IMPACT OF AGRICULTURAL AND ENVIRONMENTAL POLICIES ON SOCIO-ECONOMIC DEVELOPMENT IN LATIN AMERICA AND CARIBBEAN

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1.0 Sustainable Socio-economic Development in Latin America and the Caribbean

1.1 Sustainable Development Defined

The concept, Sustainable Development as used in this context, refers to development that is aimed at meeting the needs of the present populations of Latin America and the Caribbean, while at the same time enhancing the probability that future generations of the region will be able to meet their needs. From a practical point of view, it requires policies or commitments of governments to pursue social and economic development that does not jeopardize future generations (Toure, 2002).

It is important to recognize that although Sustainable Development means the same for all countries of the region, the approach employed in Latin America in general, must of necessity be different from that employed in the Caribbean. This is so because the countries of the Caribbean are small compared to most countries in Latin America . The unique problems faced by small countries have been delineated in Agenda 21 of the 1992 United Nations Conference on Environment and Development (UNCED). They include the following:

- Small size
- Isolation from labour markets
- Ecological fragility
- Geographic dispersion &
- Limited resources

1.2 The Relationship Between Agricultural & Environmental Policies and Socio-economic Development

Although there has always been a close relationship between agricultural and environmental policies and socio-economic development, that relationship has assumed far greater significance because of the nature of globalisation today. Globalisation as it is known today, has created a world in which small, medium-sized and large countries all have to compete for the same resources and markets, therefore, every variable that affects a country's ability to compete successfully, has taken on increased importance. It is axiomatic that the kinds of agricultural and environmental policies that exist in Latin America and the Caribbean have a great impact on socio-economic development in the region. It should be noted, however, that the relationship is quite complex. Agricultural policies and practices have an impact on the environment, and vice versa, environmental policies and practices have an impact on agriculture. In turn, agricultural and environmental policies and practices, individually and in combination, have an impact on socio-economic development. Additionally, socio-economic policies and practices have an impact on agriculture and the environment.

The key to sustainable socio-economic development, is having a clear understanding of the intricate relationships between agricultural and environmental policies on the one hand and socio-economic development on the other.

1.3 Characteristics of the Caribbean Region

For geographical, political and practical reasons, the Caribbean is treated as a sub-region of the Latin American Region. The Caribbean region encompasses an area of 2.6 million square kilometres, with a population of about 20 million people. Most of the population is concentrated in a narrow band along the coastal plains of each country. Although the countries share some similarities, they display significant variations in regards to terrestrial and marine resources, and levels of environmental degradation. All Caribbean countries with the exception of Guyana and Haiti are classified as middle level economies. Guyana and Haiti are classified as lower level economies. The region has made significant strides in developing a market-driven economy, and through CARICOM, is working towards greater economic integration in the region. One of the most significant economic measures developed by CARICOM, is the Caribbean Single Market and Economy (CSME), which will enhance the ability of the Caribbean to negotiate with the rest of the world as a single entity.

While Belize, Surinam and Guyana (mainland countries) have extensive forests and arable lands, those of Haiti are depleted and those of the Organization of Eastern Caribbean States (OECS) are under severe pressure. Jamaica, Trinidad & Tobago, the Dominican Republic, Surinam and Guyana have significant deposits of mineral or

petroleum reserves. Most of the countries are experiencing significant environmental degradation associated with high population density, but Guyana, Surinam and Belize are spared this problem because they are very sparsely populated (Elvis, 1994).

All the countries of the region are confronted with development pressures on coastal and marine resources, but these pressures are more intense in the Organization of Eastern Caribbean States (OECS), Jamaica, Barbados and Haiti.

1.4 Characteristics of the Latin American Region

Typically, Latin America consists of four areas, namely:

- Mexico
- Central America
- The Caribbean &
- South America

Since the Caribbean has been described already, the general description which ensues, will refer only to the other three areas.

The region extends from 33 degree north latitude to 56 degree south latitude. It has the greatest latitude range of any world-wide region. The area is highly diverse in climate and geography (Athey, 1987). Central America is very mountainous, volcanic in origin, earthquake prone and having a wide variety of lakes. The coast-lands are swampy and the interior lowlands are covered by dense forests. The overall physical features of South America is dominated by the Andes mountains on the west, the Amazon Basin on the

north and the rest forms a plateau. Athey suggests that all four of the world's major land-forms (mountains, hills, plateaus and plains) are found in the region.

