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SUSTAINABLE DEVELOPMENT IN THE CARIBBEAN

by

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Introduction

In "Our Common Future," the World Commission on Environment and Development provides a global context and the conceptual outline of what sustainable development entails. Although the concept was not a new one and indeed had been used in a Caribbean context before, the strength of our "Common Future" is that it introduced the concept of sustainable development to a wider audience. The definition is succinct: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Further, the Commission states that "in its broadest sense, the strategy for sustainable development aims to promote harmony among human beings and between humanity and nature".

This latter definition is remarkably similar to a theorem of stoic philosophy which, as described by Bertrand Russell, in 1946 emphasizes the relationship between man and nature: "all things are part of one single system, which is called Nature. The individual life is good when it is in harmony with Nature. In one sense every life is in harmony with Nature, since it is such as Nature's law caused it to be, but in another sense a human life is only in harmony with Nature when the individual will is directed to ends which are among those of Nature".

It seems that the resurfacing of the concept of sustainability as a major global policy concern in the last quarter of the 20th century stems from the realization that humanity is no longer in harmony with nature or that the apparent different pathways of nature, on the one hand, and the envisaged destiny of humanity on the other hand, are bound to collide. While the above definition of sustainable development is elegant in its simplicity, accepting and attaining sustainability in development entails critical objectives for environment and development policies that are far-reaching in their implications at both the national and international levels. The Commission identified these critical objectives which include:

- (i) reviving growth;
- (ii) changing the quality of growth;
- (iii) meeting the essential needs for jobs, food, energy, water and sanitation;
- (iv) ensuring a sustainable level of population;
- (v) conserving and enhancing the resource base;
- (vi) reorienting technology and managing risk; and

(vii) merging environment and economics in decision making.

Without doubt these are formidable objectives for any derived sectoral policy, but more properly these should be regarded as necessary conditions for sustainable development rather than as objectives, because in this connotation, the critical objectives are a means to the aim of harmony. It is not certain whether these critical objectives are exhaustive and it is likely that they will be subject to change or expansion in the future. For example, the anthroposophic focus which guides the action, if not the philosophies, of much of humanity may be inconsistent with sustainable development. If this assertion is true then the development of a 'new ethic' or a critical evaluation of the basic assumptions of welfare economics would by necessity also become a critical objective. It must also be noted that many of the critical objectives have been long-standing government objectives, if not at the national level then certainly at the departmental level. Likewise, many of these critical objectives have been long-standing aims of environmentally active NGOs and other community groups. What "Our Common Future" makes very clear, however, is the need to integrate the critical objectives and not to see them in isolation.

Inherent in the concept of sustainability is a different perspective of time as it relates to development. Under the influence of post-Keynesian economics, a distinctive short-term view of the world has evolved which, at its extreme, is perhaps best illustrated by the quarterly evaluations by the IMF or by the quarterly reports issued by many private-sector companies. With its explicit recognition of a time horizon which extends beyond the current generation, "Our common future" illustrates that neglecting to incorporate an assessment of long-term effects in short-term analysis is, in the end, counter-productive since the long-term effects may very well void any short term benefits, however impressive the latter may have been.

Also inherent in the concept of sustainability is an acknowledgement that the traditional differentiation between the social and physical sciences and among the various sciences themselves, is becoming increasingly meaningless in the analysis of the development process. While economic multiplier effects are often incorporated in such analysis, the existence of waste product or degradation multiplier effects is rarely acknowledged. Non-incorporation implies the assumption of a zero effect, which is a demonstrably false assumption. Incorporation, however, would require close co-operation of physical and social scientists at all stages of analysis.

Likewise, the concept presumes that prevention of environmental degradation is economically more efficient than the mitigation, if at all possible, of such degradation, since prevention is almost always less costly than mitigation. At the

macro-economic level, this concept is not always understood by decisionmakers because, due to the way national income statistics are estimated, natural resources are not considered economic resources which are subject to depreciation and deterioration. As a consequence potentially renewable resources are often treated as non renewable ones and exploited beyond their regenerative capacity.

