ASSESSMENT OF THE IMPACT AND POLICY IMPLICATIONS OF TRADE LIBERALIZATION ON THE AGRICULTURAL SECTOR OF CARICOM COUNTRIES: PURPOSES AND EXPECTED OUTPUTS FROM THE ONGOING FAO PROJECT

by

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1. INTRODUCTION

The open nature of the Caribbean economies has caused them to be greatly affected by changes in the international economic environment. The oil shocks of the 1970s and the 1980s, together with changes in the preferential arrangements accorded these countries have led to adverse movements in their terms of trade and resulted in balance of payments and general economy wide problems. The efforts within CARICOM countries in the 1980s to adjust to these changes have been characterized by a variety of economic reforms, including programs promoting greater stabilization and increased privatization.

In the 1990s the completion of the Uruguay Round with new global trading rules for agriculture, and the formation of NAFTA are representative of further changes in the international economic environment with potential impacts on these countries. The general characterization of these changes indicates a movement toward greater trade liberalization. Within CARICOM there is particular concern regarding the effects on their agricultural sectors. As a result several studies have been commissioned both at a regional and national level to assess the impact and policy implications of this more liberalized trading environment.

This paper reports on one of these studies jointly being undertaken by FAO and IICA. The first section presents a brief statement on the background and approach to the project. The second section presents a description of CARICOM agriculture and international trade over the last decade. The third section presents issues affecting competitiveness in CARICOM agriculture at a regional level. The fourth section points to potential outcomes and policy issues.

2. BACKGROUND AND APPROACH TO THE PROJECT

The need for a study assisting CARICOM countries in the transformation of their agricultural sectors in response to the increasing globalization and trade liberalization policies that are shaping the international economic environment has long

been recognized. On the instructions of the Standing Committee of Ministers responsible for Agriculture of the Caribbean Community, the CARICOM Secretariat requested FAO assistance in completing one such study. Given the Memorandum of Understanding between FAO and the Inter-American Institute for Cooperation on Agriculture (IICA) they also suggested that FAO collaborate with IICA in jointly undertaking the study.

Under the FAO Technical Cooperation Programme, the project "Assessment of the Impact and Policy Implications of Trade Liberalization on the Agricultural Sector of CARICOM Countries" (TCP/RLA/5612) was approved. The project is focusing on CARICOM's agricultural trade and trading relations, particularly as they relate to exports, imports and food security. The countries participating in the project are Barbados, Belize, Grenada, Guyana, Jamaica, St. Lucia, Suriname, and Trinidad and Tobago.

The successful transformation of the agricultural sector will depend on how programmes and policies inside and outside the region affect the sector's capacity to compete in the changing international economic environment.

Within the region, countries are at different stages of implementation of reforms. Some of the benchmarks in the process are-.

1982- Jamaica, First Structural Adjustment Loan by the World Bank. In fact, the efforts at liberalization began with the first IMF Stabilization agreement in 1977, but the government did not implement the agreement. In the 1980's there were several IMF/WB projects promoting structural reform which included several measures related to deregulation and trade liberalization. These programs and the implementation of the Common External Tariff (CET) make Jamaica one of the most open economies in CARICOM.

1986 - Grenada introduced a program aimed at downsizing the public sector in an effort to reduce the fiscal deficit. This program was reinforced during 1991 to 1995 as a self imposed structural adjustment program. The main strategy was to promote the private sector as the engine of growth.

1988- Guyana, Economic Recovery Program (ERP). A number of measures included in this program had an impact on the agricultural sector. Among these were elimination of almost all price controls; establishment of a floating exchange rate and the cambio system; reduction and simplification of the structure of external tariffs with the introduction of CET; the elimination of most import licensing requirements; launching of a major privatization programme of public assets, including all rice mills; and the introduction of private sector management in the sugar industry.

1988- Trinidad and Tobago. The Structural Adjustment Programme included: restraint of public expenditure, tax reform, privatization of state enterprises and public rescheduling of debt repayment. Significant signs of trade liberalization appeared with the deregulation of the foreign exchange market in 1989. In 1994 the rice, flour and vegetable oil industries were deregulated.

1991- CARICOM launched the implementation of the Common External Tariff (CET). This was designed to liberalize intra- and extra -regional trade. It affected all countries, but at different rates of

implementation. Jamaica and Trinidad and Tobago have advanced the furthest with these reforms.

1992- Suriname. Implementation of a Structural Adjustment Programme. In 1995, positive economic impacts as well as social costs were realized. Programs intended as safety nets were introduced to address the negative social implications. In 1996, Suriname became a member of CARICOM and started to implement the CET.

1992- Barbados. Implemented a two-year stabilization programme with a focus on the reduction of the public deficit and further liberalization in trade policy.

The commitment in 1992 to establish a CARICOM Single Market and Economy is of considerable significance. Among the essential features of the proposed Single Market and Economy are: free movement of goods, free movement of services, free movement of persons, free movement of capital, right of establishment, a common external trade and economic policy. Of specific importance is the implementation of the CET in relation to agricultural products. These regional changes are significant and can complement changes taking place at the national level to promote an improved investment climate to assist the successful transformation of the sector.

Outside of CARICOM the main changes relevant pertain to trading agreements. Those that are of special importance are the ACP/LOME, GATT/WTO Uruguay Round arrangements, the North American Free Trade Area (NAFTA), the Caribbean Basin Economic Recovery Act (CBERA).

The most obvious of these trading blocs is Europe. The European Union (EU) already a customs union created an economic entity with unified, coordinated policies. The EU will function much as a single federal state. Eastern European countries are joining the association and will open new trade opportunities. However, some current opportunities in Europe are under threat. This is of special importance to ACP-Caribbean countries.

ACP/Lome Convention is an agreement to annually buy selected commodities at a price negotiated between the ACP countries and the EU. The Fourth Lome Convention was signed in 1990 and expires in the year 2000. The major concern of CARICOM countries is what will the next Lome agreement look like and will the non-reciprocal free access for certain quantities of goods to the EU market remain. Specifically, how will changes in the sugar protocol affect Guyana, Belize, Barbados, Jamaica and Trinidad & Tobago. The banana arrangements are already under serious question in the EU since the creation of (WT0) and its clearer set of rules governing global trade.

The completion of the GATT/WTO Uruguay Round of Multilateral Trade Negotiations implies major changes in the global economic environment. Trade liberalization will be enhanced and commercial barriers will decline, giving way to more competitive world markets. The impacts of the Uruguay Round on CARICOM countries will in the final analysis be determined by how world markets are affected (their size, stability and prices) and by the policy and programme changes within the region and individual countries.

The North American Free Trade Area (NAFTA) is of special importance to

CARICOM countries. It aims at eliminating tariffs and other trade barriers between Canada, the USA and Mexico over a fifteen-year period. There is concern that CARICOM countries will be negatively affected by trade diversion through the substitution of imports from the Caribbean with imports from NAFTA members. Agricultural exports are directly affected since the competitive position acquired by CARICOM as a result of preferences granted by the USA and Canada are being eroded by the agreement. The most important agreement between the USA and CARICOM in this regard is the Caribbean Basin Initiative (CBI), enacted in 1984, which gave Caribbean countries duty free access to the USA market for a number of commodities. CARICOM has had a long standing agreement with the USA on sugar exports but this was eroded greatly in the mid 1980's. The basic Caribbean quotas have declined from a total of 121,944 million tons in 1984/1988 to 57,803 million tons in 1995/1996. The USA has also played a pivotal role in the banana issue in Europe. It has influenced certain Latin American banana exporting countries to join Mexico and the US in seeking action in the WTO against the EU Banana Regime. The US has been supplementing this pressure on the EU under its own national Section 301 Trade Law.

All the changes in the international trading framework referred to above pose potential threats and at the same time present new situations and opportunities to CARICOM countries. The final outcome will depend on their ability to introduce policy and programme reforms that result in increasing their competitiveness in world and domestic markets. Many CARICOM countries are reforming their macroeconomic and sectoral policies aimed at increasing agricultural productivity, efficiency, productive capacity and competitiveness.

The project is designed to assist the CARICOM Secretariat and its member countries in their response to this changing international economic environment. The following tasks reflect the main objectives of the project:

a) to assess the impact of trade liberalization arrangements on the agricultural and agri-food industrial sector;

b) to analyse the impact of current and anticipated trade liberalization processes on food security in general and on vulnerable groups in particular;

c) to analyse the present and future evolution of external markets for CARICOM agricultural commodities and the prospects for increasing exports in those markets;

d) to estimate the international competitiveness of major agricultural commodities and evaluate the effects of trade liberalization on factors affecting competitiveness-,

e) to identify main constraints to increased efficiency and competitiveness of selected agricultural commodities;

f) to identify policy responses that are necessary to improving the productivity and competitive position of the region's agricultural and agri-food sector in the changing international economic environment;

g) to enable the agricultural sector to participate more effectively within the Single Market and Economy of CARICOM;

h) to make recommendations aimed at improving trading arrangements which will increase the competitive capacity of agricultural and agri-food sector producers in the region;

i) to strengthen the agricultural policy support capacity within the CARICOM region to address ongoing changes in the international economic environment that affect the agricultural sector.

The following main activities were carried out at a national and regional level:

i) Production and Trade Performance including: A review and analysis of the agricultural, food and agro-industrial sectors. This included an assessment of the agricultural and food strategies and policies with specific reference to changes undertaken over the period; the major agricultural sector projects implemented over the period, paying particular attention to the obstacles and constraints to success; also, the sectoral trade performance, for at most the twenty five major exports and imports.

ii) Agricultural Institutional Setting including: A review of the structure of wages, including wage legislation and labor force statistics with clear indications of the demographic profile of the labor force; a review of changes in monetary policy, fiscal policy where relevant, credit policy, export enhancement policies and agricultural diversification policies/programs; a review of the agricultural institutions and other institutions that have linkages to the agricultural sector; an assessment of the existence and adequacy of infrastructure facilities, production, marketing and other support services.

iii) Trade Policy analysis included a review of the country's trade policy regime (including the CET) with specific reference to changes in the structure of tariffs and non-quantitative restrictions since 1985. The review identified export taxes, duties, and trade taxes such as stamp duties, customs service charges, and landing fees imposed at the border. A description of the trading arrangements to which the country is a party (ACP/LOME, CBI, CARICOM/Venezuela, CARICOM/Colombia, CARIBCAN, WTO/ GATT and in addition any other bilateral or multilateral arrangements) was completed.

iv) Cost of Production and Price analysis included: presentation of details on cost of production information for the major export and import competing commodities. Current agricultural input and output prices at the producer, processor, import, export and consumer retail levels for the major domestically produced commodities and imports (not exceeding 20 commodities) were analysed. The detailed cost, frequency and cargo capacity of land, air and sea transport distinguishing between refrigerated and non-refrigerated carriers was compared. A review of economic incentives (fiscal, credit, research and development, exports, imports, etc.) accorded to the agricultural food sector was evaluated. These incentives were compared with similar measures accorded to the manufacturing and tourism sector.

v) An analysis of **linkages** included a description of the existing relationships between the tourism and agricultural sector,

and between international trade and natural resource use.

The study is expected to be completed shortly.

3. CARICOM AGRICULTURE AND INTERNATIONAL TRADE

3.1 Agriculture in Total CARICOM Trade

CARICOM's total trade situation has changed minimally over the past fifteen years in terms of the countries that dominate trade in the region, the commodities that dominate the trade picture, and in terms of countries with which the region has traded. The data indicates that in terms of total trade Trinidad and Tobago, Jamaica, Suriname and Guyana are the top four exporters, while Jamaica, Bahamas, Trinidad and Tobago and Barbados are the top four importers. In each case the export dominance is influenced by the presence of a mineral export sector, oil for Trinidad and Tobago, bauxite for Jamaica, Suriname and Guyana. These four countries account for greater than seventy five percent of CARICOM's exports. The countries that dominate the import trade are also the most populated, accounting for sixty-eight percent of the population. In the case of The Bahamas and Barbados the level of food imports also reflects the vibrant tourist trade. In the case of Jamaica and Trinidad and Tobago the agro-industrial sector is a significant importer of agricultural raw materials. This has been increasing in Trinidad and Tobago with a surge in re-exports of agricultural goods.

Four locations characterize the destination of CARICOM's exports. In order of importance they are the USA, EU, within CARICOM itself and Canada. **Table 1** shows exports from CARICOM as a whole by destination over the period 1985 to 1995. This pattern and order of magnitude has been constant over the last ten years, with trade to Canada showing the greatest rate of growth. Within the EU, the historical relationship with the United Kingdom still makes it the dominant trading partner.

Trade between the USA and CARICOM is far larger than CARICOM's trade with the EU, Canada or intra-CARICOM combined. **Table 2** presents the information on the total exports by destination and shares for selected CARICOM countries for 1995. This result reflects the dominance of Trinidad and Tobago and Jamaica in CARICOM trade. When the trade between these two countries and the US market is observed, it overshadows even their dominance of CARICOM exports in general, in 1995 the former being 83 percent, and the latter 64 percent. CARICOM's total exports to Canada while of a much smaller magnitude is similarly dominated by two countries, Jamaica and Guyana accounting for 88 percent of the exports. The EU market remains generally the most important in terms of the number of CARICOM countries exporting most of their products to the EU market.

On the import side the sources of imports are dominated by the same countries and regions. However, over the last decade imports from the EU have shown considerable growth, particularly in the 1990 to 1995 period. **Tables 3** and **4** show CARICOM's imports by origin and trade balance. The balance of trade with the USA and EU has declined for CARICOM over the period. From 1986 this balance of trade (with EU and USA) turned negative and

became increasingly so; Canada remained a net importer of CARICOM goods.

Trade with Latin America has been increasing with CARICOM posting its first positive trade balance over the period in 1995. Japan is also an important CARICOM trading partner; but with a rapidly increasing deficit in the 1990's. Most of the region's trade deficit with Japan is derived from Japan's exports to the Bahamas and to a lesser extent to Barbados. Trade with other countries shows no particular regional patterns for CARICOM as a whole, although individual countries have been increasing trade with a more diverse group of countries.

3.2 CARICOM Agricultural Trade

The two most populous and agro-industrially developed countries in the region, Jamaica and Trinidad and Tobago, dominate CARICOM's agricultural trade. **Table 5** provides an overview of agricultural trade in the region. Jamaica with its diverse agricultural sector and vibrant agro-industrial sector is both the leading agricultural exporter and importer. Guyana, with its sugar and rice exports is the second most important exporter. The Bahamas with its high per capita income, significant tourist trade, and small agricultural sector, is the third most important importer of agricultural products in the region. Barbados, for similar reasons, is also one of the most important importers of agricultural products. Trinidad and Tobago features as both an important importer and exporter because of its relatively large population and high income within the region and also more recently because of its increasing agro-industrial exports.

