

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS



Trends and Challenges
in
Agriculture, Forestry and Fisheries in the Caribbean

REGIONAL OFFICE FOR LATIN AMERICA AND THE CARIBBEAN

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1. Introduction¹

In the post 1994 international economic order characterised by trade liberalisation and globalisation, the ability of small countries generally and island states in particular, to compete economically in the world market has become critical to the survival of their agricultural sectors and rural communities. Understanding small country peculiar characteristics is therefore important. The long term goal of these countries is to attain economic efficiency and sustainable development; however, over the shorter term managing the transition period and adopting the measures needed to achieve the goals of growth and development is the more immediate task. This document has four objectives: to highlight the peculiar characteristics of Caribbean states and to review their recent economic performance in a global context; to review agricultural production and trade trends over the last decade; to present the agricultural and rural sector transformation challenges collectively faced by Caribbean countries; and to outline policy issues facing the development of the agricultural and rural sectors in the region.

1.1 Caribbean Country Characteristics

The Caribbean is made up of small islands and countries (**Table 1, Charts 1a, 1b, 1c, 1d**). The peculiar characteristics of smallness and “islandness” have been well recognised in the 1990’s, most notably at the UN Global Conference on Sustainable Development of Small Island Developing States (Barbados, May 1994). This conference prioritized the principles of the right to development taking preference over the need to participate in a globalized market liberalisation system. The aim being to underline the importance of focusing on improving the quality of life and sustainable development while pursuing policies and programs of development in the new world economy.

The special geographical and socio-economic characteristics of small states and which make them particularly vulnerable include²:

- Narrow economic base - traditional exports and tourism.
- Economic dependence on larger country/countries for markets and investment - EU and USA.
- Geographic isolation - long shipping distances.
- Dependence on external agents/factors to establish proximity to sea and air routes.
- Inability to exploit land transport fully - limited capital and scale.
- Limited pool of skills - small populations and migration.
- Paucity of natural resources and their over-exploitation – land pressure
- Highly vulnerable production systems - plantation and small farm agriculture.

¹ CARICOM and Caribbean are used in this document to respectively refer to the English-speaking countries that belong to the Caribbean Community (CARICOM: Antigua, Bahamas, Barbados, Belize, Dominica Grenada, Haiti, Jamaica, Guyana, Montserrat, St. Lucia, Trinidad & Tobago, St. Vincent, Suriname, St. Kitts.) and to the wider Caribbean (Cuba and the Dominican Republic). Within CARICOM, MDC’s (more developed countries) is used to refer to Barbados, Guyana, Jamaica, Trinidad and Tobago, and Suriname. The remainder are referred to as LDCs (less developed countries).

² “Small Island States and Sustainable Development: Strategic Issues and Experience”, Bass and Dalal-Clayton, International Institute for Environment & Development, Sept. 1995.

- Highly vulnerable island ecosystem - fragile coastal systems.
- Vulnerability to climate influences -hurricanes.

Table 1. Smallness Characteristics of Caribbean Countries

Country	Population	Area	GDP	GDP/Capita*
	('000)	Total	(US\$M)	(PPPUS\$)
	1998	(km2)	1998	1998
Barbados	260	430	2,268	12,001
Guyana	834	214,970	721	780
Jamaica	2,547	10,990	6,418	1,740
The Bahamas	276	13,900	n.a.	14,614
Trinidad & Tobago	1,306	5,130	6,382	7,485
Suriname	414	163,300	808	1660
Belize	217	22,960	680	4,566
Antigua & Barbuda	65	280	250	9,277
Dominica	72	750	n.a.	5,102
Grenada	93	311	343	5,838
St. Kitts & Nevis	42	269	291	10,672
St. Lucia	142	616	610	5,183
St. Vincent	110	389	316	4,692
Cuba	11,100	110,860	n.a.	3,967
Haiti	8,000	27,560	3,871	1,383
Dominican Republic	8,200	48,380	15,853	4598
Total Caribbean	33,678	621,095		

Note: CARICOM = Antigua, Bahamas, Barbados, Belize, Dominica Grenada, Haiti, Jamaica, Guyana, Montserrat, St. Lucia, Trinidad & Tobago, St. Vincent, Surinam, St. Kitts.

Caribbean = CARICOM + Cuba, Haiti and the Dominican Republic

*UNDP Human Development, Report 2000.

The World Trade Organization (WTO) recognized the importance and limitations of these characteristics when it defined the Caribbean Community (CARICOM) states as “small, dependent, vulnerable, open, and primarily single sectored”³. A critical aspect of this smallness is the dependence on interaction with large economies which provide capital, markets and transportation links. This dependence on external forces makes for extreme vulnerability of small economies to the fluctuations in prices and policies of trading partners, an increasing reality in the current and evolving global economic environment.

Knowledge of Caribbean countries’ special characteristics and understanding their interactions is vital to appreciating their need for special treatment if the important goals of sustainable development and food security are to be achieved. These characteristics are often better understood through a representation of at least three mutually interdependent sub-systems: economic, social/demographic/cultural and physical/ecological.

³ WTO, 2001

Chart 1a: Population Distribution - CARICOM Countries

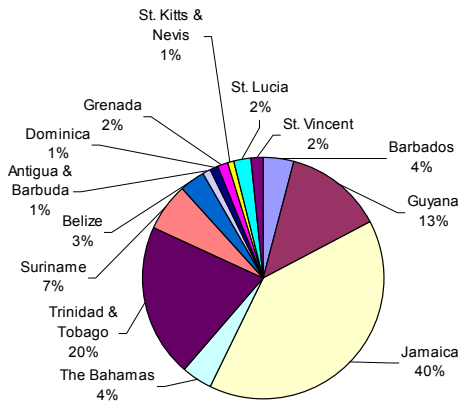


Chart 1b: Population Distribution - CARICOM and selected Caribbean Countries

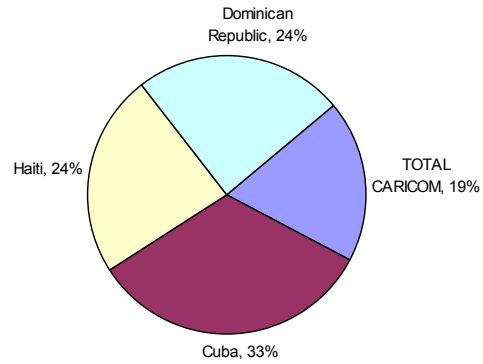


Chart 1c: Land Distribution - CARICOM Countries

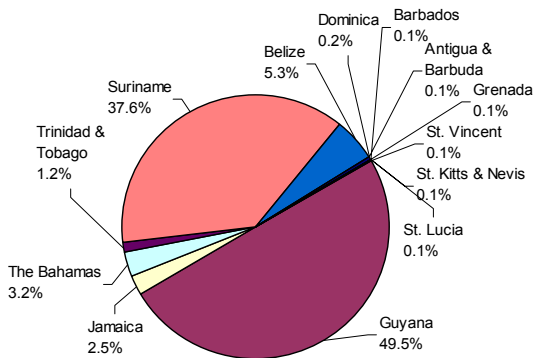
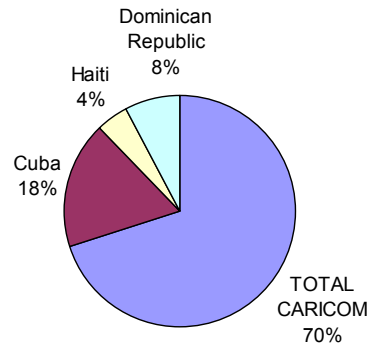


Chart 1d: Land Distribution - CARICOM and selected Caribbean Countries



Economic characteristics

The economies of the CARICOM countries tend to be narrowly based and highly exposed to external economic and political influences. Most are plantation monoculture societies or are characterised by over-exploitation of a single natural resource (e.g. oil, minerals, timber, sugar, bananas, tourism).

Table 2: CARICOM: Share in the Value of World Agricultural Trade

Country	Export share		Import share	
	Avg. 1991-94	Avg. 1995-98	Avg. 1991-94	Avg. 1995-98
Antigua & Barbuda	-	-	0.01	0.01
Barbados	0.02	0.03	0.04	0.04
Belize	0.04	0.04	0.02	0.02
Dominica	0.01	0.01	0.01	0.01
Grenada	0.01	0	0.01	0.01
Guyana	0.07	0.07	0.02	0.02
Jamaica	0.11	0.1	0.1	0.12
St. Kitts & Nevis	0.01	-	0.01	0.01
St. Lucia	0.03	0.02	0.03	0.02
St. Vincent & the Grenadines	0.02	0.01	0.01	0.01
Suriname	0.02	0.02	0.02	0.03
Trinidad & Tobago	0.05	0.07	0.09	0.09
Total CARICOM	0.39	0.37	0.37	0.37

Source: CARICOM, 2000.

Their economic performances have been characterised by a boom and bust syndrome, with the boom phase being inadequate to permit diversification beyond the dependence on a few commodities whose cycles cause the syndrome⁴. Small populations and resource bases result in an inability to benefit from economies of scale and impede the raising of large amounts of capital on the home market. High transport costs and a heavy dependence on external demand increases the potential for economic instability. Low volumes of produce and low percentages of trade in global markets exacerbate this situation. **Table 2** shows that all of CARICOM (14 member states) account for less than half of one percent of world agricultural trade. Within the Organization of Eastern Caribbean States (OECS) sub-group, seven states whose main export product is bananas, accounted only for 0.86% of world banana exports. Yet, for the Windward Islands (Dominica, St. Lucia, St. Vincent), this trade has traditionally represented over half of all export earnings and between 15% and 20% of the GDP.

Irregular and high transportation and transaction costs because of location and smallness is one of the most critical constraints, as Caribbean countries largely remain dependent on external agents to establish sea and air routes. This transportation dependence has limited market expansion both from a product and destination standpoint. Aspects of market dependence are undoubtedly related to the historical and cultural links to Europe.

This is of course reflected through the Lomé agreements over the past twenty years that have dominated trade and aid relationships of this region. While there has been some success establishing more economic bases, notably tourism, the physical and ecological limitations to constrain their development.

Social/Demographic/Cultural Characteristics

Several aspects of the social/demographic/cultural situation characterising Caribbean countries increases their vulnerability and undermines the potential to readily

⁴ The Economist, 1998

establish sustainable development systems. A small population of 6.4 million in all of CARICOM, is even less than Haiti (8 million) or the Dominican Republic (8.2 million). The high age, migratory nature and low skill level of the population has been identified as one of the reasons for a lack of institutional capacity in the region. Migration has reinforced the outward looking nature and the loss of skills, limiting the development of a culture of entrepreneurship domestically. What has resulted, in some cases, has become known as a MIRAB economy, an economy dependent on migration, remittances, aid and bureaucracy⁵.

Although the level of human development in particular states is among the highest in the Latin American and Caribbean (LAC) region (three of the five states classified as having high human development are in the Caribbean sub-region, two of them ranked highest, Barbados and the Bahamas), the general situation is more high unemployment, high inequality of income and persistent poverty. The latter has been referred to by the World Bank as households that are “conjunctionally poor”- those unable to achieve satisfactory incomes due to low human capital and/or the economic environment including internal and external shocks.

Physical/Ecological Characteristics

Caribbean countries are prone to hurricanes, volcanic eruptions and floods; hurricanes being by far the most significant natural calamities. Such natural disasters compound the constraints to development. For example, In 1955, as a result of Hurricane Janet, Grenada’s then-biggest industry, nutmeg cultivation, collapsed. The banana plantations in St. Lucia were destroyed in 1980, as were five million forest trees in Dominica. In September 1995, Hurricane Luis devastated St. Kitts and Nevis. Antigua and Barbuda had 5 hurricanes in 6 years, destroying the entire crop and over 60% of their tourism infrastructure⁶. In Belize, during the period September 2000 and October 2001, the combined effects of Hurricane Keith, Tropical Storm Chantal and Hurricane Iris inflicted damages of some US\$305 million to the agriculture and fisheries sector. In some cases the apparent growth in GDP seems due to the constant need to rebuild the infrastructure, largely financed by creating an additional debt burden.