Finally there are a strong implications with regard to community involvement and participation. All too often decisions on resource use are made at the centre without consultation and involvement of the community. In such situations it is not surprising that frequently the community does not benefit from these decisions, although at least as frequently they are obliged to share in their costs. Passive or active opposition of the community to changes in resource use is the result.

Caribbean Context

How does the concept of sustainable development relate to the Caribbean? Is it just one more of the many fashions which reach the region with the compliments of the developed North? Or is it a concept which may also have relevance to the region? And if the concept is meaningful in a Caribbean context, what does sustainable development imply for the region? Three simple questions with no real clear-cut answers.

In a certain way, the enthusiasm with which the North embraces sustainable development may have less to do with meeting global development objectives than with regional, national and global concerns on the state of the environment which affect directly or indirectly the welfare of the North. The eighties was a decade where actions led mostly by NGOs which pressured their own governments, resulted in significant policy changes with respect to environment not only within individual countries, but also in multilateral organizations like the World Bank, the Inter-American Development Bank and the various bilateral assistance programmes. By and large these actions focussed on the environment part of the development- environment nexus and significant policy changes with respect to development have not taken place. For example, over the decade not much progress has been achieved with removing the distortive agricultural policies in either the EEC, Japan or the USA.

To answer the question, though, as to whether or not sustainable development is just one more paradigm currently "en vogue" in the North, my own perception is that it is not. Since the environmental problems are real, it will take a long time to solve them and both North and South form part of the same biosphere and are subject to the same laws of nature. If the long-term view is accepted, then the hypothesis that sustainable development is just a fad can be rejected. What cannot be rejected is that the

sustainable development concept is environment-led in the North, while in the South it is presumed to be development-led. Given the interactions between the necessary conditions, or critical objectives, the fact that these pathways are different may not have much consequence in the long-term, since sooner or later they are bound to converge. However, the differences in normative perceptions are certain to arouse heated debates in the immediate future.

The next question is whether sustainable development is a relevant concept in the Caribbean. One may well argue that the contribution of the region to global environmental problems is so minute that in global terms it is insignificant. While this may be true in absolute terms, it is not necessarily an accurate assertion if taken in per capita terms. For example, the per capita consumption of CFCs is well above the world average in several Caribbean countries. (derived from Heileman, 1989). Also, several of the global concerns like climate change, sea-level rise and deforestation in Latin America will also affect the region. For example estimates of the cost to protect the productive coastal zone of Guyana range from US \$ 260 million to replace the worst 130 kilometers of coastal defences to US \$ 1 billion to provide protection for a 50 year period. (Sattaur, 1990).

Facing the Caribbean are major issues which, although linked , can be categorized as global issues, and regional, national and local issues. Between these regional and national response mechanisms and potentials for action differ.

With regard to global issues there remains an urgent need for a much more detailed and quantitative assessment of the likely impacts and development prospects for the region. Equally important is an similar evaluation of the implications of proposed and future protocols and other international agreements. Technology transfer and an equitable distribution of the burdens of adjustment will also focus high on the international agenda and the region may wish to take an active role in developing and proposing mechanism which would alleviate some of the costs of adjustment to the region.

With regard to regional, national and local issues it appears that the primary environmental concerns of the region, as identified in the Port-of-Spain Accord (Caricom, 1989) or more implicitly in the Caribbean Action Plan (UNEP), relate to a lack of national policies or political will, rather than from the North-South division. It appears that the Caribbean is faced with three types of problems with respect to environmental management. The first relates to the planning, allocation and use of renewable and non-renewable resources, the second linked to problems of resource management; the last pertains to environmental degradation.