CARICOM's agricultural export sector expanded significantly over the last decade. **Tables 6a, 6b,** and **6c** show the agricultural exports and growth rates for each country in the region. Agricultural sector growth in Guyana of 11.5 percent between 1990-95, after six years of declines in the 1980's, was most impressive. Trinidad and Tobago's agricultural sector continued to expand, at 11.6 percent, down from the 15.8 percent of the 1985 to 1990 period. With the exception of four countries (Barbados, Grenada, St. Kitts-Nevis, and Suriname) all the countries were exporting more agricultural product value in 1995 than they were in 1980. Grenada's agricultural sector exports decline of 7.5 percent over the 1990-95 period is cause of particular note.

The growth rate in agricultural product imports was less than for agricultural exports and reflects the difficult economic situation faced by several of the countries during this period of this analysisInfluencing this outcome heavily was Jamaica's imports, which actually declined over the 1990 to 1995 period, and Trinidad and Tobago's imports which declined over the 1985 to 1990 period. **Tables 7a, 7b,** and **7c** show the agricultural imports and their growth rates for each country in the region. With the exception of Jamaica and Trinidad in these two periods, in all the other countries of CARICOM agricultural imports increased over the decade.

As a result of the expansion in agricultural exports, the agricultural trade balance for CARICOM as a whole declined over the period. The main countries accounting for this were Guyana, Belize, Jamaica and St. Vincent that had positive agricultural trade balances. Trinidad and Tobago also contributed with a significant decline its negative agricultural trade balance, from

US$265 mn. to US$78 mn. **Table 8** shows the agricultural trade balances for the countries over the last fifteen years. The significant expansion of agricultural product exports from Trinidad and Tobago since 1988 and the recovery of the agricultural sector in Guyana and Suriname over the 1990-1995 period were also important factors in the in the greatly improved agricultural trade balance. From an individual commodity standpoint, sugar and banana exports continued to define the region. Guyana, Jamaica and Belize remained the main sugar exporters, with Jamaica actually exporting more sugar than Guyana in 3 years over the decade as Guyana's production declined throughout the 1980's. St. Lucia, Dominica, and St. Vincent were the main banana exporters, but the resurgence of the banana industry since 1988 in Jamaica placed it into the category of a leading exporter of bananas from the region. Belize and Jamaica were the major citrus product producers, although several other countries exported citrus including the Bahamas from 1987. Cocoa exports were the most sluggish with no country showing an increasing trend. This commodity, however, is one with particular promise in the new trade liberalized era. Guyana's rice industry showed a remarkable recovery between 1991 and 1995.

4 CONSTRAINTS TO INCREASING EFFICIENCY OF THE AGRICULTURAL SECTOR: REGIONAL LEVEL

4.1 Determinants of Efficiency and Competitiveness

The purpose for reducing distortions in the trading environment is generally to enable a country to become more efficient in its production and marketing activities. The opportunities for greater levels of efficiency and competitiveness arising from a more liberalized trading environment are both in the domestic and international market, and on the production and marketing side. The exploitation of economies of scale under current production systems is often an important aspect of this but so are product differentiation activities that target products to smaller and more selective markets. The critical factor in realizing these opportunities is the creation of an investment climate that encourages and enables entrepreneurs to produce goods and provide services.

In the post independence period the national and agricultural policy and development strategies of many CARICOM countries have been directed toward the creation of such an investment climate. The hope was that government policy actions would lead to, among other things, increased use of improved agricultural technologies, increased agricultural sector diversification, increased scales of production, increased agroindustrial development, and in some countries increased foreign investment. It was intended that this would happen at both a national and regional level, and involve both the private and public sector. At the individual country level there are many examples: Caroni Ltd. in Trinidad and Tobago and the Livestock Development Company in Guyana. At the regional multi-country collaboration level, CARICOM Food Corporation and CARICOM Corn-Soya project both involved several countries (Barbados, Trinidad and Guyana) and had public and private sector participation. There were also many ventures that were also purely public or purely private.

The general state of agriculture in the region in the first half of the 1980's suggested that the post independence efforts were not widely successful and that agricultural transformation was needed more than ever. At this time, however, the national and international economic environment facing Caribbean agriculture was changing. Internal conditions that protected domestic agricultural markets with import restrictions and supported domestic agricultural production with subsidies were being challenged. External arrangements that allowed virtually unlimited access of export produce into foreign markets were now uncertain. In the face of these changes a CARICOM agriculture that did not become increasingly efficient and diversified by the early 1980's was now under increasing pressure to do so. Despite the efforts of the 1980's this is still very much the situation today.

Numerous micro level project reports, national level agricultural sector assessments, and international organization studies, both within individual countries and across the region, have attempted to address the issues that have prevented the successful transformation of CARICOM agriculture in the periods identified above. Many of these issues resurfaced at a regional, national and commodity level during this study. However, the discussions were very different, because the context and expectations, and hence the options, were also different. Concepts of globalization, privatization, liberalization, integration, competitiveness, public/private sector partnerships, entreprenurship and rural transformation were much more integral to the discussions than ever before. It was recognized that these concepts had to be factored in to the approach that addressed all the seemingly binding constraints that continued to prevent the agricultural sector from developing. In a sense, the most fundamental change was from an approach characterized by external forces transforming the agricultural sector to the agricultural sector transforming itself. This is an important paradigm shift that is taking hold in the CARICOM region, changing the dynamics within and between the different actors, organizations, and institutions affecting agricultural development, implying very different approaches to addressing the agricultural sector constraints.

The determinants of efficiency and competitiveness of the agricultural sector are often generally classified as follows:

(i) *Endowments:* natural resources and infrastructure. This includes the amount and quality of land and water resources and access to these resources. Land availability and capability, and the nature of the tenure and land access system are particularly critical here. The drainage and irrigation systems, roads and transportation systems, energy supply and communication links are important dimensions of the infrastructure.

(ii) *Institutions:* research, education, policy development and general programming capacity at the local, national, regional and international levels. The public institutional support framework and its capacity to collaborate with and respond to the needs of the private sector is important in this regard. Human resources in each country and those available throughout the region and the systems and opportunities for their efficient and effective use is a

key determinant of the institutional and organizational strength.

(iii) *Policy Environment:* national macroeconomic management (fiscal incentives and management, monetary policies) sectoral policy and differences between sectors; political stability and policy consistency and continuity; social policy and industrial/labor relations; international agreements and global economic outlook; all combine to create the investment climate.

(iv) *Production, Marketing, and Support Service Frameworks:* commodity specific issues are addressed here from an entrepreneurial standpoint. Product characteristics are determined within a resource endowment and from a market demand perspective. Product differentiation, promotion and distribution capacity and innovativeness are the key elements in this area. Support services include financial and information systems.

The remainder of this paper outlines the constraints affecting the determinants of efficiency and competitiveness of the agricultural sector at the regional level.

4.2 Intra-Regional Level Constraints

A summary of constraints at the regional level is presented in two different contexts in this and the next section. Firstly, constraints at the intra-regional level. These constraints point directly to weaknesses for which collaboration in resolving at a CARICOM level is most logical and generally recognized. Examples of this would be constraints associated with research and the Caribbean Agricultural Research and Development Institute (CARDI), or with marketing and the Caribbean Food Corporation (CFC) or its subsidiary, the Caribbean Agricultural Trading Company (CATCO). Where regional institutions are identified when introducing constraints to agricultural transformation it is not intended to place the responsibility for the continuing nature of the constraint within the particular institution but rather at the regional level as a whole. Secondly, constraints that are common across the region where countries can certainly benefit from the lessons within other countries but where explicit regional collaboration may be neither necessarily logical nor needed. The constraints in this second regional context are addressed in terms of sectoral and commodity constraints across the region.

Caribbean agricultural sectors did not escape the "lost decade" of the 1980's that characterized developing countries across the globe. In these countries the agricultural sector suffered as the wider economy experienced imbalances in the internal (fiscal deficits) and external accounts (foreign exchange reserves). The negative impact on the agricultural sector was increased by the accompanying high rates of inflation and interest. The efficiency and effectiveness of agricultural sector institutions declined, rural infrastructure deteriorated, and agricultural policy making and programming capacity was weakened. The impact on the agricultural sector, on top of direct sectoral impacts such as declining commodity prices, resulted from the ensuing tighter macroeconomic, especially fiscal policies. These impacts resulted from measures that downsized the public agricultural sector support systems generally, and specifically from changes such as a reduction in input

subsidies and services, and a dismantling of agricultural marketing parastatals. As a result, the current efforts to increase productivity and competitiveness of the agricultural sector in CARICOM countries is starting with less capacity than it had in the mid 1970's. Many of the constraints that were identified in the earlier periods remain and many new constraints have been recognized. Those constraints that could be conceived within a regional context and that are perhaps best addressed at the CARICOM level are outlined here.

4.2.1 Agricultural Research, Technology Development and Transfer

Long run competitiveness of CARICOM agriculture will be determined mainly by increases in productivity. Investment in research and development is well recognized as a major determinant of increased productivity. The regional research system needs to be strengthened to better serve the agricultural sector in each of the member countries. There is a tremendous overlap in terms of crop and livestock activities and much can be gained in terms of reducing costs and increasing benefits if the agricultural research activities are approached from a regional perspective. The main institution delivering research services at the regional level is the Caribbean Agricultural Research and Development Institute (CARDI). The strengthening of CARDI and increased and improved collaboration with institutions such as FAO, IICA, and UWI is essential. The constraints identified below are both a cause and result of a weak regional research system. To strengthen the regional agricultural research system to contribute to the increases in productivity needed for the transformation of the agricultural sector, the following constraints need to be addressed:

- a lack of financial support
- inefficient and ineffective utilization of the funds available
- inadequate systems for research focus identification
- research agendas not reflecting regional needs
- research bias toward traditional crops
- research agendas defined too narrowly in terms of individual crops
- research agendas defined too broadly in terms of number of crops
- weak research units at the national level
- limited technical research capacity at the national level
- limited linkages between research focus and market requirements
- limited linkages between research institutions and other critical agricultural support service and community organizations
- lack of public/private sector research implementation activities
- limited public/private sector funded research activities.

There are numerous reasons why these regional research constraints need to be addressed urgently. Among the most important is that the current systems are under threat and all the economies of scale and collaboration that the region can realize from the regional governments and private sectors collaborating together may be lost if the usefulness of a regional research system is not soon visible. The questioning of the regional research system is not about the need for a regional approach, mainly the need to have a regional approach that works for the member countries.

4.2.2 Regional Marketing and Market Information

CARICOM trade is highly concentrated with respect to both commodities and markets. The efforts to diversify both commodities traded and their markets have been limited by both supply and demand side constraints. Many of these constraints if addressed from a regional perspective have a much greater chance of realizing the benefits individual states expect and simultaneously reducing the costs to each state. The marketing of high quality, high value products in carefully identified and targeted markets is probably going to be one of the most critical factors in the successful transformation of CARICOM agriculture. Strengthening the Region's agricultural marketing systems, intelligence and infrastructure is therefore a critical component to increasing the competitiveness of the Region's agricultural products. The major constraints affecting marketing at a regional level are as follows:

I. Lack of a comprehensive regional market research system

- that continuously analyses market opportunities for CARICOM products
- that develops market information to guide production end decisions
- that links effectively with the product research and development frameworks

II. Lack of a market promotion and development system for CARICOM products

- that develops the Caribbean ancestry market living outside the Caribbean
- that develops the "exotic" dimension of CARICOM products in both niche and mass markets (possibly based on natural resource or culture characteristics)
- that develops access to the domestic and regional market in CARICOM so that a larger share of the demand in these markets is met by local and regional suppliers

III Lack of marketing infrastructure that facilitates the joint physical marketing of CARICOM commodities

- that serves as a wholesale market or clearing house for agricultural products that originate from several points across CARICOM
- that facilitates the marketing of agricultural produce by managing the risk collectively. This arises in several areas such as transit losses, phytosanitary rejection, non-payment for products
- that promotes availability of distribution facilities and transportation services, ground, air and water, that assist the penetration of markets.

The CARICOM Export Development Agency (CEDA) has a mandate to undertake export market research, intelligence and development activities. Thus there is a start to addressing some aspects of the constraint identified above as the need for a comprehensive regional agricultural market research system. However, this institution focuses mainly on trading agreements and does not address any of the three areas listed under this specific constraint in an adequate manner. Over the longer run the assembling and bulking of agricultural produce should be more a private sector responsibility but given the current underdeveloped marketing systems regionally a public/private sector collaboration will most likely be needed over the short run. The Export Credit Insurance

Scheme in some countries addresses some of the issues under the third area of marketing constraints. However, lack of adequate services to assist in the management of risk remains a major agricultural marketing constraint. The Caribbean Food Corporation's role in the marketing of CARICOM produce should be revisited in the light of all of the three areas of marketing constraints identified here.

4.2.3 Regional Policy Planning Framework

The lack of integration and linkages between the agricultural sector and the other sectors of the economy in CARICOM states is a major constraint to increasing productivity of the former sector. This is so because of the importance of direct and relative incentives and impacts on agricultural decision making and enterprises. A major reason for this weakness has been the lack of a well-integrated and effective agricultural economic planning and policy-making capacity within individual countries and across the region. The individual nations and the region have tried to address this constraint by a series of ad hoc studies that inevitably fail to serve the intended purpose partly because there is neither the base to support the studies or the instrument to facilitate the implementation of its recommendations. The key components of this policy planning constraint are as follows:

- lack of clearly and specifically defined agricultural development policies and programmes
- relative disincentives to the agricultural sector when compared to the support for other sectors, particularly the tourism and manufacturing sectors
- lack of integration of macro-economic and trade management decisions with agricultural sectoral policy making
- lack of data and information centers at either the national or the regional level to facilitate the economic analysis that should precede decision making
- lack of coordination at a wider economy level across the region and therefore a fragmented regional policy approach to agricultural development
- lack of a common regional agricultural trade policy or negotiating framework.

The result of the above is often an economic policy framework that is inconsistent with the agricultural sectoral policy framework. The examples of this are many: pricing-policies aimed at keeping industrial wages low but that simultaneously undermine agricultural production profitability, and monetary policies that seek to increase savings through high interest rates but that simultaneously dampen agricultural sector investment are only two examples. Inter-sectoral policy differences that favour the manufacturing and service sectors need to be recognized. Tax holidays in the manufacturing sector and import duty exemptions for construction materials in the hotel services sector are examples of this. The policy regulations and environment facing entrepreneurs across the region also need to be consistent if regional cooperation and initiatives are to contribute to increased competitiveness. For example, a CARICOM capital market and investment code needs to be developed so that entrepreneurs can more readily access funds and opportunities throughout the region. The fundamental constraint here is that the CARICOM region lacks an institution that is able to effectively discharge responsibilities in the areas of planning and policy formulation.

