workers today in poor countries (nearly 900 million) as there are workers in all sectors in the rest of the world (slightly over one billion)... To support their populations. these countries will have to create hundreds of millions of new non-agricultural jobs or else find some alternative way of generating income and wealth" (emphasis by us).

So the necessity of adding environmental sustainability and social sustainability remains on the long-term agenda. It would be very pretentious and idealistic to propose "a" solution, or a fortiori, "the" solution. But from our point of view, progressively, sustainable development should acquire the status of an "international public good". The idea of sustainable development presupposes the definition of a public good on the planetary scale. It is well known that the production of public goods on such a scale (just like defense or security or peace) requires powerful authorities or interests that assume the costs of producing this public good without expecting anything other than the free diffusion of the externality to the population under its authority. The problem is that it is difficult to envisage the institutional setup and the governance structure that could take up the responsibility of producing this public good: a collection of non-state actors? A hegemonic supra-national state? A special international organisation? A mix of all these actors and stakeholders?

A hegemonic state, or a hegemon in the language of Kindleberger (1973, 1986) (an Internationally Dominant Economy in the sense of François Perroux), might probably be able to define the rules of the international game and supply an international public good. The problem is that in a multipolar world, even though the United States is the natural and the only world leader, it no longer has the capacity (nor probably the dessire) to be a lone hegemon.

Which of the current international organizations could be capable of assuming responsibility for the agenda of sustainable development? Certainly not the UN, which is itself undergoing major reforms. It is very unlikely that it could be the WTO or the OECD, which dominate discussions of the world's economic agenda. The WTO seems to have become an organization for regulating the organization of production on a world-wide scale (Gerbier, 1996). In any case, the WTO has no real clout on the guestion of sustainability. So sustainable development, as an international public good, still remains to be instituted. We think that it could be undemocratic and unstable if it is instituted only from above. Collective action and political institutions are also necessary from a grassroots level, in order to make sustainable development a really global concern.

From our point of view, it is obvious that in order to be viable and to face up to the current global crisis, a fully globalized capitalism must become more socially and environmentally sustainable: in order to regulate it, the battle for notably stronger and progressive international regimes and institutions lies ahead of us.

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Figure 1

The naive chaine of sustainable development by free trade The ideological agenda of the Rio Summit-GATT-WTO

Positi

ve

Effect

Free Trade (Uruguay Round)



- Agreement by the majority participants (55 countries) on 15th April 1994:
- Developed countries to lower customs duties on industrial products by 40%.
- Reduction by 36% of export subsidies on agricultural products and quarantee of minimum access to markets.
- Committments of developing countries to be presented in 1995.

Increase in Production and Income



- Increase in the volume of international trade in goods between 9% and 24% by 2005.
- Increase in the volume of imports and exports of developing countries as well as economies in transition would exceed the average rate of growth of the rest of the world by 50% in 2005.
- Increase in world income between 109 and 510 million dollars in 2005 (according to GATT, the last figure represents the "most likely" estimate.



Cumulative Effect

(self perpetuating cycle)

"Sustainable Growth" (mistaken as "sustainable development")



- Explicit hypothesis: intergenerational equity (solidarity with future generations) as a result of the endogenisation of the rate of capital investment and technical progress (with possibility of substitution of natural capital by man-made capital)
- Implicit hypothesis: intergenerational equity (solidarity within the same generation) is possible only by trickling down of the growth and the wealth of developed countries to developing countries.



Positive Effect

Environmental Protection



- Explicit hypothesis: liberalisation permits an increase in world income and hence in environmental protection.
- Implicit hypothesis: Environmental protection is possible only through an increase in world income (hypothesis of an "Environmental Kuznets Curve" : reduction of pollution is positively related to the increase in per capita income).

 \leftarrow Positi ve Effect

Reference: Damian, Chaudhuri, Berthaud (1997)