The small islands of the CARICOM are especially vulnerable to changes in climatic conditions, due to global warming and the consequent rise in sea level and intensification of storm frequency. It has been projected that a rise in average temperature of 1.5°C by 2030 and slightly increased rainfall and humidity could increase the frequency of hurricanes by 40% and the maximum wind speed by 8%. A 30 cm sea level rise by 2030 in response to global warming may inundate many low-lying areas⁷.

Environmental devastation has been increased by a lack of regulation and over exploitation of natural resources. Many islands in the Caribbean, originally heavily forested, have suffered deforestation due to replacement of the natural forests by erosive and pest/disease-prone plantation agriculture. In some countries, loss of forest

⁵ Bass & Dalal-Clayton, IIED, Sept. 1995.

⁶ WTO,

⁷ Bass and Cambers, 1991

has led to flooding of homes and farmland in the wet season, and erratic water supplies in the dry season. Tourism has increased vulnerability in the fragile coastal ecosystems. In their urgency to attract investment, small CARICOM economies are often dependent on private investors who too often take advantage of state regulations, resulting in loss of resources and ecological damage. Additionally, CARICOM countries possess limited resources for waste disposal and recycling which means that the systems are ill-equipped to deal with industrial waste and the products of high-intensity, mass-market tourism and their impact on the surrounding marine ecosystem.

The combined peculiarities of small populations, small land areas, and limited, fragile natural resource bases, contribute to the continued prevalence of externally determined futures. This external dependency, in one sense economic/structural, in another social/cultural, underlines the need for special and different approaches to be created for the further human, economic and rural area development of these countries.

1.2 Economic Performance in a Global Context

The world economy has been on a continuous growth path. However, this has not been uniform throughout the years or decades or throughout the regions or countries. In **Table 3** the differences in the world growth rate of real GDP across geographical regions is shown. The high growth rates of East Asia and the Pacific throughout the last three decades and the low growth rate for Latin America and the Caribbean throughout the 1980's stand out. Latin American countries rebounded in the 1990's with a growth rate of just over 3%, more than twice that of the 1980's.

Table 3. Growth of Real GDP (%), 1971 - 2010
(GDP in 1995 prices and exchange rates - average annual percentages)

	1971-80	1981-90	1991-99	1999	Estimate	Forecast
					2000	2000-2010
World	3.6	3	2.4	2.8	4.1	3.4
High-income economies	3.3	3.1	2.2	2.7	3.8	3
USA	2.8	3.2	3	4.2	5.1	3.3
Low and Middle-income economies	5.3	2.7	3.2	3.2	5.3	5
East Asia & Pacific	6.6	7.2	7.1	6.9	7.2	6.3
LAC	5.9	1.1	3.2	0.1	4	4.3
Europe and Central Asia	4.9	1.2	-2.3	1	5.2	4.3
Sub-Saharan Africa	3.3	1.8	2	2.3	2.7	3.6

Source: World Bank, Global Economic Prospects and the Developing Countries 2001

An important component of the recovery in the 1990's has been the expansion in trade. Both in comparison with the 1980s and in relation to the growth in GDP, trade growth has expanded. This reflects both a buoyant world economy as well as technology changes and the removal of barriers to trade. It is worth pointing out, however, that in recent years, "the terms of trade have declined with respect to primary agricultural products while average mineral and fuel prices rose"⁸.

⁸ ECLAC, 2001

Prior to September 11th and the current Middle East crisis, the prospects for continued growth and trade expansion were optimistic with the World Bank's Global Economic Prospects 2001, predicting a world output growth rate of the order of 3.4 per cent for 2000-2010. At a regional level, Latin America and the Caribbean region were expected to register a 4.3 per cent growth. However, given the recent upheavals in New York and the Middle East, there is reason to believe that the actual growth rates would be lower than those predicted. In the Caribbean, this is particularly the case given their strong links to the US economy, both for exports and tourists, their limited diversification, their position as price takers, and all the aspects of "islandness" and smallness detailed in section one. There were considerable differences in economic growth performance across countries in the region in the 1990's (Table 4).

Table 4. Caribbean - Real GDP Growth (%) Remainder based on values at 1995 prices

Country	1991	1997	1998	1999	2000	1981-1990	1991-2000
Antigua and Barbuda	2.7	5.6	3.9	4.6	3.5	6.1	3.3
Bahamas	-2.7	3.3	3	6	---	---	1.9*
Barbados	-4.1	2.6	4.8	2.5	3	1.1	1.4
Belize	3.1	4	1.3	6.4	6	4.5	4.1
Dominica	2.2	2.2	2.3	0.9	---	4.4	2.1*
Grenada	3.6	4.2	7.3	7.8	---	4.9	3.5*
Guyana	6	6.2	-1.7	3	3	-2.9	5.3
Jamaica	0.7	-2.1	-0.7	-0.2	0.5	2.2	0.1
St Kitts and Nevis	2.3	7.3	1	2.8	---	5.8	4.1
St Lucia	0	0.6	2.7	3.5	---	6.8	2.2*
St Vincent & the Grenadines	1.4	3.1	5.7	4	---	6.5	3.2*
Suriname	3.2	5.7	10.7	-1.3	---	0.5	1.7*
Trinidad & Tobago	2.7	3.1	4.4	6.9	5	-2.6	3
Cuba	-10.9	2.5	1.2	6.2	5.5	3.7	-1.4
Haiti	0.3	1.4	3.1	2.3	1	-0.5	-1
Dominican Republic	1.1	8.9	8.2	8.3	8.5	2.4	6.3
Total Caribbean	1.3	1.6	2.7	3.4	3.1	0.1	1.9

Sources: ECLAC, Preliminary overview of the Economy of Latin America and the Caribbean, CEPAL-ECLAC, 2000.

Notes: 1981-1990: Calculated on the basis of figures at constant 1990 prices.

(*) Refers to 1991-1999. (---) Not available.

In the Latin Caribbean, the outstanding performance of the Dominican Republic masks the downturn in Cuba and Haiti, especially during the first half of the 1990's. In the CARICOM region, the strong performance of Guyana and Belize helped the region to register a 2% growth for the decade of the 1990's. While the larger economies in the Caribbean continued to do well in 2000 and 2001, preliminary data for 2001 shows the smaller OECS economies under severe pressure.⁹ The external indebtedness of Caribbean countries reveals their openness relative to economies of Latin American in general. Table 5 shows similar levels of external debt as a percentage of GNP for CARICOM and LAC, while Table 6 reveals debt relative to the export sector. With few exceptions, inflation has remained under control in the Caribbean region in the 1990's (Table 7).

⁹ Advocate, March 2002.

Table 5: Caribbean - External Debt as % of GNP

Country	1993	1997	1998	1999
Barbados	35.8	26.7	26.3	24.4
Belize	39.9	72.7	52.1	50.2
Dominica	49.7	45.5	44.9	43.5
Dominican Republic	54.5	29.8	29.8	29.0
Grenada	56.3	42.8	58.5	44.6
Guyana	539.8	242.2	254.8	245.7
Haiti	46.7	38.1	27.5	28.6
Jamaica	107.7	52.6	60.2	59.7
St. Kitts/Nevis	28.8	45.6	50.0	50.5
St Lucia	29.1	27.9	31.9	29.4
St. Vincent & the Grenadines	44.3	41.2	44.3	62.1
Trinidad & Tobago	52.9	39.5	37.7	38.1
CARICOM	49.6	42.0	42.1	41.8
LAC*		36.6	41.1	41.8
WORLD		36.1	42.8	40.5

Source: World Bank, Global Economic Prospects, 2001c.

* LAC = Latin America and the Caribbean

This performance augurs well for investment and trade development as control of inflation is a strong indicator of macroeconomic stability.

Table 6: Caribbean - Total Debt Services as a % of Exports of Goods and Services

Country	1980	1990	1997	1998	1999
Barbados	4.2	15.2	6.9	6.2	7.3
Belize		7.5	11.1	12.9	11.2
Dominica		5.6	7.5	6.7	7.3
Grenada	5.9	3.0	4.0	4.5	4.6
Guyana	22.8	..	17.6	19.5	
Jamaica	19.0	26.9	15.3	12.4	17.4
St Kitts/Nevis		2.9	4.8	7.1	12.0
St Lucia		2.1	3.5	4.3	5.2
St Vincent & the Grenadines	1.0	2.9			
Trinidad and Tobago	6.8	19.3	17.8	10.3	13.1
CARICOM	11.4	9.6	9.7	9.0	9.2
Haiti	6.2	10.1	12.4	10.6	10.5
Dominican Republic	25.3	10.4	5.6	4.2	3.9
LAC	36.2	24.4	35.6	32.5	41.6
WORLD	12.8	18.1	17.1	18.2	21.4

Source: UNCTAD, World Investment Report, 2000

In addition to trade opportunities and impacts, foreign direct investment is an important determining factor of growth in Caribbean countries. The downturn in foreign investment during the Asian crisis (post 1997) affected the Caribbean much less than the Latin American region (especially the South American countries). This reflects the relatively greater linkages and dependence of Caribbean countries on the EU and the USA.

Table 7: Inflation (%) in the Caribbean (1993-2000)

Country	1993	1998	1999	2000
Antigua/Barbuda	1.5	3.4	1.1	0.6
Aruba	5.3	1.5	2.3*	4.0*
Bahamas	2.7	0.5	1.3	1.3
Barbados	1.1	-1.2	1.5	2.4
Belize	1.5	-0.9	-1.2	0.6
Dominica	1.7	1.5	0	1.1
Grenada	3.5	1.4	1	3.5
Guyana	7.7	4.8	7.5*	6.1*
Jamaica	23	8.6	6.8	8.2
Montserrat	0.7	0.8	0.8	1.7
St Kitts/Nevis	1.4	3.4	3.9	2.1
St Lucia	0.6	3.6	6.1	0.2
St Vincent & the Grenadines	4.5	3.3	1	0.2
Suriname	243.5	19	113	64.3
Trinidad andTobago	8.7	5.6	3.4	3.6
Dominican Republic	2.8	7.8	6.4	9
Haiti	29.7	10.6	11.5	15.3
LAC	n.a	10.5	9.6	8.7

Sources: ECLAC, 1997 and IMF's International Financial Statistics, November 2001.

Note: * and ** : Data from IFS .

** : Mean of 1st quarter and 2nd quarter inflation.

n.a.: Not available

LAC = Latin America and the Caribbean

Overall, the CARICOM countries underwent a decrease in foreign direct investment (FDI) inflows between 1997 to 1999 (**Table 8**), although these flows almost quadrupled since 1990.

**Table 8. FDI Inflows to the CARICOM Countries and Latin America.
1990, 1997-1999 (Millions of US\$)**

Countries	1990	1997	1998	1999
The Bahamas	(17)	210	147	145
Barbados	11	15	16	15
Belize	17	12	18	3
Guyana	8	52	47	48
Jamaica	138	203	369	520
OECS*	182	182	232	257
Suriname**		7	12	105
Trinidad & Tobago	109	1,000	732	633
CARICOM	448	1,686	1,571	1,626
Latin America		55,195	60,203	76,078

Sources: CARICOM: UNCTAD World Investment Reports 1996, 1999& 2000.

UN Economic Survey of Latin America and the Caribbean 1999/2000, ECLAC,2000.

National data.