4.3 Common Constraints across the Region

CARICOM agriculture, conceived from a regional or national standpoint, faces a series of constraints that are common to most countries. These traditional constraints in areas such as policy and investment climate, infrastructure and institutions, technology, production and marketing can potentially become more significant because of the changing international context. Trade liberalization can shorten the adjustment time facing both agricultural exports and import substitutes. The formation of economic blocs can increase relative market access to countries that produce CARICOM competing products. Technology developments can reduce the reliance on tropical product raw materials. The globalization of capital markets threatens to pull resources out of the agriculture sector. In the face of this potential exacerbation of the problem, it makes the addressing of the traditional constraints that more urgent. This section outlines these constraints generally and in terms of specific commodities across the region. **Table 9** presents a summary of the general constraints across the region.

Inadequate land administration systems perpetuate the widespread fragmentation of land holdings, the small size of parcels and the maldistribution of land. This situation contributes to low yields, limits investment and increases production costs. Water management is a constraint throughout the region and contributes both to low yields as well as wide fluctuations in output. The lack of transportation infrastructure contributes to the low utilization of off farm inputs in general and of mechanical inputs in particular. It also limits the harvesting of crops and contributes to the low volumes available to the agro-industrial sector. The high cost of energy contributes to the cycle of low supply of raw materials, high input and processing costs and low demand from agroindustrial enterprises for domestic raw materials.

Technology development and transfer in CARICOM countries has suffered from a shortage of financial and technical resources. One reason for this is the general lack of recognition of the evidence that suggests that the returns to good research are very high. The shortage of material and human resources could be greatly relieved through increased collaboration across countries and in the development of private/public sector partnerships. As it is there is considerable duplication currently due to the similarity of crops and the approaches to research and extension in the region.

The educational system generally and the agricultural education system specifically produces individuals who are in the former case alienated from agriculture, and in the latter case persons that want to be involved with agriculture as a science as opposed to as a business. Throughout the region this institutional and cultural constraint continues to undermine the efforts at transforming the sector. The inability to perceive of the Ministry of Agriculture as a strong vibrant regulatory and policy making body and one that can represent the interests of the farms and firms in national policy discussions is a crucial component of this limitation. The interface between the public sector and the agricultural sector is undergoing significant change in the new international economic climate and the ability of the government to play its new role of facilitator and of the public to give up their old expectations of direct production and marketing support is a part of the educational process for both entities.

The production system remains very traditional for both export and food crops. Access to improved inputs have been limited by import restrictions and government monopolies. The marketing capacity in the individual countries is very weak. Generally, it exists for the traditional crops and has been associated with commodity boards. While this is fairly well organized it lacks dynamism partly because the markets for the products have been guaranteed under preferential market conditions. Thus, expertise and experience in product differentiation and product promotion is limited. This deficit affects the potential of developing the nontraditional product sub-sector which is even more highly dependent on effective marketing for its success given the level of competition characterizing its product markets. Marketing extension services, which include market intelligence information, regional and international grades and standards, and assistance to access national and regional agricultural marketing infrastructure facilities and services are crucial in addressing this constraint.

An important change in the investment climate has been the liberalization of financial markets in several CARICOM member states. Private sector investment, both foreign and domestic, has increased significantly in the 1990's in several member countries, most notably, Jamaica, Trinidad and Tobago, Guyana and St. Lucia. At the same time however, access to capital within member countries, particularly for small and medium sized agricultural enterprises, has not improved. This is a familiar constraint that is long associated with the inability to meet collateral requirements on the part of the rural sector, and relative disinterest by financial institutions in small and medium sized agricultural enterprises. With privatization and liberalization these old constraints have been exacerbated by the increasing cost of credit.

Across the region several countries produce similar crops with common constraints to increasing their competitiveness. Jamaica, Guyana and St. Lucia are the countries that dominate the export production of specific crops, citrus and cocoa in the case of Jamaica, sugar and rice in the case of Guyana, and bananas for St. Lucia. With the exception of cocoa over the last half of the 1990's, which declined in all of the exporting countries, the export trends have been highly variable. For example, while banana exports declined in Grenada and St. Vincent in the 1990's, they expanded in Jamaica and Belize; while sugar exports declined slightly in Barbados, they increased similarly in Trinidad and Tobago. In general, the determinants of export levels appeared to be more production than market related, as agricultural exports followed country conditions more than their potentially changing market prospects. While undoubtedly the prospects for increased production depend on future marketing arrangements, this past supply side influence is an argument for continued focus on both the constraints in the general economy as well as on constraints facing particular crops. **Table 10** presents some of these constraints and suggested responses as they relate to CARICOM agricultural commodities.

5. CONCLUSIONS

This project is still in progress. The agricultural production and trade situation, and challenges to increased competitiveness have been characterized from a regional standpoint. The outcomes of the analysis and

recommendations will be presented to the CARICOM Secretariat in the final report.

A limited number of commodities and a few countries dominate trade in CARICOM. The export destinations and import sources that characterize this trade comprise even fewer countries than CARICOM. Despite the threats to CARICOM access to EU markets, EU is growing as a destination for CARICOM's exports. Imports from the EU and USA are increasing, as is the negative trade balance with these two trading partners. CARICOM agricultural trade increased significantly over the past decade, average agricultural export growth rates for the region being positive in both of the last five-year periods. In contrast to the total trade balance, the agricultural sector trade balance has been declining, becoming increasingly less negative. There is a sense in which it is true to say that the agricultural sector has enabled the CARICOM region to do a lot better economically than it would have otherwise. Unfortunately, most governments do not recognize this.

Agricultural trade will continue to be critical to the economic welfare of the region. The changed international economic environment emphasizes globalization, privatization, liberalization, integration, competitiveness, public/private sector partnerships, entrepreneurship and rural transformation, more than ever before. The sector will have to adapt to changing its production structure, to increasing the efficiency of its production processes, and to operating under conditions of increased competition. Product differentiation activities will be of greater significance in this situation, therefore measures emphasizing product development and marketing should be more reflected in policies at the sectoral, national and regional levels.

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percent of the value of production in 1993-1994 (OECD, 1995).

In developing countries, the pattern of government intervention is more mixed. Because of the relatively large share of agriculture in the economy and the relative ease of collecting border taxes, many governments have taxed agricultural exports. On the other hand, in the pursuit of self-sufficiency for food staples, governments have often provided protection to producers of grains and other import items. Input subsidies have also been a common feature of developing-country agricultural policies. However, often more important than the direct effects of sectoral policies are the indirect effects on agricultural production incentives of industrial-sector protection and exchange rate overvaluation.

On a world perspective, agricultural trade made a substantial contribution to the improvements in global and household food security that occurred during the 1980s. Ample food supplies were available on world markets at decreasing real prices. The volatility of world prices decreased. World grain stocks never fell below the 17 to 18 percent of world cereal consumption estimated by FAO as the minimum necessary to ensure world food security. Food aid flows, particularly for emergencies, increased. Despite this overall positive balance, a number of weaknesses were also evident in the 1980s. Depressed commodity markets damaged the growth prospects of agricultural exporters; the continued insulation of many national markets from world market trends meant that world markets were excessively sensitive to changes in supply and demand conditions; and increased volumes of commodity exports were achieved at the expense of environmental degradation in some countries. To some extent the situation in the last six years has been different, with stocks lower, prices higher and food aid flows by 1995 at their lowest since the mid-1970s.

II. FOOD SECURITY, SUSTAINABILITY AND TRADE LIBERALIZTION

The contribution of trade to food security occurs in a number of ways: through making up the difference between production and consumption needs; reducing supply variability; fostering economic growth; making more efficient use of world resources; and permitting production to take place in those regions most suited to it. But reliance on trade may also bring some risks. These include deteriorating terms of exchange on world markets (falling prices for agricultural exports, higher prices for food imports); uncertainty of supplies; world market price instability; and increasing environmental stress if appropriate policies are not in place.

One definition for food security could be a situation in which all households have both physical and economic access to adequate food for all members, and where households are not at risk of losing such access. There are three dimensions implicit in this definition: **availability, stability** and **access.** Adequate food availability means that, on average, sufficient food supplies should be available to meet consumption needs. **Stability** refers to minimizing the probability that, in difficult years or seasons, food consumption might fall below consumption requirements. **Access** draws attention to the fact that, even with bountiful supplies, many people still go hungry because they do not have the resources to produce or purchase

the food they need. In addition, if food needs are met through exploitation on non-renewable natural resources or degradation of the environment, there is no guarantee of food security in the long term.

Another definition for food security can be approached at different levels: for the world as a whole, or for individual nations, regions or households. Ultimately, food security concerns the individual or family unit, and its principal determinant is purchasing power, income adjusted for the cost of what that income could buy. Similarly, purchasing power at the national level, the amount of foreign exchange available to pay for necessary food imports, is a key determinant of national food security.

At the national level, there are two broad options for achieving food security: the pursuit of food **self-sufficiency** or the pursuit of food **self-reliance.** While food **self-sufficiency** means the satisfaction of food needs as far as possible from domestic supplies with minimized dependence on trade, **self-reliance** means to take into account the possibilities of international trade. In several developed countries the motivation for the policy goal of high self-sufficiency in food has often been more to transfer income to farmers than to protect against uncertain world markets. A number of larger developing countries adopted this policy because year-to-year changes in their import requirements could otherwise have been big enough to affect world prices. This was particularly true with respect to rice, for which the world market was relatively small. Another consideration that influenced the choice of **self- sufficiency** policies in some countries was that under a free trade regime they could have been exporters of basic food commodities, which would have resulted in higher than affordable domestic prices, to the detriment of the food security of poor consumers. Other countries have, however, pursued a policy of encouraging the country to produce enough food itself to provide a minimum level of food intake per person, to protect against the contingency that it might be unable to import food at any cost, as in time of war or embargo. The concept of food self-reliance implies maintaining a level of domestic production plus a capacity to import in order to meet the food needs of the population by exporting other products. The benefits and risks of relying on international trade to ensure food security are at the heart of the debate between these alternative strategies.

A major contribution of trade to food security has been that it has permitted food consumption to grow faster than domestic production in countries where there are constraints on increasing the latter. Over the period from 1970 to 1990, gross agricultural production in the 93 developing countries grew by 3.3 percent per annum, while domestic demand increased by 3.6 percent per annum.

On one hand, there is no doubt that food imports can make a vital contribution to food security. Countries relying on food imports have two key concerns: their capacity to maintain food imports at desired levels and reliability of access to these imports. Food import capacity depends on the prices and other terms on which food can be imported, as well as on the foreign exchange situation, which for many developing countries is limited by debt repayments, declining terms of trade and limited export potential.

A significant decrease in the purchasing power of export commodities can also put a country's food security at risk. For this reason, countries (and farm households)

often maintain a higher level of food self-sufficiency than might otherwise be warranted as insurance against unexpected fluctuations in import purchasing power. However, for many countries, achieving a higher level of food self-sufficiency may still represent an illusory security if it shifts dependence from food to fertilizer and other essential inputs where these are imported. Maintaining foreign exchange reserves is an alternative and, in theory, a more efficient approach, but in view of other development needs, reserve levels in developing countries are rarely sufficient.

In Latin America between 1970 and 1991, the food import share fell from 11 to 10 percent. A declining share of food imports implies that developing-country food imports in total imports implies that developing-country food importers have greater flexibility to reallocate foreign exchange to food imports in the event of major price increases. Conversely, those countries whose dependence on food imports has been increasing are now more vulnerable to shocks arising in food or other markets.

Economic literature offers much theoretical support for a positive relationship between trade and economic growth. Export growth may relieve a foreign-exchange constraint and permit a higher level of imports, thus allowing more domestic growth if this has been constrained by the need to keep import demand at a certain level. It allows firms to escape the limitations of home market size and to reap the benefits of economies of scale. Exposure to foreign competition helps to remove inefficiencies that may build up in relatively closed economies and discourages unproductive activities such as lobbying and rent seeking. Access to foreign markets means that countries gain exposure to ideas, knowledge and new technologies.

International trade contributes to income growth in a number of ways. First, it enables countries to reap the benefits of comparative advantage. Second, an increase in export demand enables production to be expanded. Third, trade is associated with greater possibilities for the transfer of capital and expertise, particularly through foreign investment. While the role of transitional agribusiness firms in developing countries has been controversial in the past, there is increasing recognition of the management benefits they can bring to production, processing and marketing. However, the impact may be more positive on larger farmers producing cash crops than on small or subsistence farmers.

Trade contributes to food security by accelerating national income growth. Economic growth can enhance food security by increasing individuals' command over resources and thus their access to food. As incomes grow, the fraction spent on food declines and the chances of falling into food insecurity decrease, while at the same time savings enhance longer-term food security. However, if national economic growth does not trickle down to the poor, then the food security of poor groups does not improve and may in some cases deteriorate.

Inevitably, however, theoretical conclusions are derived from simplified models of the real world, giving rise to skepticism about their validity when policy choices must be made. For example, the classification of a country's trade strategy could be carried out on the basis of a number of indicators such as the effective rate of protection, use of direct controls such as quotas and import licenses, use of export incentives and degree of exchange rate overvaluation. Building on earlier applications of this methodology by the World Bank (1987), the International

Monetary Fund (IMF) recently compared the economic performance of four groups of developing countries following different trade regimes. The results generally support the conclusion that more open trade orientation is associated with better economic performance.

But studies of this kind are, however, open to a number of criticisms. The attribution of countries to particular trade-regime categories is inevitably arbitrary and subjective. The question of causation is not directly addressed. It may be that rapidly expanding economies are more able to dismantle protection than stagnant ones. Various authors have queried whether the results hold consistently for countries at all stages of development (in particular, whether or not a "threshold effect" exists, such that growth is positively related to trade orientation only once countries achieve some minimum level of development). Others argue that the studies ignore the importance of world market conditions in determining the feasibility of a successful trade opening strategy.

The alternative approach investigates whether there is a positive relationship between exports and economic growth, making the (usually implicit) assumption that higher export growth is associated with a more open trade orientation. Research has generally shown that a positive relationship exists, and that faster export growth is correlated with higher productivity growth in developing countries. The approach, however, has been criticized for its reliance on simplistic statistical methods and for bypassing the question of causality. Output growth may be the cause of export growth or vice versa. Overall, the issue of the relationship between trade and income growth is still open and available evidence does not permit definite conclusions.

It is evident that agricultural trade affects the volume and location of agricultural production. Such a simple statement may have important positive or negative environmental effects. Not only trade, but also global food security depends on maintaining and conserving the natural resource base for food production in both developed and developing countries. There is increasing evidence that as agricultural production becomes more intensive, there are substantial risks that the natural resource base can become degraded unless specific conservation measures are put in place. Soil erosion and desertification, water logging and salinization, deforestation, the exhaustion of water supplies and chemical pollution from fertilizer and pesticide use are all serious threats to maintaining and increasing food production levels over time.