Throughout Latin America population density is relatively low but highly urbanized, and growth rates are very high. In Argentina, Chile, Uraguay and Venezuela, the most urbanized of the large states, at least 80% of the population live in urban centres, while in the less urbanized countries of Bolivia, Ecuador and Paraguay, less than 65% live in urban areas (http.//Encarta.msn.com). Unlike the Caribbean sub-region, most of the countries of the rest of Latin America have vast areas of arable lands as well of vast reserves of mineral and petroleum.

According to one expert, the countries are characterized by large agrarian structures known as haciendas, which have become entrenched in the power structure. This has resulted in most of the lands being in the hands of a few, while the masses have limited access. Historically the region has been dependent on mineral commodities and agriculture, but it has experienced growth and diversification in most economic sectors post world war II. These and other factors have a significant bearing on the role that agricultural and environmental policies have on socio-economic development in the region.

2.0. Agricultural and Environmental Policies and Socio-economic Development in the

Caribbean.

Agricultural Policies

The countries of the Caribbean rely heavily on agriculture for survival, therefore, agricultural policies invariably have a significant impact on socio-economic development. Because of size and limited resources, the interlocking relationship between ecology and socio-economic growth and development is particularly evident in this region (Elvis, 1994). For this reason, when agricultural policies lead to the depletion or misuse of land resources, the prospects for development are jeopardized. Although the sub-head is agricultural policies, it is quite evident that both policies and practices affect development, therefore, the discussion will focus on both. There is a relative paucity of integrated agricultural policies in the region, but even when policies exist, current practices are at variance with them.

A key factor in sustainable socio-economic development is the existence of development planning which includes the following features (Elvis, 1994):

- Land use planning
- Development control
- Institutionalisation of environmental impact assessment

An examination of the Caribbean region, reveals that only recently has any meaningful attention been given to development planning, and even now, it is done in a piecemeal fashion. It is evident that currently, many policies and practices in the Caribbean, do not encourage or promote good land-use management. For example, Elvis (1994) contends that population pressures in Haiti, Jamaica and Barbados have resulted in overuse of

ecosystems, and pressure on the land in Haiti, Barbados, Dominican Republic and Jamaica has led to depletion of fuel-wood, soil erosion and coastal zone degradation. In addition, accelerated urbanization in Jamaica, the Dominican republic, and Haiti, has lead to depletion of forests, unsafe drinking water, and poor sanitation. In Antigua and Barbuda, the practice of open grazing has led to the abandonment of agricultural land and the transition from agriculture to tourism. In Dominica, St. Vincent and the Grenadines and St. Lucia, banana cultivation has invaded forest-lands, thereby causing soil erosion.

Socio-economic development in the region is being significantly hampered because agriculture is not guided by principles of sustainable development but instead by profit margins. Such inappropriate agricultural practices, result from schemes that are based on short-sighted economic development (Barry, 1995). There is a vicious cycle that predominates in the Caribbean: Poor agricultural policies and practices lead to deforestation and soil erosion, which in turn leads to declining soil fertility, overcrowding and excessive sub-division of land, reduction in yield, and ultimately retarded social and economic development.

One of the most significant ways in which agriculture can have an impact on socio-economic development, is through the adoption of appropriate technology for agricultural activities. The failure to adopt appropriate technology for agricultural activities, is one of the greatest obstacles to socio-economic development in the Caribbean. Jamaica, for example, has not kept pace with other developing countries in the application of technology to agriculture. The use of science and technology can result in increased yield, which in turn can reduce unit cost to the farmer thereby increasing profit. Lowered

unit cost will enable the country to achieve comparable advantage and increase market share. The region, notably Jamaica is taking steps to modernize its agriculture, but unless these changes are followed up and nurtured, the expected results will not be realized (Brown, 1988). Austin (1997) suggests that agricultural extension is a significant component of transferring technology, because extension organizations (or officers) can influence the extent to which technology is adopted and how it is used. Unfortunately, in light of budgetary constraint, many countries in the region have reduced the number of extension officers.