Note: * : all except Montserrat;

** : included only from year of accession to CARICOM.

Table 9. FDI Stock as a Percentage (%) of GDP in CARICOM Countries

Countries	1980	1985	1990	1995	1997
Antigua & Barbuda	20.9	46.5	73.8	88.5	94.5
Bahamas	22.3	12.7	10.7	14.2	26
Barbados	12.2	10.3	9.7	13	11.6
Belize	6.4	5	17.7	25	28.3
Dominica	...	5.7	38.8	84.6	102.8
Grenada	1.7	10.9	34.7	60.7	74.6
Jamaica	18.7	22.7	16.3	29.9	33.1
St. Kitts	2.1	40.5	100.4	108.1	118.3
St. Lucia	70.1	90.7	78.9	91.7	106.4
St. Vincent	2	7.5	24.3	70.8	92.9
Trinidad & Tobago	15.7	23.7	41.3	68.2	84.4
Latin America & Caribbean	6.4	10.5	10.1	15.1	
Developing Countries		9.8	10.5	14.1	

Source: UNCTAD, World Investment Report 1999.

This decrease is due to a huge decrease in Trinidad and Tobago (36.7%), and the Bahamas (30.9%), the former being the biggest FDI recipient for the CARICOM region. The low value of FDI flows into the Caribbean should not lead to an underestimation of their importance. On average, as a percentage of GDP, FDI stock is much higher in the Caribbean than for the Latin American countries region. **(Table 9).**

Much of this FDI stock has gone into reassembling operations for export. These business activities have used the Caribbean as a production and export platform for the North American market and contribute to transforming the competitive position of some host economies.¹⁰ To promote the role of FDI in their economies, it is well recognised that Caribbean countries will have to improve the domestic and regional investment environment, especially in a macroeconomic context.

The recent categorizing by the OECD (Organisation for Economic Cooperation and Development) of a number of Caribbean countries as “uncooperative tax havens”, regarding offshore financial services in the Caribbean, has to be considered in weighing prospects for future economic performance. Such labeling of these economies can negatively affect not only the financial sector and capital inflows but also tourism. Strong responses from Caribbean countries has led to some, but not all, being removed by OECD from the list.

The events of September 11, 2001 have inevitably affected Caribbean economies. In a number of Caribbean tourist destinations, one impact has been the reduction of tourists arrivals in general and from the USA in particular. Preliminary statistics from the Barbados Tourism Authority (BAT) indicate that between October to December 2001, tourist arrivals declined by 12.9 per cent. In the meantime, the bed occupancy rate decreased from 60.4 per cent in 2000 to 53 per cent in 2001. This came after five years of increases in visitor arrivals. Thus, some of the overall economic growth decline in Barbados in the year 2001 (-2.8 per cent) is explained by global recession, a slump in the manufacturing sector and a deep decline in the tourist industry. The September 11 event may also jeopardise food security in the relatively more food

¹⁰ UN, 2001

import dependent countries of the Caribbean. It has been reported that, during the immediate aftermath when air transportation from the USA was grounded, some countries experienced food shipment delays and there was concern that they might face food shortages.

Most of the Caribbean countries are also vulnerable in terms of their overall trade balances and their ability to sustain current account deficits. **Table 10** shows these deficits in the second half of the 1990's, during a decade that saw CARICOM's imports growing twice as fast as exports.

Table 10: Current Account, Overall Balance in CARICOM Countries (US\$ Million)

	1996	1997	1998	1999	2000
	Current Account				
ECCB	-328.220	-398.960	-382.780	-400.220	-419.48*
Bahamas	-263.300	-472.100	-995.400	-671.900	-437.500
Barbados	71.100	-49.400	-62.500	-147.500	-145.000
Belize	-6.600	-31.900	-59.800	-77.500	-139.500
Guyana	-53.800	-105.100	-98.500	-77.200	-117.000
Jamaica	-142.600	-332.200	-327.800	-252.100	-274.600
Suriname	-63.100	-67.700	-154.900	-211.400	32.300
Trinidad & Tobago	68.200	-578.900	-645.300	30.600	990.600
Total	-718.200	-2036.260	-2726.980	-1807.220	-510.180
	Overall Balance				
ECCB	-19.440	21.700	81.440	16.110	17.55*
Bahamas	-7.600	56.500	119.200	65.300	-61.000
Barbados	113.200	37.550	-37.200	55.600	200.800
Belize	20.600	1.400	-13.700	12.900	-43.300
Guyana	-1.400	4.000	-22.700	-4.400	24.000
Jamaica	271.400	-170.400	-43.900	136.400	-518.400
Suriname	-1.700	19.100	8.100	-4.400	9.800
Trinidad & Tobago	213.500	175.300	80.600	162.200	441.0*
Total	588.560	145.150	171.840	439.710	70.450

Sources:

Eastern Caribbean Central Bank: Report and Statement of Accounts for the financial year ended 31 March 2001, 2001. ECLAC, various issues.

Central Bank of Barbados: Annual Statistical Digest, 2000. Central Bank of Barbados, 2001.

Note: ECCB - OECS countries and Anguilla.

ECCB data were converted from EC\$ into US\$ by dividing by 2.7.

Data for Barbados vary from one source to another.

Central Bank of Barbados data used and converted from \$BDS into US\$ by dividing by 2.

(*): Preliminary.

(-): Deficit.

The 1996 World Food Summit declaration underscored the importance of trade in the achievement of food security. Precisely, it lays out the components of a food security strategy: an enabling political, social and economic environment; improved access to food; sustainable food production; food, agricultural trade and overall trade policies; preparedness for natural disasters and man-made emergencies; investment and implementation, monitoring and follow-up.¹¹ In the Caribbean, where high levels of poverty continue to exist, unemployment is high, and vulnerability is ever present, the

¹¹ FAO, Agricultural Trade and Food Security, Vol.1., 2000, p.152

issue of food security is of paramount importance. This poverty and food insecurity is disproportionately located in rural areas where livelihoods are largely determined by agricultural production and trade. Thus, an evaluation of the trends, challenges and opportunities is important to promoting programmes and policies that are effective and efficient in improving the situation.

2. Agricultural Sector Production and Trade Trends

In the Caribbean the agricultural sector has been and continues to be a very important contributor to GDP, employment and exports (**Table 11**). Only in the last two decades has agricultural output as a percentage of GDP reduced to less than 10% for about seven countries in the region, for the remainder it is greater, and for at least three countries it has remained over 20%. This percentage is considered an underestimate given the importance of agriculture to the industrial and commercial sectors. As a region, and especially so in some specific countries, the agricultural sector is considered to be declining. This is highlighted by a review of the different segments of the agricultural sector.

Table 11. Agricultural Sector Characteristics of Caribbean Countries

Country	Land Area		Agric.	Distribution of GDP			Food Imp./	Top Single Ag.	Labour
	Total (km ²)	Arable %	Trade/GDP	by Sector 1998			Total Imp.	Commodity to	Force
			Ratio	Agric.	Indust.	Serv.	Exp. Earnings	in Agric.	
	1998	1997-99 (%)							1998
Barbados	430	40	7.5	6.6	20	73.4	11	12	4.3
Guyana	214,970	2	40	34.7	32.5	32.8	7.9	24	27**
Jamaica	10,990	25	11.4	8	33.7	58.4	11.3	7	21.4
The Bahamas	13,880	1	n.a.	n.a.	n.a.	n.a.	9	3	3.8***
Trinidad & Tobago	5,130	24	8.7	1.8	47.5	50.7	8.9	2	8.1
Suriname	163,300	0	30	n.a.	n.a.	n.a.	19.9	10	5.2
Belize	22,960	4	22.3	18.7	25.5	55.8	11.6	26	29.9
Antigua & Barbuda	280	18	5.7				9.2	1	n.a.
Dominica	750	20	21.6	20.2	22.5	57.3	17.5	27	23.7
Grenada	311	32	15.3	8.4	22.2	69.4	16.2	38	15.5
St. Kitts & Nevis	269	22	13.4	4.6	24.3	71.1	13.1	35	13*
St. Lucia	616	27	19.7	8.1	18.9	72.9	18.4	54	23.1
St. Vincent/Grenadines	389	28	24.8	10.9	26.9	62.2	16.3	37	18*
Cuba	110,860	40	n.a.	n.a.	n.a.	n.a.	11.6	35	
Haiti	27,560	33	8.7	30.4	20.1	49.6	34.9	8	
Dominican Republic	48,380	32	6.8	11.6	32.8	55.6	9.5	13	

Source:

UNDP Human Development Report 2000

FAOSTAT, January 2002

World Development Indicators, 2001.

* 1991

** 1992

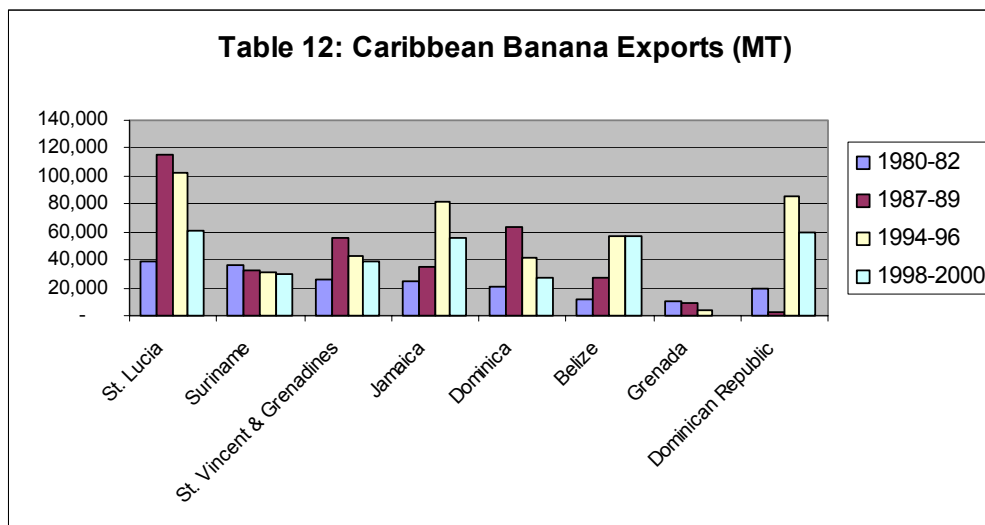
*** 1997

2.1. Traditional Crops

The two main traditional crops in the region are bananas and sugar. Cocoa, coffee, citrus and rice are the other major products produced and exported. Average export volumes for these crops were compared during three-year periods.

Bananas have received the most attention in the period of trade liberalization because of the potential lack of competitiveness if preferential arrangements into the European market were ended. This vulnerability is considerable, particularly in the case of St. Lucia, where recently bananas accounted for 50% of agricultural output and 60% of the country's total exports. St. Lucia has been making gains on exports of bananas to non-traditional markets, increasing its non-EU exports from 93 tonnes in 1996 to 624 tonnes in 2000. In the CARICOM region, the possible effects of the uncertainty of

the EU banana regime, seemingly not apparent in the 1994-1996 period, certainly appear to be evident in the most recent data. (Table 12)¹².



Source: FAOSTAT, 2000

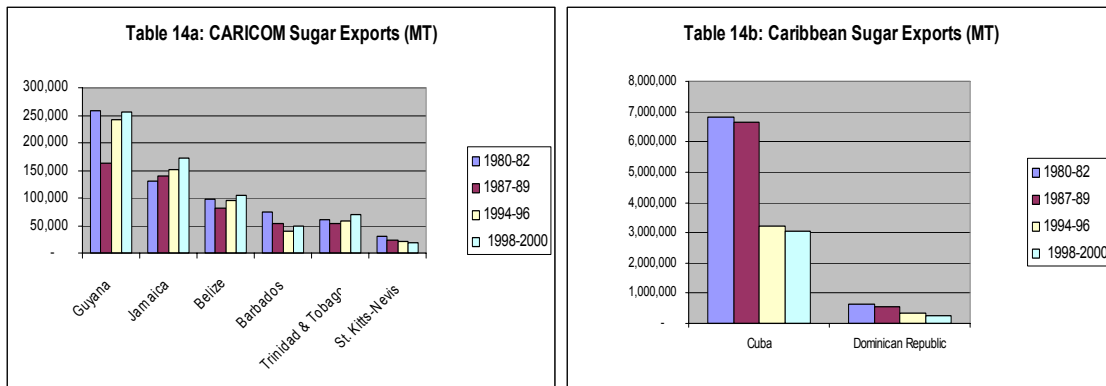
Production and exports are down sharply in Dominica, St. Lucia and St. Vincent and the Grenadines. In Jamaica, more bananas have been going into the domestic market, reflecting a relatively stable production situation but a sharp decline in exports. As a region, CARICOM has seen a sharp drop in banana exports over the period 1998-2000. Haiti and the Dominican Republic are also major Caribbean producers of bananas. In the former, production is reported as being stable, while in the latter there was a sharp decline in 2000. The future of the banana industry in the region is very much linked to increasing yields, lowering production costs and increasing the amount of produce going to specialized niche markets (fair trade, organic). The yield differences between some of the countries are considerable (Table 13).