Agricultural interventions have often led to environmental problems. In some developed countries certain subsidies for agriculture have reinforced market failures by encouraging intensification, although in other cases subsidies have been paid to withdraw land from crop production. Similarly, in some developing countries prices for farm inputs such as water, fertilisers and pesticides have been kept artificially low. In these cases the effect has been to encourage producers to specialize in certain crops and to intensify their use of inputs, contributing to soil and water degradation and other types of environmental mismanagement. However, most developing countries suffer from low levels of productivity and need to increase their input use in order to raise output and to avoid environmental problems associated with expanding the area under production into marginal lands.

The interaction between trade and environmental issues can be seen in two ways: first, there is concern about the impact of trade on the environment. Second, there is concern about the way that environmental standards may change conditions of competition and induce demands for protection against products from countries with lower environmental standards. Trade and the environment can be compatible and complementary to each other provided certain policies are in place. Both interactions are currently being studied by the Committee on Trade and Environment (CTE) of the World Trade Organization (WTO), whose terms of reference include examination of the effect of environmental measures on market access, especially in relation to developing countries, as well as the environmental benefits of removing trade restrictions and distortions.

The extent of the environmental impact of trade liberalization cannot be directly estimated from conventional measures of changes in the volume of agricultural output. Thus, for example, while 1 tonne of rice is priced at twice the level of 1 tonne of wheat, it cannot be assumed that the environmental impact of an additional tonne of rice is twice as great as the environmental impact of an additional tonne of wheat. Assessment requires measures more closely reflecting the environmental impact of each commodity in each region. Environmental impacts are not equivalent across countries.

Agricultural trade liberalization could well reduce global environmental damage, although it is not necessarily the case that environmental pressure in each individual country will be reduced, and in some it may increase. What is relevant is the environmental impact of the change in resource use in each country, relative to the environmental impact of alternative uses for these resources. The main effects of such liberalization derive from three sources. **First,** an international relocation of crop production from high-subsidy (and high chemical input) to low-subsidy countries would reduce the use of chemicals 'in world food production (Anderson, 1992). Chemical use in low-subsidy countries, including developing countries, would increase, though from a relatively low base. **Second,** trade reform will also lead to a reduced demand for land for agricultural production in low-subsidy countries, including developing countries. Empirical evidence shows, however, that land is the input least responsive to changes in farm prices, and that the expansion in agricultural area induced by the price increases expected from the Uruguay Round will be small. **Third,** if trade reform encourages export crops that are more labour intensive than staple food production, this will help to reduce the pressures on forests from the encroachment of subsistence farming.

Trade exacerbates environmental problems, even if general trade is not the root cause of the problem. Environmental damage generally results from (domestic) policy distortions and private costs not reflecting the full social cost of resource use. The appropriate policy response to address such failures is the internalization of unaccounted environmental costs. This can be done through regulation and/or the use of market-based economic instruments, but it must be recognized that, in developing countries in particular, the administrative and market mechanisms to implement these policies may not yet be in place. Moreover, many developing countries are under tremendous economic pressure to exploit their resources regardless of the long-term consequences. Because this is a consequence of poverty

rather than a deliberate desire to exploit the environment for the purposes of competitive gain, multilateral assistance towards the implementation of environmental policies is an appropriate policy response.

Even in the absence of appropriate environmental policy trade can still be welfare improving. The standard welfare gains from trade liberalization may be sufficiently great to offset the environmental costs of increased agricultural on.

Countries at different levels of economic development will not necessarily want to make the same trade-off between economic development and the alleviation of poverty on the one hand, and environmental quality on the other. From this perspective, trade facilitated by differences in environmental standards is an important mechanism for raising incomes in low-standard countries, thus ensuring higher environmental standards in the longer-term. However, harmonization of standards may be desirable where pollution results in transborder spillovers or has an effect on the global environment. **The Rio Declaration on Environment and Development** makes clear, however, that such problems should be solved through international co-operation and consensus.

In general, trade measures pursued to achieve environmental aims often do not address the real cause of the environmental problem, although such policies are often favoured because they are easy to implement and manage. The ability of the Uruguay Round agreements to defuse disputes between countries and to prevent trade tensions arising from the clash between trade and environmental interests will be tested in the years ahead.

III. IMPACTS OF THE URUGUAY ROUND ON AGRICULTURAL TRADE

The Final Act of the Uruguay Round of multilateral trade negotiations has led to very significant changes in the global trade regime for both merchandise and services trade, and particularly for agriculture, which was included for the first time in a significant way in such negotiations. The liberalization process is a dynamic one, in that negotiations on further liberalization, particularly in agriculture and services, are scheduled to begin in 1999. In some instances, individual-country trade policies, particularly those of developing countries, may actually be changing more rapidly than as signified by their schedules to the Uruguay Round, which establish maximum levels of protection or minimum access opportunities. Furthermore, the greater interest in new regional trade groupings with ambitious objectives of freeing intra-regional trade also implies a more rapid reduction in barriers on certain trade flows than were foreseen in the Final Act.

Over the years, many attempts have been made to estimate the impact on world income of trade liberalization. Recently the focus of this literature has been on the Uruguay Round, including an effort to assess liberalization in all sectors of the economy that have been significantly affected by the Round.

As regards the quantification of the impact of the Uruguay Round, an important limitation needs to be emphasized. The estimated trade and income gains from the increase in market access for goods underestimate the full impact of the Uruguay Round on world trade

and income. **First,** there are many possible dynamic effects mentioned in the economic literature that were not considered. **Second,** the estimates implicitly assume that the status quo in commercial relations and business confidence would have been maintained if the Uruguay Round had failed. Many observers would argue that a failure of the round would have meant a distinct worsening of trade relations for a considerable period into the future and a delay in world economic recovery. Avoidance of the associated losses in trade and income would have to be included in a full accounting of the gains from a successful Uruguay Round. **Third,** and in many ways most important of all, the estimates ignore every result of the round except the liberalization of trade in goods. Models have not attempted to include the beneficial impact of the strengthened rules, procedures and institutions, including the market-access commitments and rules for services in the General Agreement on Trade in Services.

Irrespective of the magnitude of the Impact of the Uruguay Round, there are also important distributional shifts both between and within countries, with significant implications for household incomes and therefore household food security. On balance, UNCTAD estimates that the Uruguay Round will lead to a small reduction in absolute poverty (1.4 percent), though there will be gains and losses across regions as well as groups within countries.

The Agreement on Agriculture (AOA) covers market access, domestic support, export subsidies, export prohibitions and restrictions and introduces important rule chances in each of these areas. The Uruguay Round Agreement on Sanitary and Phytosanitary Measures introduces new disciplines in this increasingly important area and is designed to minimize the discriminatory and adverse trade effects of such measures. Special and differential treatment was provided for developing countries under the rules on domestic support and export subsidies, in the form of lower reduction commitments and longer implementation time frames, as well as through more substantial tariff reductions on tropical agricultural product. Least-developed countries were not required to make reduction commitments. Particular concerns of the net food-importing and poorest countries were met through the Uruguay Round Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least Developed and Net Food-Importing Developing Countries.

The rules and commitments on domestic support are broadly designed to consolidate domestic policy reforms at the international level and to encourage a progressive shift towards domestic policy measures that are less trade distortive and are exempt from reduction commitments. Initially there may be some scope for switching support from one commodity area to another under those sector-wide or global domestic support commitments.

The new rules and negotiated commitments on import protection, together with the binding of virtually all agricultural tariffs, represent an unprecedented and important step in the direction of systematically liberalizing trade in agriculture, in terms of both improved conditions of competition and trading opportunities. The provisions of the AOA and the related ministerial decisions on the least-developed and net food-importing countries also reflect a number of concerns that were taken into account in the negotiations.

First, the ministerial decision reflected the concerns of a number of net food-importing and least-developed countries that, while the implementation of the results of the Uruguay Round as a whole should generate increasing opportunities for trade and economic growth for the benefit of all participants, negative effects might be encountered by those countries during the implementation of the trade-liberalizing reform programme on agriculture. In this regard, ministers made specific reference to the need for adequate supplies of basic foodstuffs from external sources on reasonable terms and conditions and to short-term difficulties in financing normal levels of commercial imports of basic foodstuffs. The ministerial decision contains a number of provisions relating to these aspects, including export credits, technical assistance to agriculture and access to the resources of international financial institutions or such facilities as may be established. In addition, ministers agreed to review the level of food aid established periodically under the Food Aid Convention; to initiate negotiations in the appropriate forum to establish a level of food aid commitments sufficient to meet the legitimate needs of developing countries during the reform programme; and to adopt guidelines to ensure that an increasing proportion of basic foodstuffs is provided to least-developed and net food-importing countries in fully grant form and/or on appropriate terms.

A **second** area of concern, related specifically to the implications that agricultural trade reform and liberalization could have for domestic food security, is reflected in the provisions of the AOA on quantitative export prohibitions and restrictions.

Overall, the Agreement on Agriculture (AOA) represents a major improvement in the conditions of competition governing trade in agriculture. The new rules are not just systemic improvements. In a practical sense they will enhance the quality of trade concessions and other commitments. The new rules prohibiting the use of export subsidies not subject to specific reduction commitments, and prohibiting non-tariff access measures have already entered fully into force and will have a beneficial effect on conditions of competition for trade in all agricultural products.

Closely linked to the Agreement on Agriculture is the Agreement on Sanitary and Phytosanitary Measures (SPS). The SPS recognizes that governments have the right to take sanitary and phytosanitary measures but that they should be applied only to the extent necessary to protect human, animal or plant life or health and should not arbitrarily or unjustifiably discriminate between members where identical or similar conditions prevail. In order to further the use of harmonized sanitary and phytosanitary measures on as wide a basis as possible, members are encouraged to base their measures on international standards, guidelines and recommendations, where they exist.

The changing policy environment has implications for the size and stability of world food markets and the likely levels of prices prevailing. As developed countries usually subsidized their agricultural sectors while developing countries often taxed them, the net effect of policy reforms on world markets is ambiguous. The Uruguay Round disciplines bear most heavily on developed countries, but SAP's in developing countries are being implemented simultaneously.

The Uruguay Round will influence world price stability through the tariffication process. If prices in all countries now become more responsive to changes in world market conditions, the magnitude of the changes needed in world market prices in response to supply or demand shocks is likely to be reduced. While most agricultural tariffs are now bound, countries may apply lower tariffs at any time. This gives countries some flexibility to soften the effect of world price fluctuations on the domestic economy, for example, by applying a sliding scale of tariffs, subject to the constraint that tariffs may not exceed the bound levels.

Another way in which the Uruguay Round could influence the extent of world price instability is through changed incentives for stockholdings. The reduction in market intervention, particularly by developed-country exporters, makes it less likely that government stocks will accumulate in the same way in the future as seen in the past, and thus the size of global stocks may fall. Limited global stocks mean that the world is less able to buffer adjustments of consumption to changes in production. However, the reduction in government stocks in developed country exporters will provide an incentive both for increased private stocks and for more government stocks by developing-country importers, since government purchases of food-security stocks continue to be permitted under the Agreement on Agriculture. Even though the degree of substitution of private for public stocks will not be complete, a reduced level of global stocks, with a higher proportion in private hands, could make the same contribution to stability if private stocks are more sensitive to work market fluctuations than stocks in government hands. On balance, price stability should improve for most commodities, but because of the stockholding effect it may deteriorate for grains and for some livestock products.

A further, more general effect is that liberalization of trade is often associated with the removal of barriers to the international flow of capital. International capital movements are now much less linked to underlying trade in goods and much more responsive to speculative assessments regarding rates of return in different asset markets. As a result, international capital flows are much more volatile. A sudden change in investor sentiment, as occurred recently in some Latin American countries, can result in large changes in a country's exchange rate, with knock-on effects on the domestic prices of imported goods, including food. The magnitude of such currency-related shocks in future may be much greater than that arising from food markets themselves.

While the Uruguay Round represents only a partial liberalization of agricultural trade and the benefits from increased trade will not be shared equally by all countries, there are still potential opportunities for all of them. In the case of the products that were subject to the tariffication process, the main trade opportunities are expected to generate in the short term through the arrangements negotiated under tariff quotas and the related concessions. As noted above, tariffied products represent only about 15 percent of total agricultural tariff lines, and in many cases concern basic agricultural commodities whose trade growth has been relatively sluggish.

It is evident that improvements in developing countries' agricultural output and export performance, and that of other goods and services, depend on many other policy-related factors, including improvements in

infrastructure (transport systems, energy networks, irrigation, etc.); education and training; dissemination of knowledge about appropriate (new) production technologies and product varieties; pest and disease control systems; quality management, and reforms of the domestic regulatory system (including the agricultural price system, the distribution system and land reform). These factors, together with market access abroad and better trade and trade-related policies at home, can help to raise agricultural (and other sectors) productivity, income and employment and, at least indirectly, to overcome the wider *impediments to economic development and food security in developing countries, inter alia,* by making these countries more attractive for, and increasing the efficiency of, foreign direct investment (including the transfer of capital, skills, technology and marketing channels), official aid and technical assistance.

Some developing countries have been concerned that the restrictions imposed on the policy instruments permitted to pursue agricultural policy objectives will make it more difficult for them to achieve their agricultural growth and food-security objectives in the future. For example, direct subsidization of production will be increasingly limited, so too would be the use of public-investment measures for agricultural and rural development purposes. Investment and input subsidies, both frequently used measures in developing countries to promote increased production, continue to be permitted under the Uruguay Round Agreement.

IV. AGRICULTURAL TRADE AND TRADE LIBERALIZATION IN THE CARIBBEAN REGION

Recent FAO analysis implies a continuing decline in the degree of self-sufficiency and rising import requirements in developing countries in aggregate, particularly in cereals, from the base period 1987-1989 to the year 2010, offset by an increased self-sufficiency ratio in the transitional economies and in the other developed countries. Import requirements to 2010 are derived as a residual from production and consumption projections and are thus subject to a high margin of error. Even a very small difference of 0.1 percent in projected production growth rates can, over a 20-year horizon, make a substantial difference to projected trade. Commentators argue that the FAO projections underestimate emerging constraints on growth in output, such as the shrinking backlog of unused yield-increasing technologies; the diminishing yield response of cereals to the use of additional fertilizer; the need to reduce excessive irrigation pumping to restore a balance between pumping and aquifer recharge; the effects on agriculture of social disintegration and political instability; and the effect on production of various forms of environmental degradation. If these constraints are indeed more binding than assumed in the FAO analysis, developing countries will face much higher import requirements and much higher import prices. Differences in these baseline scenarios should be borne in mind in interpreting the consequences of the policy changes in the international trade regime currently under way.