The problems of resource use allocation and planning relate essentially to policy matters and tend to affect several economic and social sectors and by implication, several government ministries and agencies. It is evident that responsibility and inter-ministerial co-ordination and co-operation are often enigmatical, resulting either in inaction or react on to crisis situations only. Furthermore it is not certain whether development in the region is carried out within the framework of an environmental policy and it is often alleged that decisions on both renewable and non-renewable resource use are taken without considering environmental consequences.

Problems of resource management tend to pertain to the management of single sectors and areas of responsibility are usually more defined. They stem partly from the uncertain broad policies as referred to above, from unclear or conflicting sectoral goals and objectives and are exacerbated by financial and manpower constraints and weak management. In this respect, specific areas of concern are, for example, forest and marine resources, water, beaches and soil erosion.

As far as concerns environmental degradation, among results of policies applied to achieve economic growth, are pollution of fresh and coastal waters, resource depletion and habitat destruction. The exact dimension of pollution and resource deterioration is difficult to determine as systematic monitoring and data-analysis are still in a rather embryonic phase. There are, however, sufficient data from ad hoc studies to warrant the conclusion that the disposal of industrial and agricultural effluents and of domestic wastes is less than adequate.

To place such concerns primarily within the North-South debate may be counter-productive when limited progress at the international level is being used as an excuse for non-action at the national or regional level. Perhaps a more appropriate approach would be to analyse the relevance of the concept of sustainable development primarily in a regional context and only secondarily within the framework of the North-South dialogue. In practice, of course, there is a close correlation between the two (for example through the influences of World Bank, IADB or CDBs lending policies on public investment programmes). This being said, it must be acknowledged that some of the root causes, although by no means all, of unsustainable development need to be addressed at the international level.

It is not certain that there is a consensus with respect to the relevance of the concept of sustainable development within the region. To the environmentalist, it still means a strong focus on conservation of the resource base and to a lesser extent on the reorientation of technology and the management of risk. To decision-makers it still often implies a concentration on reviving growth and to a lesser extent on meeting basic needs. Merging the

critical objectives in a holistic and comprehensive fashion remains rare, thereby perpetuating the differences in approach. There still remains a need to sensitize the environmentalists to the economic realities and to the need to incorporate economic parameters. Equally important is the need for increased awareness in the decision-makers of the ecological realities and of the need to incorporate environmental considerations in economic planning and policy-making.

The region remains critically dependent on the exploitation of its renewable and non-renewable resources for its economic development. Agriculture, tourism and mining remain crucial in terms of employment, foreign exchange earnings and contribution to government revenue. To maintain the productivity of the renewable resources on which agriculture and tourism depend is therefore of crucial importance for the long-term future of Caribbean economies. Nevertheless, the region is faced with problems like decreasing soil fertility, deforestation, beach erosion, reduced fisheries yields and pollution. All these factors cast serious doubt on the long-term capability of the region's renewable resources to continue to serve as economic resources in the future. In this light, the concept of sustainable development is indeed relevant for the region.

The final question relates to what sustainable development will imply for the region. This is by far the most difficult question, since the theory is not as yet operational and its various components are not yet integrated, and attempting a reply to this question is therefore obviously overly ambitious. In the last decade with its preoccupation with economic structural adjustment it appears that the social dimension has "taken a backseat", somewhat, while the environmental dimension has been largely neglected. With its emphasis on development, a first implication, then, of sustainable development is the urgency to revive growth and to meet basic needs.

Reviving Growth and Meeting Basic Needs

With the exception of a few small high-growth economies, mainly comprising the OECS countries and Puerto Rico, growth rates experienced in the region during the decade of the 1980s were low or negative, especially when viewed on a per capita basis. The Dominican Republic, Guyana, Haiti, Jamaica, Suriname and Trinidad and Tobago all faced negative per capita growth rates. For these countries the decade was one of adjustment in their attempts to resolve the problems of debt service, of the fiscal deficit, balance-of-payments current account deficits and the need to change production structures. This was accompanied by a sharp reduction in the external resource flows to the Caribbean which declined from about US\$1.1 billion in 1981 to a negative US\$96 million in 1986. As a consequence, production stagnated or

contracted while future growth has been jeopardized as investment has been deferred (ECLAC, 1989).