Source: FAOSTAT, 2000

Sugar production and exports from the CARICOM region differ considerably from the performance in the wider Caribbean. (Table 14).. In CARICOM, production and exports decreased in the 1980's and expanded in the 1990's. The recovery from the lows of the 1980's has been steady and has returned in some countries to the levels of the first three years of the 1980's. The resurgence of Guyana's sugar sector between 1992 and 1996 is one of the main reasons for this result. Exports increased from Guyana, almost reaching the production levels of the first three years of the 1980's. St. Kitts-Nevis and to a lesser extent, Barbados, show consistent signs of a declining industry over the last two decades. When considered from a Caribbean region standpoint, the sugar production and exports of Cuba determines the conclusions as

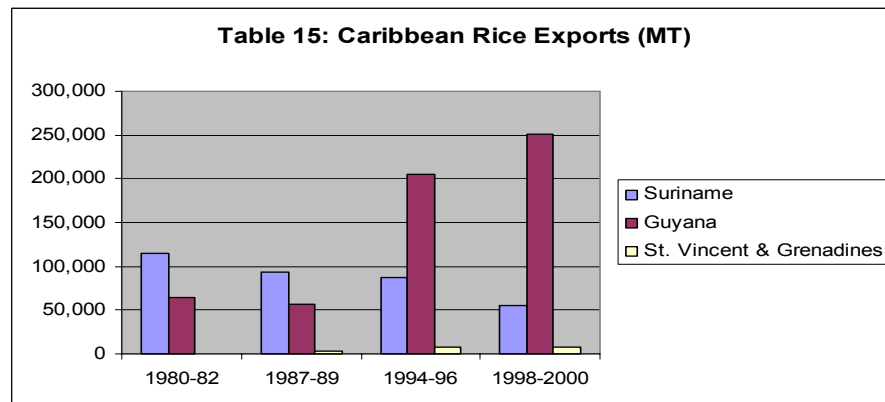
¹² Tables presenting the annual data for the 1990's are attached in the Annex to this document.

this nation produces more sugar than the combined output of all of the CARICOM countries plus Haiti and the Dominican Republic. However, production in Cuba reduced by more than 50% during the 1990's.



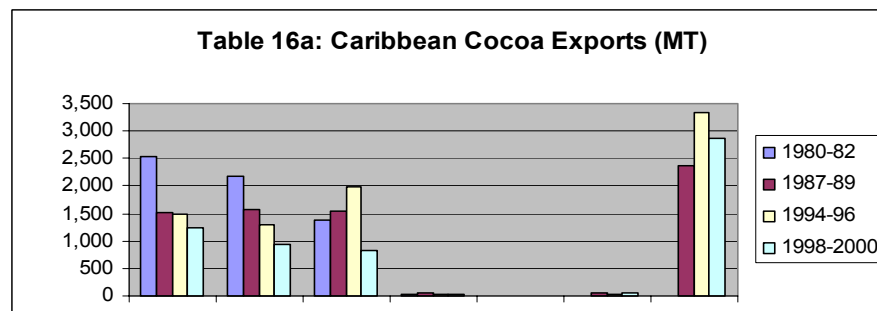
Source: FAOSTAT, 2000

Rice production and trade in CARICOM expanded over the 1990's largely as a result of the recovery of Guyana. (Table 15). This happened despite significant declines in both Jamaica and Trinidad and Tobago. Guyana's exports have increased almost seven times the low level of 1985. Between 1990 and 1994 production doubled and exports trebled. Liberalization changes addressing several of the constraints (particularly infrastructure and pricing) were started under the Economic Recovery Programme of 1988 and were speeded up and widened after 1992. In Suriname both production and exports declined on average during the last three years analyzed. In the wider Caribbean, the production performance has been mixed, with declines in Cuba, an expansion in the Dominican Republic and production around the same level in Haiti.



Source: FAOSTAT, 2000

The **cocoa** industry declined in both CARICOM and the wider Caribbean region. With the exception of Belize, exports declined over the last five years (Table 16), in the case of Jamaica by more than 50%. This came after a recovery in the first half of the 1990's.



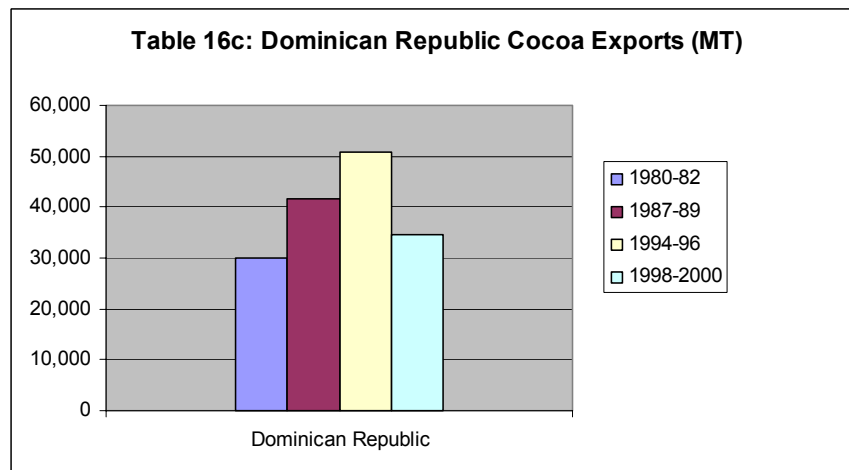
Source: FAOSTAT, 2000

The decline in the cocoa industry in the region, compared to sugar and bananas is ironic because of the three commodities it is the one for which prospects are relatively brightest. The demand for organic cocoa is expanding rapidly and cocoa is being promoted aggressively as an ideal crop for demonstrating that sustainable agriculture can be economically profitable and beneficial to the environment. World cocoa consumption rose by 6 percent in 1995-1996, the highest annual growth in 10 years; further, since the new International Cocoa Agreement of 1993, prices have been relatively strong and despite the slump in 1999/2000, seem to be on a rebound.¹³ (Table 16b.).

Table 16b: Annual Avg. Prices Cocoa

Year	US cents/lb
1997	73.41
1998	76.19
1999	52.08
2000	40.27
2001	49.03
2002	67.64

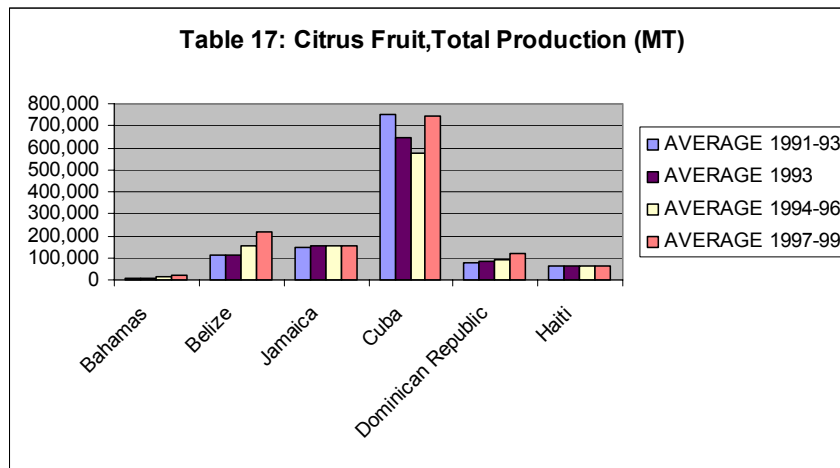
Source: International Cocoa Organization (ICCO)



Source: FAOSTAT, 2000

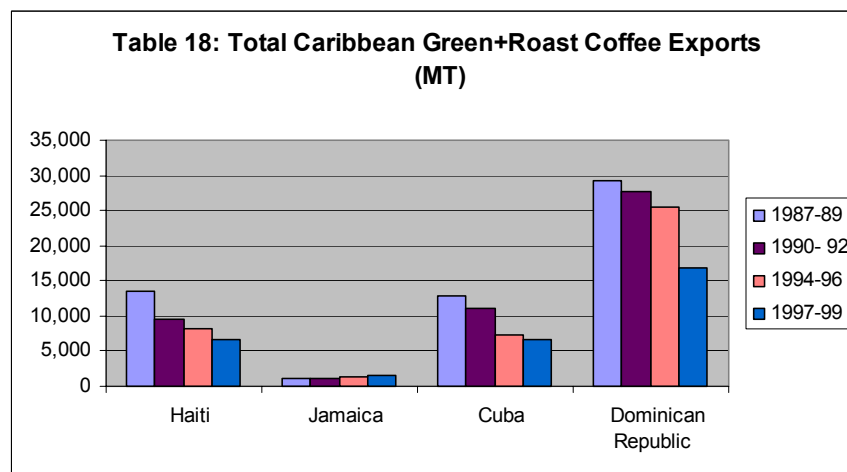
Source: FAOSTAT, 2000

¹³ International Cocoa Organization, 2002.



Source: FAOSTAT, 2000

The **citrus** industry in the region has expanded mainly because of the growth in the sector in Belize, Jamaica and the Dominican Republic. (**Table 17**). The Bahamas has been turning more to its agricultural sector in recent years and citrus production and exports has been one of the main growth areas. The expansion started in the mid-1990's continued into 2001. In all the countries where there has been an expansion in this sector, most importantly Belize, it has also represented an expansion of the large-scale private sector which has been encouraged under the deregulation and liberalization of trading policies. In Cuba and Haiti, this sector declined, but in the Dominican Republic there was a phenomenal expansion in production.



Source: FAOSTAT, 2000

Coffee production and exports from the Caribbean region declined during the period under review, although coffee exports from Jamaica increased (**Table 18**). The expansion of coffee production in Jamaica has been affected directly by deregulation, whereby a more liberal definition of “approved grower” has been used by the Coffee Industry Board. The deregulation is said to have provided an opening for more growers and marketing agents to enter the industry.

2.2 Non-Traditional Exports and Food Crops

A more diversified agricultural sector through greater production, domestic utilisation and exports of agricultural products not traditionally traded is often heralded as the route to successful transformation of the agricultural and rural sector. Diversification programmes directed to this end have been implemented in almost all of the CARICOM countries. Perhaps the most famous of these programmes is probably the Organization of Eastern Caribbean States (OECS) Agricultural Diversification Programme. The programme was designed in 1988 and composed of commodity specific and supportive projects, sector policy recommendations, activities to foster joint marketing and a programme coordinating mechanism. Data for the Caribbean region was considered over the past ten years for several commodities identified with a potential to be the new exports. Among these are mangoes, plantains, papaya and yams.

The production and export data for **mangoes** shows Haiti as the largest producer and exporter (**Table 19**). Among the CARICOM countries, St. Lucia, Jamaica and St. Vincent are the most important exporters of mangoes. However, export production has been very unstable across all of the countries.