International trade brings change, and change usually implies winners as well as losers. Agricultural trade liberalization has

been accompanied by concerns that the structural changes that accompany economic growth may lead to reduced food security among the very poor countries and households unable to take advantage of the new opportunities; that food imports may become more expensive; that global food price instability may increase if global stock levels are run down; and that the intensification of agricultural production in low-subsidizing regions could contribute to further environmental degradation in those countries. That is, trade can also have an adverse impact on food security in each of its three dimensions of access, availability and stability, as well as on sustainability. In negotiating further trade liberalization, these concerns should be understood and steps taken to minimize their adverse impact. There is a need for flanking policies at both global and national levels to ensure that the gains from trade are widely distributed and that the potential for greater food security is fully exploited.

In the Latin American experience, according to the Economic Commission for Latin America and the Caribbean (ECLAC) "the processes of trade liberalization have made it possible to improve the utilization of natural resources, in which the region has an exceptional comparative advantage. Nevertheless, the old problems of low relative productivity and insufficient competitiveness and innovative drive remain to be solved. Today these problems are compounded by new challenges arising from the necessity of improving linkages with the global economy and promoting competitiveness.

There is growing agreement that macroeconomic stability and an open, competitive and deregulated economy are necessary but not sufficient conditions for an independent process of economic growth and changing production patterns. Countries recognize both the importance of supporting this process through appropriate macro-economic incentives and regulatory frameworks and the need to design and enhance the efficiency of financial and productive development policies. In the absence of such policies, it would seem difficult to achieve the increases in productivity essential for improving linkages with the global economy and attaining high growth rates". [1]

From the Caribbean experience, author Winston Dookeran concludes that "the Caribbean countries face a multitude of uncertainties in the rapidly changing international trade regime. One thing that is certain is that action will be required on their part to ensure that their participation, although already limited, is not further jeopardized by such developments. This will require increasing levels of competition that cannot be achieved in the short term, and certainly not without some form of protection. Protection for Caribbean industry to date has not lived up to expectations, in large part due to the failure of Caribbean countries fully to utilize their potential benefits with the aim of achieving higher market shares and levels of efficiency. What is required is a change of attitude, already in evidence albeit in response to extreme external pressures and the threat of economic pitfalls. The preferential regime will continue to play a vital, complementary role in the transition period in order to achieve, in the longer term, higher levels of human development for the Caribbean society. Global trends are characterised by moves toward liberalization of trade through the reduction of tariff and nontariff barriers.

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[1] "Strengthening Development - The Interplay of Macro and Micro-Economics", CEPAL 1996

Competition, efficiency, and productivity have become the new watchwords. The Caribbean's underdeveloped productivity severely constrains participation in increasingly liberalized trade regimes. While Caribbean countries have realized that preferential treatment has not engendered a competitive production base, preferential agreements can play an important role *in the short term* in the attainment of desired levels of production. One of the disturbing aspects of the Caribbean's economic history is that these short-term measures have discouraged the developing of long-term strategic plans. Primary export commodities such as bananas, sugar, and rum, which have traditionally sustained many Caribbean economies, have survived well beyond their natural lifetimes through preferential treatment. New manufactures have also been protected by preferential treatment from the major trading partners. This has allowed Caribbean countries to enjoy a level of access to the international trading system that is not compatible with its levels of production, productivity, and international competitiveness".[2]

The Caribbean Region has been traditionally a net agricultural exporter. During the 1987-89 period the Region exported an average of US$5.6 billion of agricultural products and imported some US$3 billion annually, resulting in a net export surplus of US$2.6 billion. The Region's agricultural exports are highly concentrated, however, with one country, Cuba, accounting for over twothirds (68.5%) of agricultural exports in 1987-89. On the import side, Cuba accounted for a much smaller share, some 22% of the Region's aggregate agricultural imports. Following the virtual collapse of Cuba's traditional export market in the early 1990s, its agricultural exports declined drastically by over US$2 billion in 1991 compared to 1990. By 1993, Cuba's agricultural exports stood at only US$1.5 billion, a decline of over 70% compared to the 1990 level. The Region's aggregate agricultural exports followed the same trend, given the high share of Cuba in the total. Thus, by 1993 the Region's agricultural exports were less than half of the 1987-89 level, and the Region in fact turned into a net agricultural importer in that year of about US$0.5 billion.

In general terms according to preliminary FAO studies, the impact of the Uruguay Round Agreement on Agriculture on the Caribbean region points to both some positive and some negative effects. On the positive side there is an increase in the value of export earnings of the Region as a result of a strengthening of prices of the major agricultural commodities exported. However, at the same time, there could be erosion of preferential margins leading to a reduction in the value of preferences. Also, on the negative side the Caribbean's food import bill is seen to increase due to the projected rise in the price of basic food commodities. In the aggregate, the net agricultural trade balance for the Region as a whole is positive, although small in relative terms and not equally shared.

It is well known that the agricultural potential of the Region as a whole is limited. However, some countries are better endowed than others and could exploit their potential by taking advantage of opportunities that may be available, in view of the general strengthening of world market prices. It may be noted that such opportunities are not to be found only in products that are already exported by the Region but other agricultural products in raw

[2] "Prerefential Trade Agreements in the Caribbean: Issues and Approaches", by Winston Dookeran, IDB/CEPAL, 1995

or processed form. In particular, there has been some improvement in tariff escalation as a result of the commitments under the Uruguay Round, which may open opportunities for the Region that did not exist before.

In the Caribbean Region the countries most heavily dependent on food imports present little that they can do by themselves to offset the higher import bills as a result of higher food prices. The countries would require some compensation from international mechanisms, as envisaged by the relevant Decision of the Final Act. In addition, these countries will have to strengthen existing domestic mechanisms that would protect poor households in the event of excessive price increases in basic foodstuffs.

Other policy areas that may require some further attention are the need to develop policies that comply with the World Trade Organization (WTO) Agreement on Agriculture in respect of member countries of that organization. Others, non-members, may also actively consider the value of adopting similar policy packages. The reduction and possible elimination of non-trade barriers should also stimulate countries in the Caribbean region to examine the scope for strengthened intra-regional trade links in the future. Finally, because of the greater relevance in the future to national agriculture policy of the WTO disciplines, permanent international administrative machinery may need to be developed to handle the complex issues of compliance with the Agreement on0 Agriculture.

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ASSESSMENT OF THE IMPACT AND POLICY IMPLICATIONS OF TRADE LIBERALIZATION ON THE AGRICULTURAL SECTOR OF CARICOM COUNTRIES: PURPOSES AND EXPECTED OUTPUTS FROM THE ONGOING FAO PROJECT

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1. INTRODUCTION

The open nature of the Caribbean economies has caused them to be greatly affected by changes in the international economic environment. The oil shocks of the 1970s and the 1980s, together with changes in the preferential arrangements accorded these countries have led to adverse movements in their terms of trade and resulted in balance of payments and general economy wide problems. The efforts within CARICOM countries in the 1980s to adjust to these changes have been characterized by a variety of economic reforms, including programs promoting greater stabilization and increased privatization.

In the 1990s the completion of the Uruguay Round with new global trading rules for agriculture, and the formation of NAFTA are representative of further changes in the international economic environment with potential impacts on these countries. The general characterization of these changes indicates a movement toward greater trade liberalization. Within CARICOM there is particular concern regarding the effects on their agricultural sectors. As a result several studies have been commissioned both at a regional and national level to assess the impact and policy implications of this more liberalized trading environment.

This paper reports on one of these studies jointly being undertaken by FAO and IICA. The first section presents a brief statement on the background and approach to the project. The second section presents a description of CARICOM agriculture and international trade over the last decade. The third section presents issues affecting competitiveness in CARICOM agriculture at a regional level. The fourth section points to potential outcomes and policy issues.

2. BACKGROUND AND APPROACH TO THE PROJECT

The need for a study assisting CARICOM countries in the transformation of their agricultural sectors in response to the increasing globalization and trade liberalization policies that are shaping the international economic environment has long

been recognized. On the instructions of the Standing Committee of Ministers responsible for Agriculture of the Caribbean Community, the CARICOM Secretariat requested FAO assistance in completing one such study. Given the Memorandum of Understanding between FAO and the Inter-American Institute for Cooperation on Agriculture (IICA) they also suggested that FAO collaborate with IICA in jointly undertaking the study.

Under the FAO Technical Cooperation Programme, the project "Assessment of the Impact and Policy Implications of Trade Liberalization on the Agricultural Sector of CARICOM Countries" (TCP/RLA/5612) was approved. The project is focusing on CARICOM's agricultural trade and trading relations, particularly as they relate to exports, imports and food security. The countries participating in the project are Barbados, Belize, Grenada, Guyana, Jamaica, St. Lucia, Suriname, and Trinidad and Tobago.

The successful transformation of the agricultural sector will depend on how programmes and policies inside and outside the region affect the sector's capacity to compete in the changing international economic environment.

Within the region, countries are at different stages of implementation of reforms. Some of the benchmarks in the process are-.

1982- Jamaica, First Structural Adjustment Loan by the World Bank. In fact, the efforts at liberalization began with the first IMF Stabilization agreement in 1977, but the government did not implement the agreement. In the 1980's there were several IMF/WB projects promoting structural reform which included several measures related to deregulation and trade liberalization. These programs and the implementation of the Common External Tariff (CET) make Jamaica one of the most open economies in CARICOM.

1986 - Grenada introduced a program aimed at downsizing the public sector in an effort to reduce the fiscal deficit. This program was reinforced during 1991 to 1995 as a self imposed structural adjustment program. The main strategy was to promote the private sector as the engine of growth.

1988- Guyana, Economic Recovery Program (ERP). A number of measures included in this program had an impact on the agricultural sector. Among these were elimination of almost all price controls; establishment of a floating exchange rate and the cambio system; reduction and simplification of the structure of external tariffs with the introduction of CET; the elimination of most import licensing requirements; launching of a major privatization programme of public assets, including all rice mills; and the introduction of private sector management in the sugar industry.

1988- Trinidad and Tobago. The Structural Adjustment Programme included: restraint of public expenditure, tax reform, privatization of state enterprises and public rescheduling of debt repayment. Significant signs of trade liberalization appeared with the deregulation of the foreign exchange market in 1989. In 1994 the rice, flour and vegetable oil industries were deregulated.

1991- CARICOM launched the implementation of the Common External Tariff (CET). This was designed to liberalize intra- and extra -regional trade. It affected all countries, but at different rates of

implementation. Jamaica and Trinidad and Tobago have advanced the furthest with these reforms.

1992- Suriname. Implementation of a Structural Adjustment Programme. In 1995, positive economic impacts as well as social costs were realized. Programs intended as safety nets were introduced to address the negative social implications. In 1996, Suriname became a member of CARICOM and started to implement the CET.

1992- Barbados. Implemented a two-year stabilization programme with a focus on the reduction of the public deficit and further liberalization in trade policy.

The commitment in 1992 to establish a CARICOM Single Market and Economy is of considerable significance. Among the essential features of the proposed Single Market and Economy are: free movement of goods, free movement of services, free movement of persons, free movement of capital, right of establishment, a common external trade and economic policy. Of specific importance is the implementation of the CET in relation to agricultural products. These regional changes are significant and can complement changes taking place at the national level to promote an improved investment climate to assist the successful transformation of the sector.

Outside of CARICOM the main changes relevant pertain to trading agreements. Those that are of special importance are the ACP/LOME, GATT/WTO Uruguay Round arrangements, the North American Free Trade Area (NAFTA), the Caribbean Basin Economic Recovery Act (CBERA).

The most obvious of these trading blocs is Europe. The European Union (EU) already a customs union created an economic entity with unified, coordinated policies. The EU will function much as a single federal state. Eastern European countries are joining the association and will open new trade opportunities. However, some current opportunities in Europe are under threat. This is of special importance to ACP-Caribbean countries.

ACP/Lome Convention is an agreement to annually buy selected commodities at a price negotiated between the ACP countries and the EU. The Fourth Lome Convention was signed in 1990 and expires in the year 2000. The major concern of CARICOM countries is what will the next Lome agreement look like and will the non-reciprocal free access for certain quantities of goods to the EU market remain. Specifically, how will changes in the sugar protocol affect Guyana, Belize, Barbados, Jamaica and Trinidad & Tobago. The banana arrangements are already under serious question in the EU since the creation of (WT0) and its clearer set of rules governing global trade.

The completion of the GATT/WTO Uruguay Round of Multilateral Trade Negotiations implies major changes in the global economic environment. Trade liberalization will be enhanced and commercial barriers will decline, giving way to more competitive world markets. The impacts of the Uruguay Round on CARICOM countries will in the final analysis be determined by how world markets are affected (their size, stability and prices) and by the policy and programme changes within the region and individual countries.

The North American Free Trade Area (NAFTA) is of special importance to

CARICOM countries. It aims at eliminating tariffs and other trade barriers between Canada, the USA and Mexico over a fifteen-year period. There is concern that CARICOM countries will be negatively affected by trade diversion through the substitution of imports from the Caribbean with imports from NAFTA members. Agricultural exports are directly affected since the competitive position acquired by CARICOM as a result of preferences granted by the USA and Canada are being eroded by the agreement. The most important agreement between the USA and CARICOM in this regard is the Caribbean Basin Initiative (CBI), enacted in 1984, which gave Caribbean countries duty free access to the USA market for a number of commodities. CARICOM has had a long standing agreement with the USA on sugar exports but this was eroded greatly in the mid 1980's. The basic Caribbean quotas have declined from a total of 121,944 million tons in 1984/1988 to 57,803 million tons in 1995/1996. The USA has also played a pivotal role in the banana issue in Europe. It has influenced certain Latin American banana exporting countries to join Mexico and the US in seeking action in the WTO against the EU Banana Regime. The US has been supplementing this pressure on the EU under its own national Section 301 Trade Law.

All the changes in the international trading framework referred to above pose potential threats and at the same time present new situations and opportunities to CARICOM countries. The final outcome will depend on their ability to introduce policy and programme reforms that result in increasing their competitiveness in world and domestic markets. Many CARICOM countries are reforming their macroeconomic and sectoral policies aimed at increasing agricultural productivity, efficiency, productive capacity and competitiveness.