At the beginning of the 1990s, the Caribbean region remains dependent on the exploitation of its natural resources for its economic development. In this context, Caribbean tourism maybe also be defined as 'natural resource'-dependent, since it is sustained by the environmental inputs of climate and coastal resources (only in a few countries are the numbers of business travellers and those travelling to visit friends and relatives significant and invariably those countries are not really considered as tourism destinations).

With few exceptions banana-producers, for example, mineral and agricultural producers fared badly during the 1980s, not only experiencing a deterioration in terms of trade, but also on many occasions a drop in volume of trade. Compared with 1979-1981, the total per capita production of agriculture, food and crops had in most countries, Cuba and Suriname excepted, fallen sharply (FAO, 1989 - no data for Bahamas, Belize and the OECS countries). Likewise, mineral producers, especially of bauxite and allied products, faced poor prices, plant closures and a subsequent decline in production and exports. The long-term outlook for metallic mineral producers does not seem to be bright, as a consequence of the development of substitutes for such metals, increased recovery of wastes and technological progress. Since 1950 producers of crude metallic minerals have been facing declining terms of trade and it appears to be unlikely that this trend will be reversed in the coming decade (ECLAC, 1989).

In contrast to agriculture and mineral production, the tourism sector has grown steadily, with tourist expenditures in 1988 at roughly twice those in 1980 and with tourist arrivals rising by approximately 50 per cent over the same period. The sector was the major contributor to such economic growth as was experienced in the region. The question remains, however, whether this sector has been served as an engine of growth or as one of consumption. Traditionally, export booms in the Caribbean tend to bias consumption in favour of increased imports and to destroy production capacity outside the export sector by changing the ratio of factor productivity between the booming sector and other productive sectors, thereby rendering production unremunerative in the latter. Moreover, the problems inherited from the 1950s remain - unemployment, lack of diversification and intersectoral linkages in the structure of production and a profound malaise in the agricultural sector, both for export and local food consumption (St Cyr, 1983; Demas, 1981; ECLAC, 1985).

Quite apart from the above, there are doubts with respect to the sustainability of tourism as currently practised in the region. Already, there are signs that the sector is becoming less competitive. There are also environmental demand and supply

constraints which may reduce the effective demand for Caribbean tourism towards the end of the 1990s. The comparative advantage of the region is based on a favourable climate and on the attraction of the coastal and marine resources along with other natural, cultural and human assets. These factors have resulted in a concentration of tourist facilities within a narrow zone from the high water mark. In many of the islands these facilities are subject to, at times severe, beach erosion and pollution which erode the productive capacity of the very assets on which tourism is based. Environmental demand factors could include the increased awareness of the association between exposure to sunlight and the incidence of malignant skin neoplasms, which eventually will result in a reduced demand for sun.

The immediate impact of the adjustment process has been a marked increase in unemployment and a fall in real incomes. Undeniably, it can be stated that the people in much of the region are worse off than ten years ago. Traditionally the Commonwealth Caribbean countries have delivered extensive social services, especially with respect to education and health. To a large extent these services were supplied through government and in many instances, the budgets of the departments responsible for supplying these services have been curtailed as a result of the adjustment process. The consequence of increased poverty has raised the pressure on the region's resources, resulting in accelerated environmental degradation (ECLAC, 1989b).

The region is now in danger of losing much of what has been achieved over the last four decades. While this is not the forum to discuss attempts to resuscitate economic growth, it is obvious that economic efficiency and productivity need to be enhanced. A long-term strategy, however, would treat natural resources as capital stocks whose productivity must be maintained in respect of renewable and semi-renewable resources. Incomes derived from non-renewable resources such as oil or minerals, should be properly considered and accounted for as depreciation of capital. Such revenues ought to be used to build up the stock of human and physical capital resources, rather than for recurrent and consumptive expenditures, so that when such non-renewable resources are exhausted, the economy can utilize other productive resources.