Table 19. Caribbean Mangoes Production 1990 - 2001 (Metric Tonnes)

COUNTRY	1990	Average			2000	2001
		1991-93	1994-96	1997-99		
Cuba	72,476	59,769	55,270	53,309	45,536	45,000
Dominican Republic	190,000	192,167	191,667	183,333	180,000	180,000
Haiti	300,000	246,667	218,333	220,000	250,000	250,000
Saint Lucia	24,000	25,500	27,000	27,100	28,000	28,000
Caribbean	608,138	545,729	517,657	514,112	534,038	533,552

Source: FAOSTAT, 2000

Table 20. Caribbean: Average Production of Plantains (Mt)

COUNTRY	AVERAGE			2000
	1991-93	1994-96	1997-99	
Dominica	6,954	7,667	7,667	7,900
Grenada	647	786	730	740
Guyana	13,067	19,400	13,867	14,000
Haiti	275,835	290,000	290,000	290,000
Jamaica	30,324	34,658	33,500	33,500
Saint Lucia	2,000	1,557	1,366	1,300
Saint Vincent/Grenadines	1,491	1,747	1,516	1,450
Suriname	16,260	18,043	12,367	11,000
Trinidad and Tobago	3,800	3,850	3,850	3,850

Source: FAOSTAT, 2000

Haiti, Jamaica, Guyana and Suriname are shown as the major producers of **plantains**, with Haiti by far the largest (**Table 20**). Among the exporters of plantains, the Dominican Republic and Dominica report the highest volumes. (**Table 21**). However, in both cases the export volume is erratic.

Table 21. Caribbean: Average Exports of Plantains (Mt)

	1990	AVERAGE			2000
		1991-93	1994-96	1997-99	
Caribbean	3,491	5,866	6,816	5,890	2,574
Dominica	1,298	2,073	1,902	1,669	1,000
Dominican Republic	962	1,992	3,341	3,483	869
Saint Vincent/Grenadines	884	1,004	1,033	560	410

Source : FAOSTAT, 2000

Papaya production has been promoted in several countries and showed signs of taking off during the mid years of the 1990's (**Table 22**). However, in the case of Jamaica, exports declined in 1999 and 2000.

Table 22. CARICOM Average Papaya Exports 1990 - 2000 (Mt)

COUNTRY	AVERAGE			
	1991-93	1994-96	1997-99	2000
Belize	952	1,793	4,076	4,114
Jamaica	2,144	4,386	3,564	2,600
Trinidad and Tobago	78	44	178	402
CARICOM	3,183	6,306	7,969	7116

Source: FAOSTAT, 2000

Jamaica is the **yam** exporter from both the CARICOM region and the wider Caribbean, accounting for more than 80% of the exports. The data (**Table 23**) indicates that both the production and exports have been declining between 1995-2000. Given all the above results for the non-traditional sector, it is reasonable to conclude that the transformation to alternative exports is yet to be established in any sustainable manner.

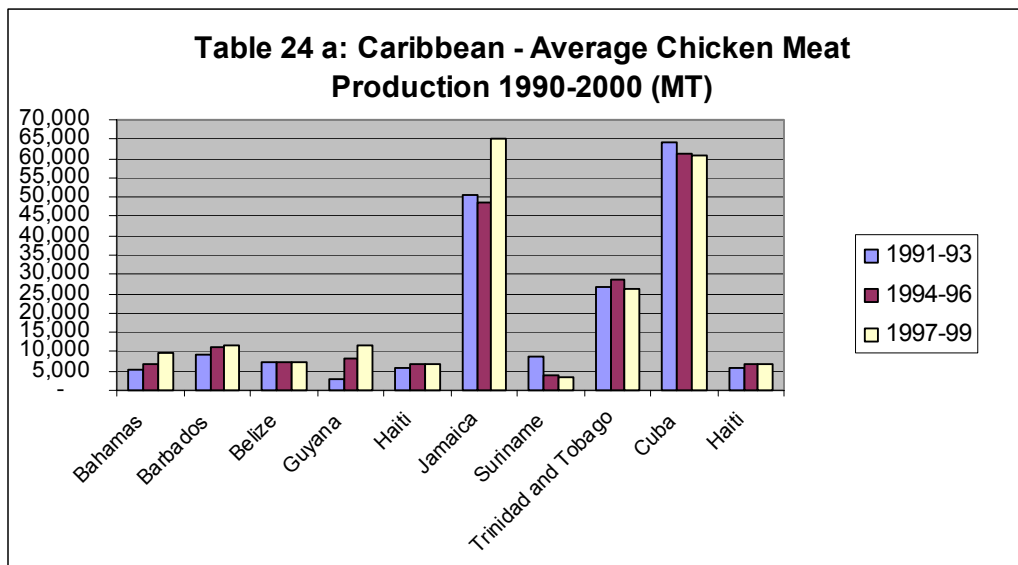
Table 23. Average Caribbean Yam Exports 1990 - 2000 (Metric Tonnes)

COUNTRY	1990	AVERAGE			2000
		1991-93	1994-96	1997-99	
Barbados	62	45	89	25	19
Dominica	107	245	461	680	680
Dominican Republic	755	746	505	307	240
Jamaica	8,293	10289	11728	7555	6,900
Saint Lucia	3	0.33	3	4	1
Saint Vincent/Grenadines	172	221	243	255	50
Trinidad and Tobago	1	2	1	0	0
CARIBBEAN	9,393	11547	13031	8825	7,890

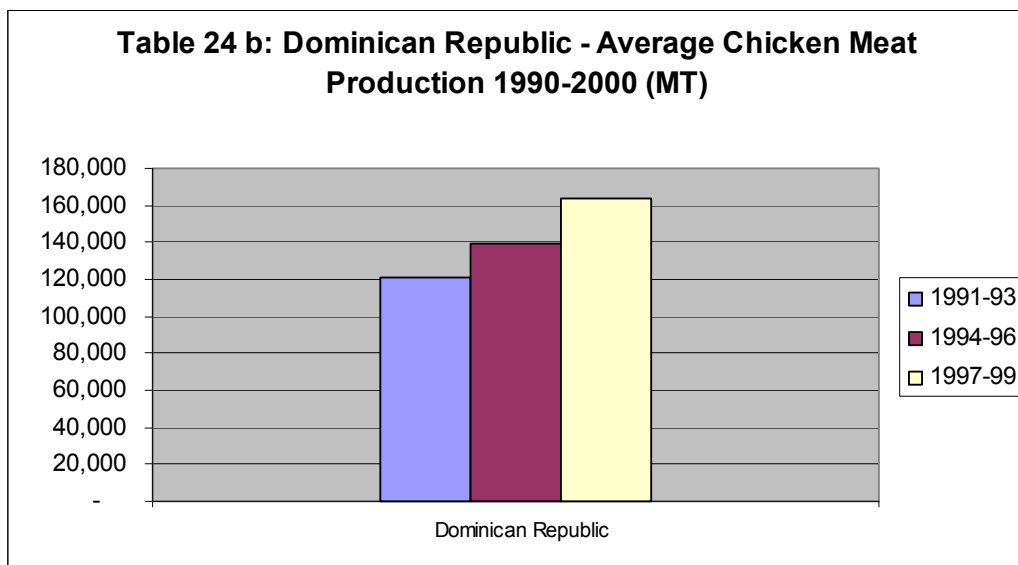
Source : FAOSTAT, 2000

2.3. Livestock

The livestock sector is small and generally considered uncompetitive in most CARICOM countries. However, it is still able to supply a significant part of the domestic fresh meat and processing product demand, mainly poultry. This a reflection of both the low level of meat consumption, except poultry, and the underdevelopment of the meat processing sector.



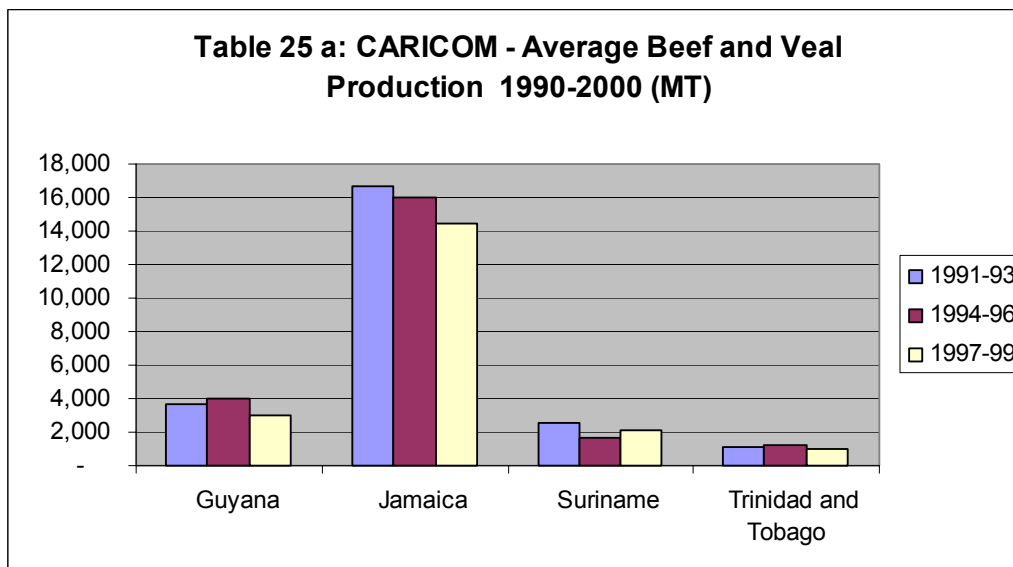
Source: FAOSTAT, 2000



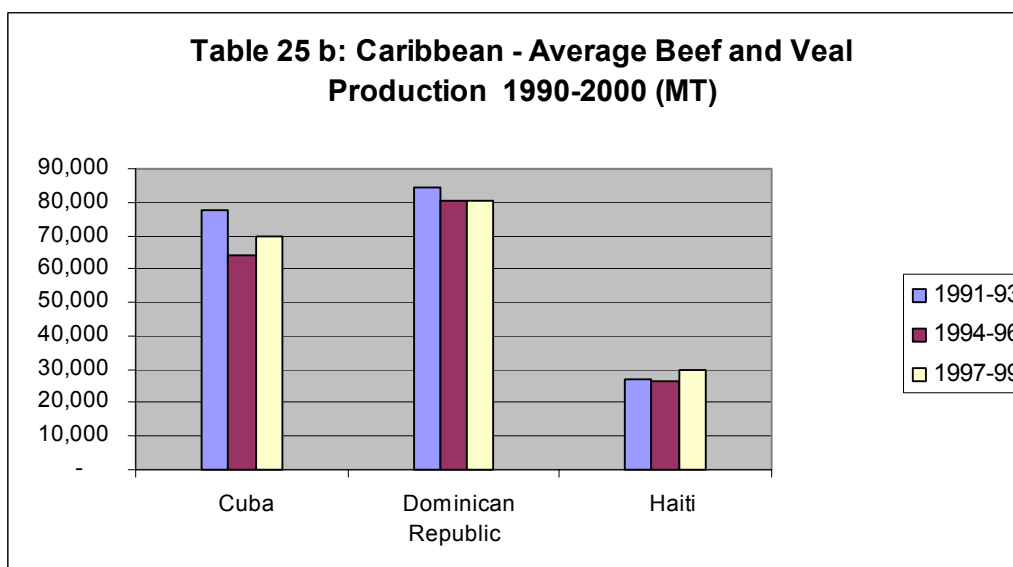
Source: FAOSTAT, 2000

There has been a tremendous expansion in **poultry** meat production during the 1990s in the Caribbean (**Table 24**). Three countries accounted for this increase, Guyana, Jamaica and the Dominican Republic. The growth of the chicken sector in Guyana was the greatest, but from a volume standpoint it was the Dominican Republic that caused an increase of close to 100,000 tons in the region. Cuba recovered only slightly from the sharp decline in the early 1990s. The region's **beef** production actually declined during the decade, reflecting the loss of production capacity in Cuba (**Table 25**). Haiti was the only country of the significant producers that evidenced

clear signs of an increase in production. **Milk** production similarly deteriorated, again