The project is designed to assist the CARICOM Secretariat and its member countries in their response to this changing international economic environment. The following tasks reflect the main objectives of the project:

a) to assess the impact of trade liberalization arrangements on the agricultural and agri-food industrial sector;

b) to analyse the impact of current and anticipated trade liberalization processes on food security in general and on vulnerable groups in particular;

c) to analyse the present and future evolution of external markets for CARICOM agricultural commodities and the prospects for increasing exports in those markets;

d) to estimate the international competitiveness of major agricultural commodities and evaluate the effects of trade liberalization on factors affecting competitiveness-,

e) to identify main constraints to increased efficiency and competitiveness of selected agricultural commodities;

f) to identify policy responses that are necessary to improving the productivity and competitive position of the region's agricultural and agri-food sector in the changing international economic environment;

g) to enable the agricultural sector to participate more effectively within the Single Market and Economy of CARICOM;

h) to make recommendations aimed at improving trading arrangements which will increase the competitive capacity of agricultural and agri-food sector producers in the region;

i) to strengthen the agricultural policy support capacity within the CARICOM region to address ongoing changes in the international economic environment that affect the agricultural sector.

The following main activities were carried out at a national and regional level:

i) Production and Trade Performance including: A review and analysis of the agricultural, food and agro-industrial sectors. This included an assessment of the agricultural and food strategies and policies with specific reference to changes undertaken over the period; the major agricultural sector projects implemented over the period, paying particular attention to the obstacles and constraints to success; also, the sectoral trade performance, for at most the twenty five major exports and imports.

ii) Agricultural Institutional Setting including: A review of the structure of wages, including wage legislation and labor force statistics with clear indications of the demographic profile of the labor force; a review of changes in monetary policy, fiscal policy where relevant, credit policy, export enhancement policies and agricultural diversification policies/programs; a review of the agricultural institutions and other institutions that have linkages to the agricultural sector; an assessment of the existence and adequacy of infrastructure facilities, production, marketing and other support services.

iii) Trade Policy analysis included a review of the country's trade policy regime (including the CET) with specific reference to changes in the structure of tariffs and non-quantitative restrictions since 1985. The review identified export taxes, duties, and trade taxes such as stamp duties, customs service charges, and landing fees imposed at the border. A description of the trading arrangements to which the country is a party (ACP/LOME, CBI, CARICOM/Venezuela, CARICOM/Colombia, CARIBCAN, WTO/ GATT and in addition any other bilateral or multilateral arrangements) was completed.

iv) Cost of Production and Price analysis included: presentation of details on cost of production information for the major export and import competing commodities. Current agricultural input and output prices at the producer, processor, import, export and consumer retail levels for the major domestically produced commodities and imports (not exceeding 20 commodities) were analysed. The detailed cost, frequency and cargo capacity of land, air and sea transport distinguishing between refrigerated and non-refrigerated carriers was compared. A review of economic incentives (fiscal, credit, research and development, exports, imports, etc.) accorded to the agricultural food sector was evaluated. These incentives were compared with similar measures accorded to the manufacturing and tourism sector.

v) An analysis of **linkages** included a description of the existing relationships between the tourism and agricultural sector,

and between international trade and natural resource use.

The study is expected to be completed shortly.

3. CARICOM AGRICULTURE AND INTERNATIONAL TRADE

3.1 Agriculture in Total CARICOM Trade

CARICOM's total trade situation has changed minimally over the past fifteen years in terms of the countries that dominate trade in the region, the commodities that dominate the trade picture, and in terms of countries with which the region has traded. The data indicates that in terms of total trade Trinidad and Tobago, Jamaica, Suriname and Guyana are the top four exporters, while Jamaica, Bahamas, Trinidad and Tobago and Barbados are the top four importers. In each case the export dominance is influenced by the presence of a mineral export sector, oil for Trinidad and Tobago, bauxite for Jamaica, Suriname and Guyana. These four countries account for greater than seventy five percent of CARICOM's exports. The countries that dominate the import trade are also the most populated, accounting for sixty-eight percent of the population. In the case of The Bahamas and Barbados the level of food imports also reflects the vibrant tourist trade. In the case of Jamaica and Trinidad and Tobago the agro-industrial sector is a significant importer of agricultural raw materials. This has been increasing in Trinidad and Tobago with a surge in re-exports of agricultural goods.

Four locations characterize the destination of CARICOM's exports. In order of importance they are the USA, EU, within CARICOM itself and Canada. **Table 1** shows exports from CARICOM as a whole by destination over the period 1985 to 1995. This pattern and order of magnitude has been constant over the last ten years, with trade to Canada showing the greatest rate of growth. Within the EU, the historical relationship with the United Kingdom still makes it the dominant trading partner.

Trade between the USA and CARICOM is far larger than CARICOM's trade with the EU, Canada or intra-CARICOM combined. **Table 2** presents the information on the total exports by destination and shares for selected CARICOM countries for 1995. This result reflects the dominance of Trinidad and Tobago and Jamaica in CARICOM trade. When the trade between these two countries and the US market is observed, it overshadows even their dominance of CARICOM exports in general, in 1995 the former being 83 percent, and the latter 64 percent. CARICOM's total exports to Canada while of a much smaller magnitude is similarly dominated by two countries, Jamaica and Guyana accounting for 88 percent of the exports. The EU market remains generally the most important in terms of the number of CARICOM countries exporting most of their products to the EU market.

On the import side the sources of imports are dominated by the same countries and regions. However, over the last decade imports from the EU have shown considerable growth, particularly in the 1990 to 1995 period. **Tables 3** and **4** show CARICOM's imports by origin and trade balance. The balance of trade with the USA and EU has declined for CARICOM over the period. From 1986 this balance of trade (with EU and USA) turned negative and

became increasingly so; Canada remained a net importer of CARICOM goods.

Trade with Latin America has been increasing with CARICOM posting its first positive trade balance over the period in 1995. Japan is also an important CARICOM trading partner; but with a rapidly increasing deficit in the 1990's. Most of the region's trade deficit with Japan is derived from Japan's exports to the Bahamas and to a lesser extent to Barbados. Trade with other countries shows no particular regional patterns for CARICOM as a whole, although individual countries have been increasing trade with a more diverse group of countries.

3.2 CARICOM Agricultural Trade

The two most populous and agro-industrially developed countries in the region, Jamaica and Trinidad and Tobago, dominate CARICOM's agricultural trade. **Table 5** provides an overview of agricultural trade in the region. Jamaica with its diverse agricultural sector and vibrant agro-industrial sector is both the leading agricultural exporter and importer. Guyana, with its sugar and rice exports is the second most important exporter. The Bahamas with its high per capita income, significant tourist trade, and small agricultural sector, is the third most important importer of agricultural products in the region. Barbados, for similar reasons, is also one of the most important importers of agricultural products. Trinidad and Tobago features as both an important importer and exporter because of its relatively large population and high income within the region and also more recently because of its increasing agro-industrial exports.

CARICOM's agricultural export sector expanded significantly over the last decade. **Tables 6a, 6b,** and **6c** show the agricultural exports and growth rates for each country in the region. Agricultural sector growth in Guyana of 11.5 percent between 1990-95, after six years of declines in the 1980's, was most impressive. Trinidad and Tobago's agricultural sector continued to expand, at 11.6 percent, down from the 15.8 percent of the 1985 to 1990 period. With the exception of four countries (Barbados, Grenada, St. Kitts-Nevis, and Suriname) all the countries were exporting more agricultural product value in 1995 than they were in 1980. Grenada's agricultural sector exports decline of 7.5 percent over the 1990-95 period is cause of particular note.

The growth rate in agricultural product imports was less than for agricultural exports and reflects the difficult economic situation faced by several of the countries during this period of this analysisInfluencing this outcome heavily was Jamaica's imports, which actually declined over the 1990 to 1995 period, and Trinidad and Tobago's imports which declined over the 1985 to 1990 period. **Tables 7a, 7b,** and **7c** show the agricultural imports and their growth rates for each country in the region. With the exception of Jamaica and Trinidad in these two periods, in all the other countries of CARICOM agricultural imports increased over the decade.

As a result of the expansion in agricultural exports, the agricultural trade balance for CARICOM as a whole declined over the period. The main countries accounting for this were Guyana, Belize, Jamaica and St. Vincent that had positive agricultural trade balances. Trinidad and Tobago also contributed with a significant decline its negative agricultural trade balance, from

US$265 mn. to US$78 mn. **Table 8** shows the agricultural trade balances for the countries over the last fifteen years. The significant expansion of agricultural product exports from Trinidad and Tobago since 1988 and the recovery of the agricultural sector in Guyana and Suriname over the 1990-1995 period were also important factors in the in the greatly improved agricultural trade balance. From an individual commodity standpoint, sugar and banana exports continued to define the region. Guyana, Jamaica and Belize remained the main sugar exporters, with Jamaica actually exporting more sugar than Guyana in 3 years over the decade as Guyana's production declined throughout the 1980's. St. Lucia, Dominica, and St. Vincent were the main banana exporters, but the resurgence of the banana industry since 1988 in Jamaica placed it into the category of a leading exporter of bananas from the region. Belize and Jamaica were the major citrus product producers, although several other countries exported citrus including the Bahamas from 1987. Cocoa exports were the most sluggish with no country showing an increasing trend. This commodity, however, is one with particular promise in the new trade liberalized era. Guyana's rice industry showed a remarkable recovery between 1991 and 1995.

4 CONSTRAINTS TO INCREASING EFFICIENCY OF THE AGRICULTURAL SECTOR: REGIONAL LEVEL

4.1 Determinants of Efficiency and Competitiveness

The purpose for reducing distortions in the trading environment is generally to enable a country to become more efficient in its production and marketing activities. The opportunities for greater levels of efficiency and competitiveness arising from a more liberalized trading environment are both in the domestic and international market, and on the production and marketing side. The exploitation of economies of scale under current production systems is often an important aspect of this but so are product differentiation activities that target products to smaller and more selective markets. The critical factor in realizing these opportunities is the creation of an investment climate that encourages and enables entrepreneurs to produce goods and provide services.

In the post independence period the national and agricultural policy and development strategies of many CARICOM countries have been directed toward the creation of such an investment climate. The hope was that government policy actions would lead to, among other things, increased use of improved agricultural technologies, increased agricultural sector diversification, increased scales of production, increased agroindustrial development, and in some countries increased foreign investment. It was intended that this would happen at both a national and regional level, and involve both the private and public sector. At the individual country level there are many examples: Caroni Ltd. in Trinidad and Tobago and the Livestock Development Company in Guyana. At the regional multi-country collaboration level, CARICOM Food Corporation and CARICOM Corn-Soya project both involved several countries (Barbados, Trinidad and Guyana) and had public and private sector participation. There were also many ventures that were also purely public or purely private.

The general state of agriculture in the region in the first half of the 1980's suggested that the post independence efforts were not widely successful and that agricultural transformation was needed more than ever. At this time, however, the national and international economic environment facing Caribbean agriculture was changing. Internal conditions that protected domestic agricultural markets with import restrictions and supported domestic agricultural production with subsidies were being challenged. External arrangements that allowed virtually unlimited access of export produce into foreign markets were now uncertain. In the face of these changes a CARICOM agriculture that did not become increasingly efficient and diversified by the early 1980's was now under increasing pressure to do so. Despite the efforts of the 1980's this is still very much the situation today.

Numerous micro level project reports, national level agricultural sector assessments, and international organization studies, both within individual countries and across the region, have attempted to address the issues that have prevented the successful transformation of CARICOM agriculture in the periods identified above. Many of these issues resurfaced at a regional, national and commodity level during this study. However, the discussions were very different, because the context and expectations, and hence the options, were also different. Concepts of globalization, privatization, liberalization, integration, competitiveness, public/private sector partnerships, entreprenurship and rural transformation were much more integral to the discussions than ever before. It was recognized that these concepts had to be factored in to the approach that addressed all the seemingly binding constraints that continued to prevent the agricultural sector from developing. In a sense, the most fundamental change was from an approach characterized by external forces transforming the agricultural sector to the agricultural sector transforming itself. This is an important paradigm shift that is taking hold in the CARICOM region, changing the dynamics within and between the different actors, organizations, and institutions affecting agricultural development, implying very different approaches to addressing the agricultural sector constraints.

The determinants of efficiency and competitiveness of the agricultural sector are often generally classified as follows:

(i) *Endowments:* natural resources and infrastructure. This includes the amount and quality of land and water resources and access to these resources. Land availability and capability, and the nature of the tenure and land access system are particularly critical here. The drainage and irrigation systems, roads and transportation systems, energy supply and communication links are important dimensions of the infrastructure.

(ii) *Institutions:* research, education, policy development and general programming capacity at the local, national, regional and international levels. The public institutional support framework and its capacity to collaborate with and respond to the needs of the private sector is important in this regard. Human resources in each country and those available throughout the region and the systems and opportunities for their efficient and effective use is a

key determinant of the institutional and organizational strength.

(iii) *Policy Environment:* national macroeconomic management (fiscal incentives and management, monetary policies) sectoral policy and differences between sectors; political stability and policy consistency and continuity; social policy and industrial/labor relations; international agreements and global economic outlook; all combine to create the investment climate.

(iv) *Production, Marketing, and Support Service Frameworks:* commodity specific issues are addressed here from an entrepreneurial standpoint. Product characteristics are determined within a resource endowment and from a market demand perspective. Product differentiation, promotion and distribution capacity and innovativeness are the key elements in this area. Support services include financial and information systems.

The remainder of this paper outlines the constraints affecting the determinants of efficiency and competitiveness of the agricultural sector at the regional level.

4.2 Intra-Regional Level Constraints

A summary of constraints at the regional level is presented in two different contexts in this and the next section. Firstly, constraints at the intra-regional level. These constraints point directly to weaknesses for which collaboration in resolving at a CARICOM level is most logical and generally recognized. Examples of this would be constraints associated with research and the Caribbean Agricultural Research and Development Institute (CARDI), or with marketing and the Caribbean Food Corporation (CFC) or its subsidiary, the Caribbean Agricultural Trading Company (CATCO). Where regional institutions are identified when introducing constraints to agricultural transformation it is not intended to place the responsibility for the continuing nature of the constraint within the particular institution but rather at the regional level as a whole. Secondly, constraints that are common across the region where countries can certainly benefit from the lessons within other countries but where explicit regional collaboration may be neither necessarily logical nor needed. The constraints in this second regional context are addressed in terms of sectoral and commodity constraints across the region.

Caribbean agricultural sectors did not escape the "lost decade" of the 1980's that characterized developing countries across the globe. In these countries the agricultural sector suffered as the wider economy experienced imbalances in the internal (fiscal deficits) and external accounts (foreign exchange reserves). The negative impact on the agricultural sector was increased by the accompanying high rates of inflation and interest. The efficiency and effectiveness of agricultural sector institutions declined, rural infrastructure deteriorated, and agricultural policy making and programming capacity was weakened. The impact on the agricultural sector, on top of direct sectoral impacts such as declining commodity prices, resulted from the ensuing tighter macroeconomic, especially fiscal policies. These impacts resulted from measures that downsized the public agricultural sector support systems generally, and specifically from changes such as a reduction in input

subsidies and services, and a dismantling of agricultural marketing parastatals. As a result, the current efforts to increase productivity and competitiveness of the agricultural sector in CARICOM countries is starting with less capacity than it had in the mid 1970's. Many of the constraints that were identified in the earlier periods remain and many new constraints have been recognized. Those constraints that could be conceived within a regional context and that are perhaps best addressed at the CARICOM level are outlined here.