The absence of comprehensive agricultural policies which are translated into practices that under-gird agricultural life in the Caribbean, has made it impossible for the countries to expand agricultural production, thereby contributing to social and economic development. For example, in Jamaica and Eastern Caribbean states, much of the land that is suitable for agricultural development remain unused, that is abandoned or withdrawn from sugar-cane or banana production. Additionally, due to misuse, there is extensive erosion of hillside agriculture land, and forest lands that were cleared for agriculture have to be abandoned because of diminished productivity (Brown, 1988).

Another important factor that inhibits the ability of the agricultural sector to contribute to sustainable social and economic development, is lack of land tenure. In the Caribbean, many small farmers do not have title to the land they occupy, and this affect their farming behaviour. For example, a study of a small farm community in St. Lucia found that land tenure has an impact on production, production patterns, cropping systems and income

earning capacity of small farmers (Le Franc, 1993). Lack of title makes it impossible for a farmer to use the land as collateral for credit, thereby reducing the options available to the farmer, while at the same time altering the farmer's relationship to the environment (Brown, 1988; Stavrakis, 1979; Rashford, 1982). It must be noted that Jamaica, Barbados, and Trinidad and Tobago have instituted policies aimed at addressing the problem of squatting by regularizing the squatters; this, however is not likely to solve the problem because political considerations make it unlikely that policy makers will insist on the enforcement of anti-squatting laws. Given the fact that most of those involved in agriculture are small farmers, it is imperative that the nations of the region institute land reform policies that will enhance the ability of small farmers to access land and credit so that they can improve the ability to earn a sustainable income and contribute to economic development. This is particularly urgent in light of the CARICOM's intention to institute the Caribbean Single Market and Economy (CSME).

It must be recognized that agricultural policies in the Caribbean is significantly influenced by agricultural policies in the international arena. According to Nigel Austin (1997), many policies instituted by the Congress of the United States of America and the World Bank, have a significant influence on the agricultural policies developed by developing countries. This simply means that although the Caribbean region may take proactive steps to harmonize the relationship between agricultural policies and socio-economic development, some of its actions will be, essentially, a reaction to circumstances over which it has no control. This makes it difficult to achieve the desired harmonization.

2.1 Environmental Policies

It is now commonly agreed that there is a direct link between environmental policies and practices on the one hand and social and economic development on the other (Elvis, 1994). However, in actuality, it is only relatively recently that we began to acknowledge that link (World Bank, 1993).This link is most evident in the Caribbean region, where the cost of environmental degradation manifests itself in:

- Harm to human health
- Decreased economic productivity
- Reduced forests

As is the case in other parts of the world, in the Caribbean, there is an intricate relationship between economic growth and the quality of the environment, and many environmental problems have economic causes. Matters related to efficiency and production are determined by economic policies and the state of efficiency and production affect the environment negatively and/or positively (Alleyne, 1993).

The Caribbean faces a host of environmental problems, most of which are related to the stage of economic development in the region. The countries of the region all acknowledge the relationship between the environment and sustainable socio-economic development. In Barbados a leading scholar has called for the harmonizing of economic and environmental policies, and the Government has responded positively, by developing a National Action Plan aimed at dealing with environmental issues. In Jamaica, the Government in an effort to enhance sustainable social and economic development,

amalgamated several agencies dealing with land use and the environment, thereby creating the National Environment and Planning Agency (NEPA). One indication of Jamaica's desire to forge the appropriate relationship between environmental and socio-economic issues, is the plethora of related policies that have emerged in the past 20 years, as reflected in the following list:

- Forestry and Soil Conservation Policy 1980
- National Forestry Action Plan Policy Statements 1990
- National Report on the Environment 1992
- Forest Land Use Policy 1996
- National Industrial Policy 1996
- National Land Policy 1996
- Policy of Jamaica's Protected Areas
- Watershed Policy 1999
- Jamaica National Environment Action Plan 1995
- National Environment Education Action Plan for Sustainable Development 1998.