Source: FAOSTAT, 2000

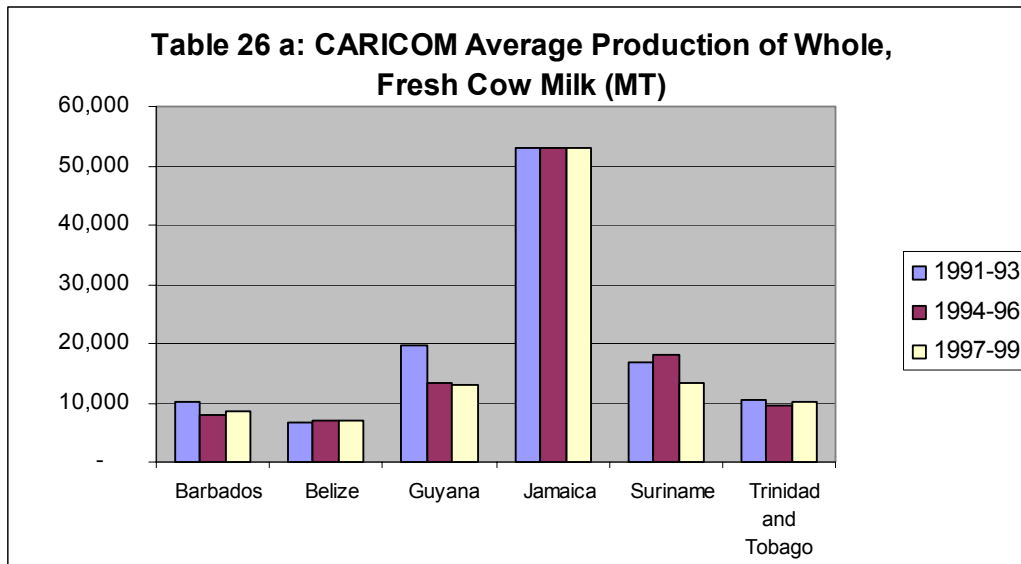


Source: FAOSTAT, 2000

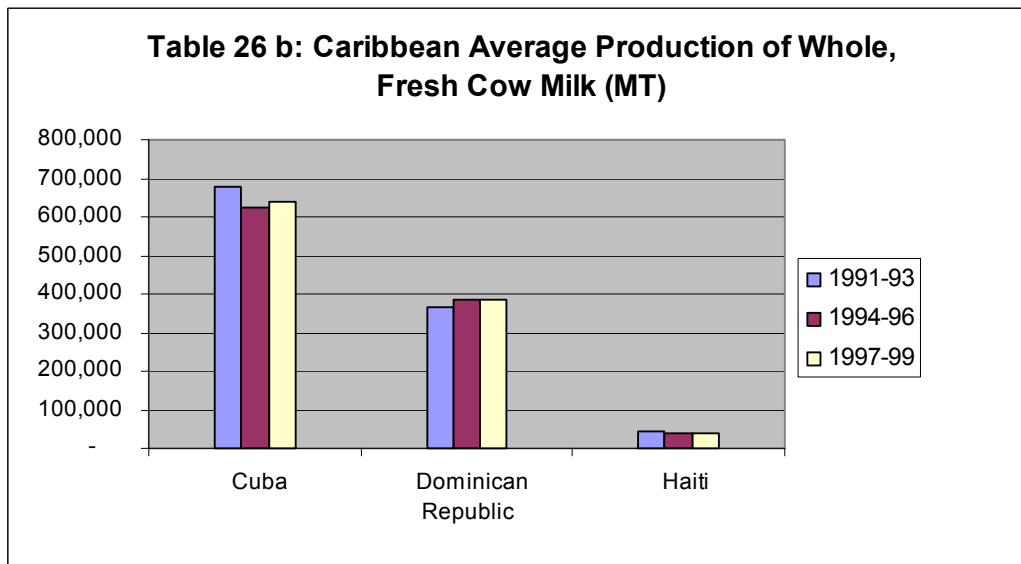
influenced by Cuba, despite small increases in Haiti and the Dominican Republic (**Table 26**). Within CARICOM, Jamaica is by far the largest beef, milk and poultry producer. However, it is generally felt that its livestock sector is very vulnerable to competition if its border protection were removed. Guyana and Belize are thought to be the countries within CARICOM with a potential to develop export beef cattle industries. To realise this potential the productivity of the sector will have to be increased and equally as importantly under systems of production and processing that meet the increasingly demanding standards of animal health, food safety and food quality.

The **poultry** industry in CARICOM requires special attention as a case might be made for protection on the basis of its multifunctionality. The CARICOM broiler industry

supplies about 60% of the CARICOM consumption, with the remainder being imported. The imports are usually of low value products, mainly leg quarters and backs and necks. This poultry meat consumption represents 86%(1998) of total meat consumed, six times the total of all other meats and is the most important source of animal protein. In some CARICOM countries the broiler industry is an important contributor to agricultural output, in Trinidad and Tobago it as high as 20% of agricultural GDP. Despite increases in productivity and industry growth in several countries the efficiency of the sector is not at a level where it can compete with imports, especially from the world's lowest cost exporters(USA and Brazil). The Caribbean Poultry Association has recently made its case for consideration as a sensitive industry, contributing to food security and as such be accorded special treatment where allowed in the WTO framework



Source: FAOSTAT, 2000



Source: FAOSTAT, 2000

4. Forestry

In the CARICOM region the forest sector development in the small islands is largely a government activity and consists mainly of programs to promote the planting of trees and the conserving of forests. Privately owned forest plantations are very scarce and are mostly confined to individual trees on agricultural land. Incentive programs to plant trees continue to exist across the islands but the actual impact of these programmes is considered very limited. The main reasons are that farms with small holdings are not inclined to plant forest trees and those private landholders with larger holdings do not depend on their income from agriculture. Timber that is sold from domestic production in the islands often therefore comes from government land. The royalty rates paid for these products are often far below market prices and this serves as a disincentive to any private activity in the forest sector. Most of the forest product demand in the islands of the Caribbean are met through imports. The situation is somewhat different in Trinidad and Tobago and Jamaica where private plantations can be readily found. In the latter the production is mainly for the domestic market, however, in Trinidad and Tobago there is an export trade amounting to US\$8.9 million (2000). Both countries import the majority of their needs, amounting to US\$88.9 million in Jamaica and US\$73.4 million in 2000.

In Guyana, Suriname and Belize and there is more scope for the development of a forest industry. Guyana is among the world's most forested countries, with almost 95 percent of forest and woodland cover. Generally the forest land in Guyana is state-owned, some logged through grants to private operators and some administered by village councils. Forest industries in Guyana produce mainly sawn timber and plywood from domestic forest resources. Palm hearts, roots and live animals (especially birds), are the most important non-wood forest products of Guyana. Other non-wood forest products include tannins and medicinal plants. In 1997, the forestry sector contributed approximately five percent to the GDP. Due to the abundance of natural forests, plantations have not been important. However, in the forest policy, forest plantations are mentioned as one of the ways to ensure watershed protection and rehabilitation (GFC, 1996 and IITF, 2000). Guyana's exports of forest products had a value of US\$38 million while its imports amounted to US\$3 million in 2000. Wood based panels and sawn wood account for 90% of the exports while only paper and paper board is imported. **Table 27** shows the trade and production of forest products.

Table 27. Guyana Forest Product Trade

	IMPORTS		EXPORTS		PRODUCTION	CONSUMPTION
	Quantity	Value	Quantity	Value	Quantity	Quantity
	(Mt)	US\$'000	(Mt)	US\$'000	(Mt)	US\$'000
Sawnwood	-	-	42,000	11,000	29,000	(13,000)
Sawnwood (NC)	-	-	42,000	11,000	29,000	(13,000)
Wood-Based Panels	-	-	87,000	24,000	92,000	5,000
Plywood	-	-	87,000	24,000	92,000	5,000
Paper and Paperboard	5,600	3,077	-	-	-	5,600
Newsprint	2,000	1,058	-	-	-	2,000
Printing+Writing Paper	300	271	-	-	-	300
Other Paper+Paperboard	3,300	1,748	-	-	-	3,300
Roundwood	-	-	54,000	3,409	1,187,873	1,133,873
Industrial Roundwood	-	-	54,000	3,409	308,000	254,000
Wood Fuel	-	-	-	-	879,873	879,873

Source: FAOSTAT, 2001

Suriname is also one of the most extensively forested countries, again with some 95 percent of the country's land under by forests. The forests are predominantly dry highland tropical rainforest with areas of wet lowland forest in the coastal belt, and a belt of dryland savannah forest dividing the two. The vast majority of Suriname's forest remains pristine although several significant new logging concessions have been recently granted. Suriname has a network of nature parks and reserves formally protecting around 7 percent of the country's land area. Surinam produces sawn timber and some panels, mainly for its domestic market. Small quantities of logs, plywood and sawn timber are exported, amounting to US\$3.2 million in 2000. Imports of forest products in 2000, mainly paper and paper board totalled US\$1.47 million. (Table 28).

Table 28. Suriname Forest Product Trade 2000

Product	IMPORTS		EXPORTS		PRODUCTION	CONSUMPTION
	Quantity	Value	Quantity	Value	Quantity	Quantity
	(Mt)	US\$'000	(Mt)	US\$'000	(Mt)	US\$'000
Sawnwood	-	-	7,000	1,812	78,000	71,000
Sawnwood (NC)	-	-	7,000	1,812	78,000	71,000
Wood-Based Panels	-	-	1,000	188	4,100	3,100
Plywood	-	-	1,000	188	4,000	3,000
Particle Board	-	-	-	-	100	100
Paper and Paperboard	1,550	1,471	-	-	-	1,550
Newsprint	1,000	871	-	-	-	1,000
Printing+Writing Paper	500	503	-	-	-	500
Other Paper+Paperboard	50	97	-	-	-	50
Roundwood	-	-	10,000	1,242	226,700	216,700
Industrial Roundwood	-	-	10,000	1,242	184,000	174,000
Wood Fuel	-	-	-	-	42,700	42,700

Source: FAOSTAT, 2001

Belize is heavily forested with around 90 percent of the total land area covered by moist sub-tropical forests and woodlands. Broad-leaved rainforests predominate, with common species including sapote (*Achras zapota*); mahogany, *Calophyllum brasiliense* and *Terminalia obovata*. A substantial proportion of Belize's forests are legally protected. More than 35 percent of the forest cover is in protected areas, and 18 percent is in formal forest reserves. Belize has small areas of gmelina and teak plantations. A modest quantity of industrial roundwood and sawn timber is produced, exports of which totalled US\$5.6 million in 2000. Belize imports panel and paper products.