4.2.1 Agricultural Research, Technology Development and Transfer

Long run competitiveness of CARICOM agriculture will be determined mainly by increases in productivity. Investment in research and development is well recognized as a major determinant of increased productivity. The regional research system needs to be strengthened to better serve the agricultural sector in each of the member countries. There is a tremendous overlap in terms of crop and livestock activities and much can be gained in terms of reducing costs and increasing benefits if the agricultural research activities are approached from a regional perspective. The main institution delivering research services at the regional level is the Caribbean Agricultural Research and Development Institute (CARDI). The strengthening of CARDI and increased and improved collaboration with institutions such as FAO, IICA, and UWI is essential. The constraints identified below are both a cause and result of a weak regional research system. To strengthen the regional agricultural research system to contribute to the increases in productivity needed for the transformation of the agricultural sector, the following constraints need to be addressed:

- a lack of financial support
- inefficient and ineffective utilization of the funds available
- inadequate systems for research focus identification
- research agendas not reflecting regional needs
- research bias toward traditional crops
- research agendas defined too narrowly in terms of individual crops
- research agendas defined too broadly in terms of number of crops
- weak research units at the national level
- limited technical research capacity at the national level
- limited linkages between research focus and market requirements
- limited linkages between research institutions and other critical agricultural support service and community organizations
- lack of public/private sector research implementation activities
- limited public/private sector funded research activities.

There are numerous reasons why these regional research constraints need to be addressed urgently. Among the most important is that the current systems are under threat and all the economies of scale and collaboration that the region can realize from the regional governments and private sectors collaborating together may be lost if the usefulness of a regional research system is not soon visible. The questioning of the regional research system is not about the need for a regional approach, mainly the need to have a regional approach that works for the member countries.

4.2.2 Regional Marketing and Market Information

CARICOM trade is highly concentrated with respect to both commodities and markets. The efforts to diversify both commodities traded and their markets have been limited by both supply and demand side constraints. Many of these constraints if addressed from a regional perspective have a much greater chance of realizing the benefits individual states expect and simultaneously reducing the costs to each state. The marketing of high quality, high value products in carefully identified and targeted markets is probably going to be one of the most critical factors in the successful transformation of CARICOM agriculture. Strengthening the Region's agricultural marketing systems, intelligence and infrastructure is therefore a critical component to increasing the competitiveness of the Region's agricultural products. The major constraints affecting marketing at a regional level are as follows:

I. Lack of a comprehensive regional market research system

- that continuously analyses market opportunities for CARICOM products
- that develops market information to guide production end decisions
- that links effectively with the product research and development frameworks

II. Lack of a market promotion and development system for CARICOM products

- that develops the Caribbean ancestry market living outside the Caribbean
- that develops the "exotic" dimension of CARICOM products in both niche and mass markets (possibly based on natural resource or culture characteristics)
- that develops access to the domestic and regional market in CARICOM so that a larger share of the demand in these markets is met by local and regional suppliers

III Lack of marketing infrastructure that facilitates the joint physical marketing of CARICOM commodities

- that serves as a wholesale market or clearing house for agricultural products that originate from several points across CARICOM
- that facilitates the marketing of agricultural produce by managing the risk collectively. This arises in several areas such as transit losses, phytosanitary rejection, non-payment for products
- that promotes availability of distribution facilities and transportation services, ground, air and water, that assist the penetration of markets.

The CARICOM Export Development Agency (CEDA) has a mandate to undertake export market research, intelligence and development activities. Thus there is a start to addressing some aspects of the constraint identified above as the need for a comprehensive regional agricultural market research system. However, this institution focuses mainly on trading agreements and does not address any of the three areas listed under this specific constraint in an adequate manner. Over the longer run the assembling and bulking of agricultural produce should be more a private sector responsibility but given the current underdeveloped marketing systems regionally a public/private sector collaboration will most likely be needed over the short run. The Export Credit Insurance

The production system remains very traditional for both export and food crops. Access to improved inputs have been limited by import restrictions and government monopolies. The marketing capacity in the individual countries is very weak. Generally, it exists for the traditional crops and has been associated with commodity boards. While this is fairly well organized it lacks dynamism partly because the markets for the products have been guaranteed under preferential market conditions. Thus, expertise and experience in product differentiation and product promotion is limited. This deficit affects the potential of developing the nontraditional product sub-sector which is even more highly dependent on effective marketing for its success given the level of competition characterizing its product markets. Marketing extension services, which include market intelligence information, regional and international grades and standards, and assistance to access national and regional agricultural marketing infrastructure facilities and services are crucial in addressing this constraint.

An important change in the investment climate has been the liberalization of financial markets in several CARICOM member states. Private sector investment, both foreign and domestic, has increased significantly in the 1990's in several member countries, most notably, Jamaica, Trinidad and Tobago, Guyana and St. Lucia. At the same time however, access to capital within member countries, particularly for small and medium sized agricultural enterprises, has not improved. This is a familiar constraint that is long associated with the inability to meet collateral requirements on the part of the rural sector, and relative disinterest by financial institutions in small and medium sized agricultural enterprises. With privatization and liberalization these old constraints have been exacerbated by the increasing cost of credit.

Across the region several countries produce similar crops with common constraints to increasing their competitiveness. Jamaica, Guyana and St. Lucia are the countries that dominate the export production of specific crops, citrus and cocoa in the case of Jamaica, sugar and rice in the case of Guyana, and bananas for St. Lucia. With the exception of cocoa over the last half of the 1990's, which declined in all of the exporting countries, the export trends have been highly variable. For example, while banana exports declined in Grenada and St. Vincent in the 1990's, they expanded in Jamaica and Belize; while sugar exports declined slightly in Barbados, they increased similarly in Trinidad and Tobago. In general, the determinants of export levels appeared to be more production than market related, as agricultural exports followed country conditions more than their potentially changing market prospects. While undoubtedly the prospects for increased production depend on future marketing arrangements, this past supply side influence is an argument for continued focus on both the constraints in the general economy as well as on constraints facing particular crops. **Table 10** presents some of these constraints and suggested responses as they relate to CARICOM agricultural commodities.

5. CONCLUSIONS

This project is still in progress. The agricultural production and trade situation, and challenges to increased competitiveness have been characterized from a regional standpoint. The outcomes of the analysis and

recommendations will be presented to the CARICOM Secretariat in the final report.

A limited number of commodities and a few countries dominate trade in CARICOM. The export destinations and import sources that characterize this trade comprise even fewer countries than CARICOM. Despite the threats to CARICOM access to EU markets, EU is growing as a destination for CARICOM's exports. Imports from the EU and USA are increasing, as is the negative trade balance with these two trading partners. CARICOM agricultural trade increased significantly over the past decade, average agricultural export growth rates for the region being positive in both of the last five-year periods. In contrast to the total trade balance, the agricultural sector trade balance has been declining, becoming increasingly less negative. There is a sense in which it is true to say that the agricultural sector has enabled the CARICOM region to do a lot better economically than it would have otherwise. Unfortunately, most governments do not recognize this.

Agricultural trade will continue to be critical to the economic welfare of the region. The changed international economic environment emphasizes globalization, privatization, liberalization, integration, competitiveness, public/private sector partnerships, entrepreneurship and rural transformation, more than ever before. The sector will have to adapt to changing its production structure, to increasing the efficiency of its production processes, and to operating under conditions of increased competition. Product differentiation activities will be of greater significance in this situation, therefore measures emphasizing product development and marketing should be more reflected in policies at the sectoral, national and regional levels.

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TABLES

Table 1: CARICOM Total Exports by Destination, 1985 – 1995 ($US million)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total	6636	3710	3892	4013	6728	5495	5405	5696	5430	5591	6593
EU	965	854	923	4028	1021	1414	1417	1409	1336	1300	1646
US	2621	1904	1961	2019	2191	2473	2334	2520	2329	2540	2546
Canada	189	197	194	209	267	283	276	284	353	411	351
CARICOM	409	235	277	285	442	434	413	416	472	182	217
Other	2452	520	537	472	2777	891	965	1067	940	1158	1833

Source: IMF Directions of Trade Statistics
Notes: CARICOM trade does not include Antigua and Barbuda, Montserrat, St. Kitts-Nevis and St. Lucia

Table 2: CARICOM Exports and Shares by Country and Destination, 1995 ($US million)

	EU	US	Canada
Barbados	42	52	14
Belize	83	56	9
Guyana	178	129	138
Jamaica	435	895	151
St. Lucia	72	36	1
Suriname	171	105	0
Trinidad and Tobago	249	1054	15
TOTAL	**1230**	**2327**	**328**

Source: IMF; exports (f.o.b.)

Table 3: CARICOM Total Imports by Origin, 1985 – 1995 (US$ million)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
TOTAL	7551	6378	6276	7012	8618	8092	8489	8650	10547	8557	9692
EU	967	1213	1065	1142	1139	1483	2018	1733	2744	2133	2406
US	2053	2087	2319	2496	3163	2991	2999	2891	3185	3087	3733
Canada	169	176	198	268	267	235	222	167	169	172	201
CARICOM	389	256	281	319	417	446	456	448	620	299	244
Other	3973	2646	2413	2787	3632	2937	2794	3411	3829	2866	3108

Source: IMF Directions of Trade Statistics 1996

Notes: CARICOM trade does not include Antigua and Barbuda, Montserrat, St. Kitts-Nevis and St. Lucia
Trinidad and Tobago exports and imports with CARICOM countries are not included for 1994 and 1995 (to be included for final report)

Table 4: CARICOM Trade Balance by Region, 1985 – 1995 (US$ million)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
TOTAL	-915	-2668	-2384	-2999	-1890	-2597	-3084	-2954	-5117	-2996	-3099
EU	-2	-359	-142	-114	-88	-69	-601	-324	-1408	-833	-760
US	20	21	-4	-59	0	48	54	117	184	239	150
LAC[1]	-890	-270	-233	-247	-427	-483	-385	-248	-492	-53	124
Japan	-254	-311	-88	-365	-414	-610	-651	-597	-750	-729	-314
Other	-357	-1566	-1559	-1737	11	-965	-836	-1531	-1795	-1043	-1112

[1] Latin American and non-CARICOM Caribbean countries

Table 5: CARICOM Agricultural Trade and Shares by Country, 1985 – 1995 (US$ million)

Years	Exports	Imports	Trade Balance	Top 3 Exporters (in order)	Top 3 Importers (in order)
1985	565	1008	-444	Jamaica, Guyana, Suriname	Trinidad and Tobago, Bahamas, Jamaica
1986	660	980	-320	Jamaica, Guyana, St. Lucia	Trinidad and Tobago, Bahamas, Jamaica
1987	723	1038	-315	Jamaica, Guyana, Belize	Trinidad and Tobago, Bahamas, Jamaica
1988	812	1058	-246	Jamaica, Guyana, St. Lucia	Jamaica, Trinidad and Tobago, Bahamas
1989	775	1194	-419	Jamaica, Guyana, Trinidad and Tobago	Jamaica, Trinidad and Tobago, Bahamas
1990	880	1167	-287	Jamaica, Trinidad and Tobago, Guyana	Jamaica, Trinidad and Tobago, Bahamas
1991	874	1188	-314	Jamaica, Guyana, Trinidad and Tobago	Trinidad and Tobago, Jamaica, Bahamas
1992	959	1181	-222	Jamaica, Guyana, Trinidad and Tobago	Jamaica, Trinidad and Tobago, Bahamas
1993	922	1182	-260	Jamaica, Guyana, Trinidad and Tobago	Jamaica, Trinidad and Tobago, Bahamas
1994	941	1172	-231	Jamaica, Guyana, Trinidad and Tobago	Jamaica, Trinidad and Tobago, Bahamas
1995	1102	1266	-165	Jamaica, Guyana, Trinidad and Tobago	Jamaica, Trinidad and Tobago, Bahamas

Source: FAO

Table 6a: CARICOM Agricultural Exports (US$ 000)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	199	1991	1992	1993	1994	1995
Antigua & Barbuda	694	1023	622	527	428	435	1060	1365	2267	1967	1467	1400	1410	1410		
Bahamas	10674	16351	23317	15074	21412	19226	12717	17745	27453	24708	37474	38563	29891	39179	39541	39328
Barbados	72402	45212	49043	36890	46109	39959	43042	47346	50155	43954	58018	51274	61159	52184	50737	68955
Belize	67812	54048	50674	48994	53169	48536	56251	66436	75271	80459	90480	71081	92127	84097	87703	113171
Dominica	4260	10595	13128	15791	15736	16891	29280	34913	41750	28873	35852	36987	36750	31888	26655	22824
Grenada	15545	15716	13119	12549	12057	15455	19488	28718	26035	21516	17898	15465	12015	11967	11395	12836
Guyana	168923	163283	115298	91536	99409	87356	106060	120952	94411	114048	107045	127139	175795	162817	182990	206531
Jamaica	131525	127608	133679	167469	139386	136846	158957	186412	208813	176889	224851	249340	238442	252031	248447	281823
Montserrat	0	67	8	10	8	59	18	19	32	24	19	19	19	19		
St. Kitts-Nevis	15194	15927	12801	12327	13017	8967	13243	15060	13846	13554	10922	11557	15238	12688	11588	13288
St. Lucia	19296	24246	24903	26865	30638	34748	61997	53918	79408	71768	85662	70881	80238	66960	55692	64227
St. Vincent & the Grenadines	13338	20022	22347	26802	38857	52194	53341	38311	61220	52947	60422	53180	62801	42071	37566	43927
Suriname	51568	46443	49420	47566	45910	58469	46686	48981	52627	43191	37814	32813	40000	40383	44678	44897
Trinidad & Tobago	80715	73135	62491	53753	47864	45462	58384	63251	79226	100493	111598	114638	113115	124394	144373	189386
TOTAL	651946	613676	570850	556153	564000	564603	660524	723427	812514	774391	879522	874337	959000	922088	941365	1101193

Source: FAO

Table 6b: Agricultural Export Growth Rates (Value)