Similar activity is taking place in St. Kitts and Nevis, Grenada, Antigua and Barbuda, Trinidad and Tobago, Guyana and Belize to name only a few. In an effort to forge the most desirable link between environmental policies and sustainable development, the countries of the region are forced to contend with the fact that because of their small size, any land-based development activity, has a direct impact on the coastal marine environment. The region is in the process of sorting out the short-term trade offs that are desirable, while at the same time developing policies and strategies that will increase the

probability that in the long run, socio-economic development and environmental protection will prove to be complementary. In some instances the effort is inadequate; for example, Belize has taken steps to protect its natural environment, but the country's overall economic development strategy does not, in practice, include a strong environmental component (Barry, 1995). One significant challenge for the region, is how to ensure socio-economic development without overexploiting the existing resources.

For these small countries, the negative effects of development can jeopardize sustainability. Guyana and Jamaica the countries with significant mineral deposits of bauxite/alumina, must contend with the consequences of mined-out areas, toxic red mud and land and forest degradation. Jamaica has instituted a policy for bauxite land restoration, but According to P.E. Williams et al (1997), Guyana has not yet promulgated such a policy. Trinidad and Tobago with its significant oil deposits is experiencing land degradation from oil-well drilling, and marine pollution from off-shore drilling and oil transfer (Elvis, 1994). Trinidad and Tobago, Guyana and Surinam are continuing to exploit petroleum reserves and forest resources without putting in place the appropriate regulatory mechanisms. With regulatory mechanisms lagging behind exploitation, the long-term socio-economic development of these countries is being placed in jeopardy.

Countries such as Jamaica, Barbados, Antigua and Barbuda, St. Lucia, St. Vincent and the Grenadines, the Bahamas, and the Dominican Republic which depend on tourism, are proceeding with the development of the tourism industry, but often to the detriment of the environment. In Antigua and Barbuda, for example, the ecological balance is disrupted when significant deforestation of mangroves takes place, only to be replaced by hotels

and marinas, to meet the needs of tourists. In Barbados, several hotels are in an increasingly precarious position because of beach erosion related to the fact that the hotels were located too close to the high-water mark.

Finally, the regions socio-economic development is threatened by recurrent natural disasters such as hurricanes, earthquakes, volcanoes, and floods. Since these occurrences are beyond the control of the region, the only viable approach is to institute measures, prior to an occurrence, aimed at damage control. Unfortunately, throughout the Caribbean, the approach is reactive; that is after the occurrence, all available resources are invested in an effort to ease the suffering. Taking appropriate early preventive steps prior to the occurrence would save lives, money and protect investments in socio-economic development. A point in case is Jamaica, which in 2001-2002, was on its way to a modicum of economic growth, and reduction of its debt burden; this recovery was, however eliminated when the country was hit by massive flood rains in May and November of 2002. The effect of the rains was devastating because the drains were blocked, bridges were in a poor state of repairs, river courses were impeded by human activity, and deforestation had left the land open to massive erosion. The net result is that the expected social and economic development has been scuttled. According to the World Bank (1993), overall, the harmful effects of inadequate or inappropriate environmental policies on socio-economic development in the region, can be traced to:

- Harmful effects on infrastructure
- Human health
- Agricultural yield

- Fisheries output and
- Forestry output

3.0 Agricultural and Environmental Policies and Socio-economic Development in the Latin America.

3.1 Agricultural Policies

Agrarian structures are a feature of social organization in Latin America, and this manifests itself in the form of large agricultural estates known as haciendas. The hacienda is a way of organizing labour and it continues to be a major factor in Latin America. As is the case in the Caribbean, in Latin America, a disproportionate amount of arable lands are in the hands of a few farmers, while a large majority of the people do not have access to or tenure on the land. In Central America, for example, 7% of the people occupy 73% of total agricultural lands, while the rest of the people including small farmers, occupy only 11% of the agricultural lands (Thrupp, 1996). This situation has far-reaching implications for socio-economic development in the region for a number of reasons. In the first place, historically, agriculture has been a mainstay of development in Latin America, but the organizational structure has led to widespread poverty and internal social unrest in many countries of the region. In effect, the arrangement has impeded social development (Rojas, 1985). Secondly, in the past most agricultural production was for domestic consumption, but since world war II export of agricultural products has assumed greater importance. As the region becomes more involved in hemispheric trade relations, it may be stymied by the historical arrangements, thereby having a negative impact on development. In other words, although there is evidence of significant socio-economic

development over the past fifty years, its sustainability may be negatively affected by the lack of access to or tenure on lands.