Population

Population growth contributes to the unsustainability of development as it eventually invokes the reactions of nature itself. Population faces an upper limit, albeit unknown which lies beyond the absorptive capacity of nature since a maximum population size is only possible at the cost of increased environmental deterioration. Therefore, in the quest for sustainable development, a population size or rate of growth which remains

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within the confines of nature's carrying capacity would be an optimal one.

However, this relates only to a long-term perspective of population policy and reflects responses to medium to long-term population pressure on the earth's natural resources. In today's world, environmental degradation stems not only from resource depletion but also from pollution. Through their high per capita production of waste and subsequent pollution, the affluent countries (which, incidentally, have low or declining rates of population growth) and the affluent classes in the poorer countries are currently the major contributors to pollution, the effects of which often take on regional or global dimensions. In this respect, population growth and environmental degradation are not related in the short term.

Within the region, resource depletion due to inappropriate agricultural practices, over-fishing and squatting does undeniably occur. While it is open to debate whether these phenomena result from population size or from systematic biases against the rural and urban poor in expenditures on infrastructure, availability of and access to services, distortionary fiscal policies and subsidies, skewed and unsecured land ownership and other similar factors which tend to aggravate poverty, it is increasingly recognized that prevailing social, economic and environmental problems are aggravated by rapid population growth.

Priority should be given not only to the removal of such biases, but also to the formulation of appropriate population policies, since a failure to reduce population growth will exacerbate environmental degradation. The critical issues involved here are not only the balance of population size within the confines of available resources, but also the capability of Caribbean economies to provide for the basic needs of present and future populations. It is not only a question of numbers, but also of quality (Boland, 1990).

In this respect, the existence of a population policy or the application of anti-conception measures within a society could serve as an indicator of a society's commitment to sustainable development. Population policies, however, face strong challenges from individuals and institutions which, for a variety of reasons, are opposed to such policies. While at the individual level unawareness of the implications of population growth can and does exist, a lack of understanding of the long-term consequences of rapid population growth is unlikely at the institutional level. Opponents of population policies demonstrate a strong choice in favour of the current and the next generation over future generations. Where such institutions have a strong ethical influence then the earlier referred to question for a need of a 'new ethic' may indeed become relevant.

Economics and Environment

Traditionally, environmental management has relied on the use of legal instruments to enforce policy measures. Many, if not most, of these have more or less failed to achieve their objectives, as enforcement of environmental legislation remains rare, given limited political and judicial will, budgetary constraints, limited manpower and a lack of standards. The use of economic instruments has been much more limited and often resulting beneficial environmental effects have been accidental rather than by design (for example, taxes on fuel or high import duties on cars have had a beneficial environmental effect). On the other hand, subsidization of pesticides or of sewerage have had unintended negative environmental effects. In general, little thought seems to have been given to the use of economic instruments to further environmental objectives.

In an era of adjustment and of a need to revive growth, instruments of environmental policy should: be economically efficient; distort the underlying micro-economic relationships as little as possible; correct the misallocations and sub-optimal resource use which are a consequence of external conditions; acknowledge budgetary constraints; and comply with existing broad macro-economic objectives. In these respects, economic instruments can be more efficient than legal instruments, since use of the latter rarely results in least-cost solutions.