	81/80	82/81	83/82	84/83	85/84	86/85	87/86	88/87	89/88	90/89	91/90	92/91	93/92	94/93	95/94
Antigua & Barbuda	47.41	-39.20	-15.27	-18.79	1.64	143.68	28.77	66.08	-13.23	-25.42	-4.57	0.71	0.00		
Bahamas	53.19	42.60	-35.35	-42.05	-10.21	-33.86	39.54	54.71	-10.00	51.67	2.91	-22.49	31.07	0.92	-0.54
Barbados	-37.55	8.47	-24.78	24.99	-13.34	7.72	10.00	5.93	-12.36	32.00	-11.62	19.28	-14.67	-2.77	35.91
Belize	-20.30	-6.24	-3.32	8.52	-8.71	-15.90	18.11	13.30	6.89	12.45	-21.44	29.61	-8.72	4.29	29.04
Dominica	148.71	23.91	20.28	-.-0.35	7.34	73.35	19.24	19.58	-30.84	24.17	3.17	-0.64	-13.23	-16.41	-14.37
Grenada	1.10	-16.52	-4.34	-3.92	28.18	26.10	47.36	-9.34	-17.36	-16.82	-13.59	-22.31	-0.40	-4.78	12.65
Guyana	-3.34	-29.39	-20.61	8.60	-12.12	21.41	14.04	-21.94	20.80	-6.14	18.77	38.27	-7.38	12.39	12.86
Jamaica	-2.98	4.76	25.28	-16.77	-1.82	16.16	17.27	12.02	-15.29	27.11	10.89	-4.37	5.70	-1.42	13.43
Montserrat		-88.06	25.00	-20.00	637.50	-69.49	5.56	68.42	-25.00	-20.83	0.00	0.00	0.00		
St. Kitts-Nevis	4.82	-19.63	-3.70	5.60	-31.11	47.69	13.72	-8.06	-2.11	-19.42	5.81	31.85	-16.73	-8.67	14.67
St. Lucia	25.65	2.71	7.88	14.04	13.41	78.42	-13.03	47.28	-9.62	19.36	-17.26	13.20	-16.55	-16.83	15.33
St. Vincent & the Grenadines	50.11	11.61	19.94	44.98	34.32	2.20	-28.18	59.80	-13.51	14.12	-11.99	18.09	-33.01	-10.71	16.93
Suriname	-9.94	6.41	-3.75	-3.48	27.36	-20.15	4.92	7.44	-17.93	-12.45	-13.23	21.90	0.96	10.64	0.49
Trinidad & Tobago	-9.39	-14.55	-13.98	-10.96	-5.02	28.42	8.34	25.26	26.84	11.05	2.72	-1.33	9.97	16.06	31.18
AVERAGE	19.04	-8.08	-1.91	5.32	47.67	24.11	13.26	24.32	-8.05	6.49	-3.53	8.70	-4.50	1.44	13.96

Table 6c: Agricultural Export growth Rates, Selected CARICOM Countries, 1985 – 1990, 1990 – 1995

	1985-1990	1990-1995
Barbados	5.0	9.7
Belize	9.7	7.5
Grenada	9.7	-7.5
Guyana	2.7	11.5
Jamaica	9.2	8.6
St. Lucia	22.6	-0.5
Suriname	-1.8	1.4
Trinidad and Tobago	15.8	11.6
AVERAGE	9.1	5.3

Table 7a: CARICOM Agricultural Imports (US$ millions)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	199	1991	1992	1993	1994	1995
Antigua & Barbuda	21	24	23	24	28	24	25	27	32	35	37	36	35	34	34	33
Bahamas	151	108	180	158	178	184	194	210	212	219	214	229	201	213	218	207
Barbados	90	99	91	88	93	87	94	95	119	119	116	119	106	109	121	134
Belize	36	40	33	26	31	34	32	35	51	51	49	29	57	49	48	49
Dominica	13	15	13	13	15	14	15	17	22	22	27	27	26	24	25	28
Grenada	16	16	17	13	16	20	17	24	27	29	29	29	27	32	30	35
Guyana	52	55	30	25	20	18	20	24	34	37	38	37	46	55	42	54
Jamaica	225	252	234	239	211	178	176	206	292	248	253	248	254	276	261	268
Montserrat	3	3	3	3	4	3	4	5	4	7	7	8	7	8	7	7
St. Kitts-Nevis	8	104	10	12	11	12	14	15	17	19	20	19	18	19	19	18
St. Lucia	23	29	27	27	28	31	35	42	55	64	55	64	69	69	70	73
St. Vincent & the Grenadines	19	19	22	20	22	21	19	20	27	28	28	28	29	30	29	29
Suriname	50	56	52	51	45	38	39	33	43	52	52	56	59	49	53	64
Trinidad & Tobago	346	391	429	438	415	343	295	285	247	241	241	259	246	214	216	268
TOTAL	1052	1118	1164	1136	1117	1008	980	1039	1194	1167	1167	1188	1180	1182	1172	1266

Source: FAO

Table 7b: Agricultural Import Growth Rates (Value)

	81/80	82/81	83/82	84/83	85/84	86/85	87/86	88/87	89/88	90/89	91/90	92/91	93/92	94/93	95/94
Antigua & Barbuda	13.46	-3.08	1.35	20.79	-15.81	2.82	11.02	16.74	10.24	5.49	-3.63	0.13	-5.81	0.007	-1.00
Bahamas	-28.20	66.24	-12.50	13.18	3.06	5.58	8.31	0.92	3.36	-2.43	7.21	-12.19	5.61	2.38	-4.79
Barbados	9.19	-7.94	-3.00	5.11	-5.99	8.43	1.18	12.50	10.67	-2.33	2.91	-11.40	3.35	10.93	10.47
Belize	17.42	-19.41	-19.99	20.63	8.54	-6.01	10.28	19.16	22.25	-4.85	-40.66	97.24	-13.80	-3.67	2.62
Dominica	5.45	-13.59	-0.26	21.31	-9.34	6.85	12.26	23.71	8.68	19.00	2.74	-3.70	-8.58	1.71	12.88
Grenada	5.58	1.69	-20.38	17.42	25.76	-12.72	42.05	-3.23	13.84	7.53	-0.96	-6.69	21.23	-6.78	14.70
Guyana	12.03	-44.53	-18.55	-18.70	-7.84	9.94	15.56	13.73	27.69	11.61	-3.52	24.20	19.57	-23.51	29.33
Jamaica	19.93	-6.96	2.05	-11.58	-15.61	-1.27	16.66	20.67	17.45	-13.02	2.25	2.58	8.74	-5.42	2.52
Montserrat	26.82	-8.17	9.68	6.78	-10.85	-24.58	33.62	-3.91	-17.93	58.47	15.36	-14.81	22.40	-10.42	-5.83
St. Kitts-Nevis	22.30	-1.32	14.08	-9.65	11.70	21.42	3.71	18.17	-2.84	15.65	-2.56	-8.64	6.42	-0.19	-3.79
St. Lucia	1.02	-7.20	-0.85	4.28	9.40	14.19	19.40	6.94	22.31	1.16	16.12	7.41	-0.06	1.86	4.31
St. Vincent & the Grenadines	12.53	14.26	-7.96	8.69	-0.65	-11.56	8.07	21.51	10.42	3.65	-0.32	3.00	2.82	-4.16	1.53
Suriname	13.11	-6.37	-2.24	-12.02	-15.18	2.29	-16.03	10.59	20.08	19.33	7.79	5.26	-16.55	8.77	18.56
Trinidad & Tobago	6.23	9.72	2.14	-5.35	-17.24	-14.03	-3.49	-23.72	13.80	-2.38	7.16	-4.90	-12.80	0.52	24.18
AVERAGE	9.78	-1.90	-4.03	4.35	-2.86	3.61	11.61	9.56	11.43	8.35	0.38	5.54	2.32	-1.99	7.55

Table 7c: Agricultural Import Growth Rates, Selected CARICOM Countries

	1985-1990	1990-1995
Barbados	4.1	2.3
Belize	8.2	6.1
Grenada	12.2	4.8
Guyana	11.8	9.6
Jamaica	4.1	-1.1
St. Lucia	12.2	5.1
Suriname	3.5	7.2
Trinidad and Tobago	-7.8	2.0
AVERAGE	6.0	4.5

Table 8: CARICOM Agricultural Trade Balance (US$ millions)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Antigua & Barbuda	-20	-23	-23	-23	-28	-24	-24	-26	-30	-33	-36	-34	-34	-32	-34	-33
Bahamas	-140	-92	-157	-142	-157	-165	-181	-192	-185	-195	-176	-191	-171	-173	-178	-168
Barbados	-18	-53	-41	-51	-46	-47	-51	-48	-57	-75	-58	-68	-45	-57	-70	-65
Belize	32	14	18	23	22	14	24	31	33	29	41	42	35	35	40	64
Dominica	-8	-4	0.4	3	0.4	3	14	18	21	6	9	10	10	8	2	-5
Grenada	-0.04	-0.7	-4	-0.8	-4	-4	2	4	2	-5	-11	-13	-15	-20	-19	-21
Guyana	117	109	85	67	79	69	85	97	68	80	69	90	130	108	141	152
Jamaica	-93	-124	-101	-72	-72	-42	-17	-19	-39	-114	-29	2	-16	-24	-13	-14
Montserrat	-3	-3	-3	-4	-3	-4	-5	-5	-4	-7	-8	-7	-8	-7	-7	-7
St. Kitts-Nevis	7	5	3	0.6	2	-3	-1	0.1	-4	-4	-9	-8	-2	-6	-7	-5
St. Lucia	-5	-5	-2	0.5	3	4	27	12	35	17	30	7	11	-2	-14	-9
St. Vincent & the Grenadines	-5	1	0.8	7	17	31	34	18	36	25	32	25	34	12	9	15
Suriname	2	-10	-3	-4	0.7	20	7	16	16	-0.5	-14	-23	-19	-9	-9	19
Trinidad & Tobago	-265	-318	-367	-384	-367	-298	-237	-222	-138	-147	-130	-144	-133	-90	-71	-78
TOTAL	-400	-504	-593	-580	-553	-444	-320	-315	-246	-419	-287	-214	-222	-260	-231	-165

Table 9: Trade Liberalization and CARICOM Agriculture, Sectoral Issues and Constraints

Constraints	Typical Characteristics of the Constraint
Infrastructure	
Roads	Farm roads often impassable in the rainy season; low levels of mechanization
Drainage & Irrigation	Water management-often linked to low yields (too little water) or crop loss (too much)
Transportation Facilities	Inadequate for non-traditionals generally lack of refrigerated services. Lack of adequate linkages to newly targetted markets
Energy	High energy costs due to low scale and monopolization of energy supply industry.
Institutional	
Technology Research Capacity	Fiscal reform has led to the decimation of public research capacity with nothing replacing it. Limited varietal and crop protection work.
Technology Transfer	Has been limited by inadequate operational support for field staff training and transportation
Education (all levels)	Lack of skills to serve the sector, more recently recognized.
Policy Analysis & Planning	Limited microeconomic services to promote investment. Limited macroeconoimc analysis to inform policy makers. Limited project and program evaluation capacity.
Ministry of Agriculture	Policy development and program implementation capacity very limited, low salaries.
Organizations	Farmer organizations weak, small memberships, too fragmented.processing and marketing information services absent
Institutional Linkages	Both from a private/public and public/public standpoint
Production/Investment	
Input Supplies	Importer monopolies and licensing bureaucracy
Access to Credit	High interest rates; Bias to traditional crops Procedural regulations and limitations.
Land Tenancy	Land Administration bottlenecks limiting access and land distribution programs not recognizing the importance of size.
Investment	Low relative sectoral profitability because of relative incentives and pricing structures.
Marketing	
Product Characteristics	Poor quality and appearance of the product because of lack of technology development and services
Price and Product Quality Informati	The absence of information to producers regarding market needs and opportunities. Low price elasticties for traditional exports.
Packaging and Processing	Inadequate packaging and minimal processing opportunities lead to high post harvest losses..
Product Differentiation and Promoti	Products are generally not differentiated and are sold at one price.
Product Distribution	Lack of cooling, storage increasea and transport services increases supply variability
Policy	
Macroeconomic Management	Foreign Exchange Unavailability Rapid Inflation
Sectoral Policy	Removal of subsidies, lack of clarity of goals.
Trade Policy	Import Licensing and tariffs on imports Competition from final product imports Export tax disincentive
Environment	Deforestation and loss of topsoil. Abuse of chemicals in the production system.
Social	
Historic Public Sector Role	Culture of government support for production and marketing.
Immigration/Intersectoral Options	Labor expectations, worker attitudes, low labor productivity.
Trade Union Relations	Upward pressure on wages, high labor costs due to intersectoral impacts.
Praedial Larceny	Lack of a policy Lack of implementation of policy Lack of effectiveness of the implemented policy
Public/Private Sector Partnership	Parastatals a disincentive to private sector investment

Table 10 Trade Liberalization and CARICOM Agriculture – Sectional Issues: Constraints by Commodity Across the Region

Commodity	Typical Nature of the Constraint	Suggested Response
Rice	Produce quality from the perception of the importer (% of brokens) Maintenance of infrastructure (irrigation) Low value added due to processing bottlenecks	Improve nca research system Greater user responsibility for management Increase access to funding for processing facilities
Sugar	Lack of alternative use of crop output Low productivity Transportation within the sugar belt a significant proportion of total costs Weak sugar producers organizations	Investigate and further develop opportunities for processed sugar products Adoption of improved cultural practices Study alternative transportation systems Greater responsibility to sugar producers organizations
Bananas	Lack of production inputs Fungus diseases Low yields relative to competitors Inefficient harvesting systems Lack of product differentiation Lack of alternative products and markets	Increased competition in the input supply sector Increased banana research Improve crop management Invest in harvesting and packaging equipment Develop marketing schemes that allow product/country recognition More collaborative action on processed products and non-traditional markets
Citrus	Shortage of research and extension services Citrus waste management Poor drainage results in reduced fields and quotas Susceptibility to diseases and pests	Strengthen citrus growers association to provide this Develop as a feed and/or energy product Incentives to producer groups to invest in —— drainage
Cocoa	Inadequate apply of planting material Low yields, low labor productivity	Promote private sector nurseries Improve cocoa research and extension facilities
Pulses	Short storage life due to inadequate storage facilities Production as a food staple rather than a cash crop	Increase varietal research and investment in marketing infrastructure Policy planning and farm management services to demonstrate profitability and adoption strategy
Fresh Vegetables	Imported vegetable products more attractive in appearance and packaging Farmers approach vegetable production less as a business	Research for varieties more suited for individual countries. Policy planning and farm management services to demonstrate profitability and adoption strategy Organize farmers for ease of product distinction and increased access to market information
Livestock	Dependency on feed imports Inadequate slaughterhouse facilities and low Processed product facilities limits valued added and market options	Increase research into domestic by product use and pastures Organization for slaugnter facilities as required by different markets needs to first studied and then information regarding the economic nature of the opportunity made available
Tree Crops - Fruits	Lack of accurate information for planning Seasonality of production Low volumes, poor quality Lack of research and extension support	Strengthen extension and farm management retrieval and delivery information. Agronomic research to phase production of several— free crops over the year Incentives for investment on commercial scales. Strengthen research and extension services with more fruit tree crop skilled personnel