The potential for the imbalance in the control over lands to have a negative effect on social and economic development, becomes even more obvious when one considers the fact that agriculture accounts for only 12 percent of Gross Domestic Product (GDP) in the 1990s, but accounted for more than 30% of the labour force in Bolivia, Paraguay, Peru and Ecuador; it accounted for 20-30% of the labour force in Columbia and Brazil (Online encyclopedia, 1997-2000).

Developed countries have had a long history of land-use planning and resource management and this has benefited them in the management of the relationship between agricultural development and socio-economic development. The opposite is true for Latin America. In the absence of agricultural policies aimed at regulating land use, Latin America opened up to foreign investment, thereby resulting in large tracts of forests in the Amazon basin being cleared for cattle and crops (Williams, 1997), but large numbers of people especially indigenous ones, have not benefited from economic growth and are left to occupy small parcels of unproductive lands (Thrupp, 1996). A case in point is the Chaco area in Northern Argentina and South-eastern Bolivia. The area, which is occupied by the Wichi Indians, is normally fertile when managed properly, but having been opened up to ranching and commercial agriculture, it has been transformed into a dust bowl (Rankin, 1996). A situation in Brazil helps to make the point that agricultural polices and practices in Latin America are leading to what could be a disaster. In the 1970s the Brazilian Government began a policy of opening up the Amazon rain forests to

development, by the resettlement of landless families who cleared the area for grazing. Later, however, there was a policy change, and the Government began to focus on commercial farmers; this was devastating for the small farmers who were pushed aside. It must be pointed out, however, that other policies have led to the planting of significant areas of commercial forests in Brazil and Chile.

According to David Kaimowitz (1996), because many farmers have access only to small plots of land, they have concentrated on cash crops, which is creating vulnerability to pests. He suggests that a sustainable development strategy in Latin America, must be based on policies that engender:

- Creation of legal and macro-economic framework
- System of taxes
- Fines and subsidies that reduce incentives to contaminate and over-exploit natural resources
- Investment in technology, education and infrastructure
- Mechanisms for resolving conflicts between competing interest groups.

3.2 Environmental Policies

In the previous section it was pointed out that historically Latin America has depended on agriculture, but that was only half the story. In fact, the region has also depended heavily

on mineral commodities, and this dependence has played a major role in reshaping the industrial landscape of the region. Mining of petroleum, copper, bauxite and iron ore are the main activities. Unlike agriculture, mining accounts for very little of South America's GDP and employment, but industrial activity, much of which is oil related, accounts for over 30% of GDP in Argentina, Venezuela, Brazil, Bolivia, Chile, Peru and Ecuador (Online encyclopedia, 1997-2000). In 1967, Texaco discovered oil in Ecuador's Amazon region, "The Oriente". This sparked an oil boom which led to significant economic development, but also became the primary cause of environmental degradation in the region (Kimerling, 1996).

It is generally believed that in Latin America, the environment and human health are in serious danger, brought on by agriculture, transport, industry and human settlements (Kaimowitz, !996).There are many views as to what brought on this potentially explosive situation. Dore (1996), contends that as a part of structural adjustment policies, the World Bank demanded that Latin American countries promote exports in order to pay their huge debts. This led to countries in the region competing to see who could offer the best conditions, such as low wages, a submissive labour force and few environmental restrictions. In effect, countries wittingly and unwittingly established policies that were at odds with environmental sustainability. Many environmentalists maintain that European and United States of America investors were driven to invest in Latin America by the lore of large profits and the indication that they could get away with environmental pollution, and not by a desire to enhance the social and economic development of the region. In effect, weak environmental regulations throughout Latin America, caused foreign

investors to adopt production measures of a far lower standard than those used in developed countries. Notably, Mexico is a major victim of the above policy, because it attracted low wages and high pollution industries. The effect is most evident in Mexico City which now experiences frequent periods of thermal inversion.