Much environmental degradation arises from externalities and from the idea that the environment provides free and limitless services. In view of the visible resource degradation and pollution, it is clear that the latter assumption is erroneous and that the services provided by natural systems are not free. They do carry a price. In this context, externalities relate to the production or consumption of undemanded goods and services which are delivered outside the market system and hence are unpriced, thus influencing the welfare of consumers and the costs and production patterns of producers, and resulting in a non-optimal use of resources. In theory, this imbalance could be corrected by estimating implicit prices of the natural resource services to reflect the full costs and benefits of these services. In all honesty, though, such estimating procedures are not common practice within the region and this exclusion has invariably resulted in the continuation of nonsensical practices like the use of beach sand for low value added purposes, political non-action versus squatting or deforestation, pollution and the destruction of critical ecosystems. Apart from the theoretical and pragmatical problems in incorporating externalities there is a certain sloppiness in much economic project analysis in both the private and public sector, insofar as impacts, whether economic, social or environmental, which go beyond the project boundary are only cursorily considered.

In recent years and largely as a consequence of the region's dependency on external sources for the financing of public sector investment projects, the instrument of the environmental impact assessment has become increasingly 'en vogue'. While one cannot deny the value of environmental impact analysis (EIA), it is observed that often it is patched onto an economic or financial analysis and frequently it is difficult, if not impossible, to feed the results of the EIA back into the economic and financial analysis. Consequently, the value of an EIA is often considered to be marginal and is seen as a restrictive instrument rather than as one which could be development-oriented (Blommestein, undated). If properly conducted, however, an EIA could assist in estimating physical and social damage functions which could then be incorporated in the economic analysis. While it may be argued that such estimating procedures will be subject to error, it must be realized that non-estimation implies assigning a zero value to changes in environmental parameters and to the economic impacts of such changes and consequently implicitly assume that no damages (or benefits, for that matter) will occur.

Estimating shadow prices, whether or not in combination with EIAs, is mostly carried out at the project level. At higher levels of aggregation, the need to account for resource depletion remains equally valid. The desirability of properly accounting for natural resource use in the SNA system of national accounts has already been referred to. Such a correction could dramatically change the values of economic indicators, but would at least provide some indication of the robustness of the underlying economy and therefore on its medium and long-term growth prospects. It would also assist in estimating the environmental and economic impacts of either economic and environmental policies. To date, there is little evidence that such analysis is being carried out.

Conclusions

At this interim stage, conclusions remain tentative, and perhaps providing a guideline for future thought. The complexities and interrelationships of causes and effects between environment, economic growth and development pose a formidable challenge to both decision-makers and environmentalists. This challenge is not just intellectual, but is even more fundamental, since ultimately it affects the quality of life of the region's inhabitants. This challenge is also posed within a framework of rapid political and economic change in the rest of the world. The small States of the region will have to face continuing and possibly accelerating adjustments to changes in comparative advantage. Perhaps the real dilemma of sustainable development within the Caribbean region lies in the development of the capacity to react to short and medium-term social and economic changes without losing the capability to react to similar challenges in the future.

If the region gets caught in a vicious link of stagnant or deteriorating economic and social conditions, then improving natural resource use will be difficult, if not outright impossible. If, however, the region can achieve positive economic and social changes then there is the chance that sustainable development can be achieved at higher levels of production and quality of life.

Assessing the consequences of attempting to achieve sustainable development will imply an evaluation of the economic, social and natural systems of the region and of their individual components. But it is more than that, because we need to carry out such an analysis guided by the formulation of appropriate questions and assumptions. In its most simple format, we could perhaps derive a triad of questions relating to the main developments which can be expected within the region over the short, medium and long terms; expectations regarding resource use and the production of wastes and physical changes; and the impacts which these changes will have on the societies of the region. Such questions need to be answered within a framework of suitable and variable assumptions with respect, for example, to economic growth, technology and social cohesion. The assessment, then, could include an analysis of the causes of the current problems; the factors which will influence the future, past, current and future options for actions and policies; and the derivation of strategies which could enhance positive impacts and reduce negative effects. The outcome of such an evaluation would not be a forecast or plan since planning under the long-term horizons implicit in sustainable development is impossible. What it would provide, though, is some indications where interventions may be meaningful and feasible. Perhaps more important is that it would force decision-makers to question the validity of existing development paradigms and dogmas, thereby initiating a process of change.

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