Table 29. Belize Forest Production and Trade 2000

Product	IMPORTS		EXPORTS		PRODUCTION	CONSUMPTION
	Quantity	Value	Quantity	Value	Quantity	Quantity
	(Mt)	US\$'000	(Mt)	US\$'000	(Mt)	US\$'000
Sawnwood	15283	3140	8159	2935	35300	42424
Sawnwood (C)	15084	3065	115	35	5300	20269
Sawnwood (NC)	199	75	8044	2900	30000	22155
Wood-Based Panels	19109	6516	3489	1377	0	15620
Veneer Sheets	89	90	682	129	0	-593
Plywood	18512	6324	2802	1246	0	15710
Particle Board	24	3	5	2	0	19
Fibreboard	484	99	0	0	0	484
Wood Pulp	1999	642	1764	1026	0	235
Chemical Wood Pulp	1999	642	1764	1026	0	235
Paper and Paperboard	2418	2205	314	300	0	2104
Newsprint	27	17	0	0	0	27
Printing+Writing Paper	521	530	70	54	0	451
Other Paper+Paperboard	1870	1658	244	246	0	1626
Roundwood	519	75	0	0	187600	188119
Industrial Roundwood	519	75	0	0	61600	62119
Wood Fuel	0	0	0	0	126000	126000
Wood Residues	84	3	0	0	0	84
Other Fibre Pulp	0	0	0	0	0	0
Recovered Paper	46	4	3	0	0	43

Source: FAOSTAT, 2001

In the Dominican Republic, Cuba and Haiti the forest product production and forest cover varies considerably. The Dominican Republic is moderately forested, with slightly more than 40 percent forest and woodland cover. More than 25 percent of the country's land area has some form of legal protection. A pilot reforestation project has been started near San José de las Matas. Most of the wood produced in the Dominican Republic is burned as fuel. The country also produces a small quantity of packaging and printing and writing grade paper for its domestic market. Most demand for forest products is met by imports amounting to US\$192.7 million in 2000, mainly sawn wood, paper and paperboard. Cuba is characterised by around 15 percent forest cover. Much of the forest was cleared for cattle raising and sugar cane production. Cuba has established a significant plantation estate based on pines, eucalyptus, casuarina and gmelina. Protected areas cover 30 percent of Cuba including its marine platform. There are around 20 national parks and biosphere reserves. Cuba produces moderate quantities of sawnwood and wood-based panels, and smaller quantities of paper. Exports of forest products are negligible (US\$285,000 in 2000), while imports US\$39.7 million in 2000 complement domestic production.

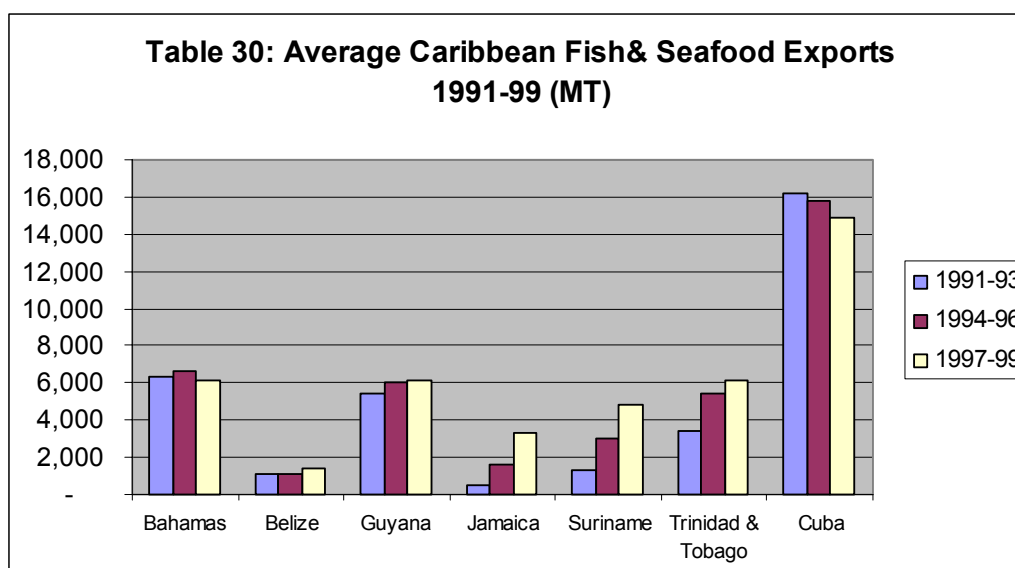
Haiti has very few remaining areas of natural forest, with forest cover reduced to around 1%. Most of the forests have been cleared for agriculture and there are now significant problems associated with resultant soil erosion and desertification. The remaining forests are mainly in inaccessible mountain areas and are classified as humid subtropical forests. Wood is an important source of fuel in Haiti and forestry was a significant industry, but the clearance of commercially available forests has left no large-scale forest industries in the country. Demand for industrial wood and paper products is mainly met by imports, in 2000 this totaled US\$11 million.

2.5. Fisheries

Fisheries, production consumption and trade in the Caribbean is influenced greatly by the demand of the tourist industry. As a result, several countries are both exporters and importers and some that might seem to produce enough for the domestic resident population do not have enough for total demand, including domestic export demand (tourism). This reality is also complicated by the different species and stocks available to particular countries.

The main fish and seafood producing countries in the region are Cuba and Guyana. The Dominican Republic, Trinidad and Tobago and Suriname produce similar volumes, about a third of Guyana's production. Although the Bahamas production is low they export a large percentage of the production and as a result export volumes similar to Guyana. (Table 30). The Dominican Republic and Jamaica are the major importers of fish, undoubtedly influenced by the size of their tourist industry.

The capacity for effective fisheries assessment and management remains one of the challenges for the fisheries industry. Even in countries where the appropriate institutions for monitoring and control of fisheries resources exist, and the most advanced fisheries management techniques are employed, there is difficulty coping with the high species diversity and obtaining information on the status of the important resources. This is recorded in the 2000 Report to Congress by the US



Source: FAOSTAT, 2001

National Marine Fisheries Service (NMFS), where it is stated that of the 57 stocks falling under the jurisdiction of the Gulf of Mexico Fisheries Management Council, the status of 46 (81%) was unknown or undefined, while of the 179 stocks falling under the jurisdiction of the United States Caribbean Fisheries Management Council, the status of 175 (98%) was unknown or undefined¹⁴.

¹⁴ WECAFC, The Status of Fisheries Resources in the Western Central Atlantic Region, FAO, Oct., 2001, pg. 9

There is considerable interest amongst some states in the region in expanding their fisheries for large pelagics, both oceanic such as tunas, bonitos and billfishes, and coastal, for example, king mackerel. In recent years fisheries for these stocks have increased considerably. FAO is currently assisting the CARICOM countries of the Western Central Atlantic Fishery Commission(WECAFC), through a Technical Cooperation Project, in planning future development of their fisheries for large pelagics.

Some of the most valuable fishery resources in the region are crustacean, in particular the Caribbean spiny lobster. Countries that export these products of high commercial value such as shrimp and lobster, traditionally have a positive trade balance in respect of fishery products. However, international demand, mainly in the form of exports to the United States and the growing tourism market, combined with the absence of adequate fishery management systems, could affect the sustainability of these fishery resources.

Despite the complexity of the fishing industry, it continues to be seen as having potential for reducing expenditure on imports and increasing export earnings, particularly with respect to seafood such as shrimp and lobster. It also creates jobs and increases possibilities for rural area development in the Caribbean. As such, it is viewed as a food security product, increasing incomes and as a source of nutrition to the people of the region. The realisation of this role for the fishing industry is interlinked with the question of the future of the small-scale artisanal fisherman and the production and infrastructure facilities that will promote this segment of the industry to a more dynamic, sustainable and entrepreneurial level. Critical components of this include increased facilities for storage and distribution of domestic fish supplies, encouragement of joint venture activities for development of more forward linkages(processing), as well as training in both artisanal and aquaculture fishing systems.

In the light of the great overall uncertainty regarding the status of even the more important fisheries resources of the region, it is important that some species or groups be monitored, especially those of conservation concern, in order to retain the social and economic benefits being derived from the region's marine resources. This may imply improvement to existing fishery monitoring and data collection programmes and systems. In addition, as many of the resources are shared between two or more countries, closer co-operation should be forged at a variety of levels.

2.6 Summary

As a Caribbean region it can be stated that in the decade of the 1990's there has been a decline in the two crops that have come to characterize the agricultural sector. Banana exports fell largely because of the declines in the St. Lucia and the Dominican Republic. The decline of sugar exports was greatly affected by declines in the largest producing countries, Cuba and the Dominican Republic, although exports increased from the four largest CARICOM producers. Non-traditional product production and exports has not been impressive, there being decreases in three of the four non-traditional exports (mangoes, plantains, root crops) considered. Production in the livestock sector saw an expansion in the poultry sector, with substantial expansion in

the two major producing countries, Jamaica and the Dominican Republic. Exports of fishery products have been stable, neither increasing nor decreasing. Obtaining national production statistics for this sector and the forestry sector is difficult and no firm conclusion can be drawn on its performance. Thus, the Caribbean region is losing ground on its traditional agricultural exports without seizing opportunities in what might be non-traditional, more processed food or import substitutes. During the period under review agricultural imports to the region expanded. The general challenge to Caribbean agriculture is clear, there must be productivity growth if the decline in the traditional export products is to be stopped and if opportunities to market non-traditional products are to be seized, the latter applies as much to exports as it does to food products into the domestic market, including the demand from the tourism sector.

3. Agriculture and Rural Sector Transformation – Challenges

An important step in promoting rural transformation in the Caribbean region lies in understanding the different types of production systems existing in rural areas. This is essential to the removal of constraints and to the development of opportunities to increasing their efficiency and growth. At least four sub-systems should be recognised, including the plantation agriculture system, the small farmer export food crop sector, the small farm food and livestock producer supplying the local market, and subsistence or marginal producers with minimal linkages to both the rest of the agriculture sector or the economy. This latter group, often populations living in the interior areas of the country, tend to be the least developed and most food insecure.

This section addresses the common challenges facing these different groups of rural residents and presents them in terms of challenges to removing constraints and challenges arising in terms of opportunities often proposed as routes to transformation.

3.1 Constraints

The purpose for removing constraints is generally to enable a country to become more efficient in its production and marketing activities. These activities are as much in the domestic market as they are in the regional and international arena. 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 realising these opportunities is the creation of an investment climate that encourages and enables entrepreneurs to produce goods and provide services. This investment climate includes both the indirect aspects of managing the macroeconomic variables and the direct support to agricultural and rural sector participants.

In the post-independence period, the national and agricultural policies and development strategies of many CARICOM countries have been directed towards 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 agro-industrial development, and in increased foreign investment. How this might be accomplished in the future is actually under negotiation as domestic agricultural policy and trade policy are now conditioned by recent international trade negotiations. Internal conditions that protected domestic agricultural markets with import restrictions and supported domestic agricultural production with subsidies are now restricted. External arrangements that allowed virtually unlimited access of export produce into specific foreign markets is on a timeline for elimination. In the face of these changes, CARICOM agriculture has much to do to address its sources of low productivity which places its survival under threat.

In the agricultural and rural transformation environment of the new century, the balance of responsibility for change is shifting. While the role of the government remains critical, the role of the rural entrepreneur has been immensely elevated. In other words, the paradigm has shifted from government programs to strategic alliances, recognising and involving many more levels and sectors in the transformation challenge. This changes the dynamics within and between the different actors, organisations, and institutions affecting agricultural development, implying very different approaches to addressing the agricultural and rural sector constraints.

Four general areas of constraints are identified in order to organise the approach to their reduction and removal. Critical aspects cutting across the CARICOM and Caribbean rural and agricultural sector are highlighted in each category.

Natural Resources and Infrastructure

Access to natural resources and infrastructure support services which facilitate their use in an efficient and sustainable manner remains a binding constraint in rural areas. The land question, physical access and tenure arrangements still requires a lot of progress to be made. Uncertainty in the land tenure system remains one of the intractable challenges and FAO has estimated that over about half of the rural households in the Caribbean lack land titles. The highly insecure tenure hampers investment in productive activities and constitutes a major obstacle to any significant progress in rural agricultural development.(FAO 2001). This contributes to increased rural to urban migration, at times resulting from a loss of access to land through an inability to pay rent or debts because of crop failures. During the period 1990 to 2000 there was an average decline of 1.25% in the size of the rural population.

Access to and management of water (drainage and irrigation systems), roads and transportation systems, energy supply and communication links remains to be improved. Their absence has become more important, as the new technology communicating information much more comprehensively and rapidly leads to those with access to the basic infrastructure leaving those without access further behind. The continued seasonal dependence on water remains one of the most critical infrastructure constraints in the region preventing farmers and rural entrepreneurs from establishing more dynamic systems of production and marketing.