Elizabeth Dore (1996) calls attention to Brazil's Grande Carajas Project of the 1980s, which became the largest mining project in the world. The project converted a quarter of Amazonia into the world's largest industrial and agro-livestock centre. From the Brazilian Government's point of view, the project was intended to contribute to social and economic development, but the environmental fall-out was devastating. The project led to the following environmental problems:

- Massive deforestation
- Significant climate change
- Flooding
- Salination
- Less rainfall
- Soil erosion
- Extinction of plant and animal species

There are several factors that have contributed to the current state of affairs in Latin America. In the region as well as in other parts of the world, there is a tendency to focus on specific instances of danger to the environment rather than on social causes; approaches to sustainable development tend to give disproportionate attention to the

rainforests (especially Amazonia), to the neglect of other areas; because there is the notion that environmental destruction is an inevitable by-product of economic growth, environmentalist and policy makers are failing to explore the connection between political power and environmental destruction (Dore, 1996).

Despite the gloomy picture presented above, all is not lost. There is a growing environmental lobby in the region, and under pressure, from many sources, Governments of the region have begun to assess the environmental impact of their policies. In Mexico, the Partido Revolucionario Institutional (PRI) then the ruling party, launched an environmental campaign which gave legitimacy to discussions about the relationship between environmental policy and socio-economic development (Dore, 1996).

After World War II, Latin America made a conscious decision to develop its industrial base, in order to produce locally many of the good that were being imported. This decision is at the heart of the environmental and agricultural issues now confronting the region. The changes in production have had far-reaching impact on the structure of social life in the region, affecting even the way household members interact and cooperate (Stavrakis, 1996).

4.0 Conclusion

4.1 The Way Forward

Latin America and the Caribbean are inextricably intertwined because of proximity and other geo-political factors. Despite many similarities, there are significant differences between the region and the sub-region, not least of which is culture in general and language in particular.

In addressing regional issues related to the impact of agricultural and environmental policies on social and economic development, it is important to be cognizant of the role that size can play in the strategies that are adopted and the relative urgency that should be assigned to the problems that are encountered. If this is not done, we may end up with a one-size-fit-all solution, and in such a situation it is more likely that the needs of the smaller countries will be slighted. Certainly, the need to integrate environmental, agricultural and socio-economic policies and practices is paramount irrespective of size, but a solution to a particular problem may be dependent on the quantum of resources, the ability to pay, competitive advantage and the willingness of developed countries to invest in the country. The countries with funds for overseas direct investment are more likely to invest in the larger countries of the region, because such countries have larger populations and greater reserves of natural resources. Such an investment policy could lead to neglect of the agricultural and environmental needs of the smaller countries, thereby endangering their social and economic development.

In order to enhance the social and economic development of the region, member countries must take deliberate steps to ensure intra-region transfer of appropriate technologies that can improve the quality of agriculture and the sustainability of the

environment. The level of trade within the region should be increased; this could include expansion into new areas as well as increase in those areas in which we already trade. Given the proximity of the respective fishing territories, there is a need for greater collaboration so that the fishing resources are not depleted, and there are not unnecessary conflicts between nations. Venezuela has developed a special arrangement for supplying oil to the Caribbean, and it should be possible for other resource rich countries to work out similar arrangements to the benefit of those that are less endowed.

It is clear that one of the reasons for the apparent regional disconnect between agricultural and environmental policies and practices on the one hand and social and economic policies and practices on the other, is the need to bring systems of governance into conformity with the demands of the times. In this regard, I believe the countries of the Caribbean have a comparable advantage, and their experts should be used more frequently, instead of always importing experts from the developed nations.

As the larger countries of the region seek to improve their economic position by becoming involved in free trade arrangements such as the Andean Pact, the South Cone Common Market (MERCOSUR) and the North American Free Trade Agreement (NAFTA), it is imperative that they negotiate in a way that demonstrates their commitment to protecting the integrity of the social and economic development of the region.

The region cannot continue to chase long-term problems with short-term solutions. It must engage in better land-use planning and it must endeavour to influence or manage those variables that are within their sphere of influence or control. Land reform that benefits the poor can go a long way in enhancing social and economic development in the region.

Although the region is woefully behind in its policy development and implementation, it is not too late, but the problems cry out for immediate attention.

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