Technology

The traditional constraints associated with infrastructure now impact newer areas determining productivity, particularly those related to using the new information and communications technologies. The potential influence of this technology on dissemination of information on improved cultural practices and management strategies in a timely way can be a determinant of whether some of the rural areas in the Caribbean will be able to move out of traditional low productivity production systems, a narrow range of crops and adopt improved technologies to compete effectively. The role of a regional agricultural research institute with adequate facilities, staff and linkages to serve as an effective source of technology development and promotion has to be conceived in the context of its capacity to use this new information infrastructure and technology as well as the more traditional product testing and improvement roles. Strategic alliances to promote information diffusion

and training are a critical component to measurable gains. Research institutions must be able to effectively contribute to the new factors driving agricultural development, among the most important being the application of biotechnology, information technology and the demands of the market.

Institutions

Institutional constraints have also evolved, to intertwine with the traditional weaknesses, but also to include several areas of new emphases. While agricultural education upgrading and rural organization strengthening remain challenges, the need to link these in dynamic ways to product market requirements and entrepreneurship (in the context of agricultural education), and to specialized and shared responsibilities in a commercial and social framework (in the context of rural organizations) calls for changes in our approaches to removing institutional constraints. Marketing and negotiation are as important as production, and in this area the lack of organizational and institutional capacity in rural areas undermines their ability to earn and transform.

An increasingly important determinant of agricultural sector expansion has been the prevalence of praedial larceny in countries across the region. It has been associated with increased revenue loss, high operating costs for security, reluctance of farmers to expand agricultural production, a disincentive to invest for the longer term, and with distorting prices in the domestic market as farmer product competes with “stolen farmer product” causing price to be lower than they might otherwise be. It is essential that the relevant institutions orient their activities to implement and enforce policies that have long been in place to address this constraint.

Policy Environment

Across the Caribbean region, the absence of a policy environment that not only provides incentives but also control is seen as a major constraint. In terms of incentives, the main challenges are national macroeconomic management (fiscal incentives and management, monetary policies) sectoral policy and correcting the bias against the agricultural and rural sector, policy consistency and continuity over time, social policy and safety nets in an increasingly uncertain global environment. The differential earning opportunities in the private as opposed to the public sector, and the industrial as opposed to the agricultural sector, are issues of policy when considered both from a human development and a national food security standpoint. In the context of control, globalization and trade liberalization have introduced more openness and with this has come many risks, some related to market penetration techniques, product quality and information. The policy environment needs to be strengthened to ensure that its citizens, its entrepreneurs and its economy do not suffer adversely or unfairly as a result of the rules in the new international economic environment. All these combine to create a policy environment, promoting investment and growth.

3.2 Opportunities

The transformation alternatives for rural areas across the Caribbean are rooted in tying the use of natural resources to poles of growth and creating a synergy that leads to increased agricultural and rural development. The challenge facing the partners in the agricultural and rural development process is to better understand the nature of these specific opportunities and to introduce the changes required at all the different policy, production, distribution and use levels to realise the potential gains.

Tourism

The agricultural and rural development tourism linkage opportunity has three imminent challenges in the Caribbean. Firstly, the dilemma of increased use of natural resources and the goals of sustainable development. This requires an integrated problem-solving approach across the economic, social and ecological sectors. Thus, environmental and social strategies ought to be fully incorporated as this path is contemplated. Secondly, there are the challenges of producing the quantity and quality of agricultural products with the reliability needed by the tourist sector. The investment in packaging and processing given low volumes and the reality of dependence on a volatile market help to explain the challenge to make progress in this area in the Caribbean. Thirdly, if rural residents moved to providing services and worked for the tourist industry in non-agricultural production areas there is the possibility of even greater food dependency on imports. This challenge is greater when CARICOM is viewed as a group of countries less than it is a region.

Niche Markets

The agricultural and rural development niche market opportunity is perceived as an outlet for the region's products. The challenges here are very much in the human resource arena. The health food, organic products and fair trade markets require skills in promotion, and negotiation to complement the more traditional production and product distribution skills. Linkages to regulatory and standards bodies to influence, understand, comply and be certified are essential to surmounting the challenges and earning success through this alternative.

Regional Markets

The integrated regional market opportunity challenge is to sell more agricultural produce in the regional market, both to the agro-processing sector and to consumers. Intra-regional trade as a percentage of total imports and exports are considered to consistently performed below expectations. In the period 1990-1998, for example, intra-regional imports accounted for only 8 to 10% of the region's total imports, and between 12 to 23% of exports, a significant portion of which is accounted for by petroleum exports from Trinidad & Tobago. Trinidad & Tobago's intra-regional imports averaged only 1.4% of GDP. Barbados was the largest regional importer of the MDC's, averaging 7.5% of GDP. The group of MDC's on the whole have generally traded more intra-regional exports than the countries of the LDC's. The regional market opportunity also includes the challenge of greater participation in the wider Caribbean market, including those of the Association of Caribbean States(ACS) and Central and South America.

Among interventions suggested to increase rural development to intra-regional trade has been for the establishment a regional “outgrower” scheme by a centralised body to provide secure contracts and fair pre-established prices to farmers for their produce which would guarantee some measure of stability of income and greater confidence for investment. Also, introduction (again) of a regional fiscal incentive policy on promoting the location of agro-processing industries in rural areas. In addition, for non-traditional products, the challenge remains to establish producers’ organizations to effectively negotiate market price and supply terms to wholesalers. These organizations could also provide small farmers with greater information input to help them adjust to achieve the market requirements characterizing intra-regional opportunities.

Rural Non-Farm Activity (RNF)

The expansion and further development of rural non-farm activity as a component of rural incomes is essential to increasing incomes derived from within the rural sector. The 1998 FAO Annual Report(State of Food and Agriculture) revealed that average non-farm income shares in Latin America and Asia accounted for about 40% of rural income. In nearly half of the countries, the farm employment growth rate was negative, while the RNF employment growth rate was positive in all of them. The overall share of rural population with its principal activity in the RNF sector rose from 24% to 29% over a decade. Examples of these activities include the manufacture or mixing of fertiliser; tractor services; crop processing; the manufacture, rental and repair of animal traction equipment; the construction or maintenance of market facilities. Establishing work linkages to urban areas also remains a challenge, especially through sub-contracting of small, rural, home-based activities.

4. Policy Issues

Policy issues in at least four interrelated areas are pressing in determining the transformation outcomes in the agricultural and rural sector in the Caribbean. Issues in the trade arena include achieving a higher level of competitiveness and negotiating opportunities that facilitate a smooth transition to increased participation in the new international economic environment. In the production and marketing area many of the long outstanding infrastructure and institutional policy issues still need to be resolved and newer challenges arise as opportunities and perspectives change. In the area of sustainable development, ensuring the protection of the resource base as a producing entity is one area in which perspectives have changed and issues related to the environment are ever more intertwined with rural resource use decisions. Food security in the region is a changing concept and how it is viewed in a policy context will affect greatly how programs providing incentives to the agricultural and rural sector are designed and implemented.

4.1 Trade

The trading environment changes, as agreed on under the Uruguay Round, have led to governments, entrepreneurs, community organizations and partners in the development process, paying much more attention to regulations and rules governing agricultural programs and commodity trade. This arises for many reasons, among them being to take advantage of opportunities, to comply with policy commitments, to protect domestic enterprises, and to ensure that standards and regulations are met with regard to commodities and services. While the economic environment is supposed to have less government intervention this does not necessarily mean less government action, especially at a policy and analytical level. One of the results of globalization and trade liberalization is possibly that there is now a greater need for monitoring and control, as goods and services are more freely traded. Particular attention and capacity building will be needed in the area of sanitary and phytosanitary requirements, both in terms of imports and exports. The allocation of resources, the development of the skills, the design of the appropriate systems for managing the domestic environment and negotiating in the international environment are among strategic policy issues that need to be addressed. There is more exchange of goods, more transactions, more negotiations, and as a result there needs to be more analysis and evaluation so as to formulate policies that minimize the economic and social impacts resulting from the new trading framework. There are several institutions at the international level (FAO) and at the regional level (regional negotiating machinery) that are assisting countries in the trade arena. To improve the standard of living for all its citizens the Caribbean needs to increase its rate of growth. Increased trade is one of the prerequisites for meeting this need.

4.2 Production and Marketing

The design and adoption of strategies for increasing efficiency at the production and marketing levels is a major issue facing the Caribbean region. Access by rural and agricultural sector entrepreneurs to land, capital, labor and technology remain the fundamental route to increasing productivity. Property rights and effectively

functioning markets are important components in improving this access. How governments resolve issues such as land titling will determine how land markets develop, similarly praedial larceny legislation and enforcement will affect investment incentives. The mechanisms for the development and management of productive infrastructure, such as irrigation, roads, and communication systems is critical to production and marketing. Technology development and diffusion systems must be strengthened to yield increasingly efficient production and marketing interventions. New systems of shared responsibility between public and private partners, at all levels and across all levels, are evolving. Analysis needs to be conducted and decisions need to be taken to foster these approaches in order to reduce the chances that opportunities facilitating transformation are not missed. Policy and its coordination must bring stakeholders together to ensure that the relevant support services promoting investment, production and marketing are in place and are characterized by sustainable management systems.

4.3 Sustainable Rural Development

The impact of the development process on people and natural resources must be constantly evaluated. The strengthening of rural institutions and investing in human capital in rural areas are essential to establishing effective decentralized processes that enable rural residents to participate in the identification of activities and the taking of decisions that directly affect them. Highly participatory and democratic processes that allow not only the sharing of information and analysis but also time to consider the impacts and alternatives is essential. Given the fragility and scarcity of many aspects of the natural environment in the region a stewardship approach to management of natural resources may need to be promoted, one founded on transparent and well publicized rights related to land use and water, biodiversity , fisheries and forests. Strategies for disaster preparedness and mitigation require investment in physical and institutional infrastructure. The inevitable tension between the maximization of global production, equitable distribution of benefits and human welfare, and the sustainable use of natural resources has to be addressed. A strategy of sustainable rural development addressing this should arise out of a national consensus. This is a policy challenge that faces many of our countries individually and the region collectively. The Regional Transformation project of CARICOM is an example of one of the institutions assisting in this regard.

4.4 Food Security

Food security in the Caribbean region is an increasingly complex issue. The recent events of September 11, when air transportation services were disrupted for several days, raised once more the question of the relative balance between domestic production and imports as a source of food. The question was posed - to what extent should some level of self sufficiency in food be pursued as a component of food policy? Tourism influences both the demand and supply of food. On the supply side it is tourism earnings that pay for the supply of food available to many domestic consumers across the region. From the demand standpoint tourism is also a potential user of food produced within the Caribbean. It is important therefore that the role and reliance on tourism be factored into the planning around food security strategies in the Caribbean. The level of income and its distribution across the country, employment

opportunities, and prices pulled up by the tourist sector also contribute to making the food security problem in the Caribbean a distribution and access problem as well. Trade related influences have been and are increasingly of greater importance in determining the food security of the region. Caribbean's trade perspectives are less certain now than in the past. The commitment to reduce preferential access of bananas, sugar and rice through the removal of quotas starting in 2006 exposes these countries to a substantial potential decline in foreign exchange receipts from those traditional products, which have formed a long-standing earnings base. Foreign exchange levels impact the amount of food imports as well as food production inputs that each nation can access. Globalization and trade liberalization have increased the need to focus on food quality, safety, and use. It has been stated that in the region the amount of products with exhausted dates of expiry, with labels that do not conform to minimum standards, and with dubious nutritional claims are increasing. This has led to the need for strengthening the capacities of Bureaus of Standards, Food and Drug administrations and other Caribbean food monitoring institutions. The links to food use and health have also moved up the agenda as greater import content in food consumption and fast food operations have been changing the food consumption patterns and increasing particular health problems.

The challenge for policy makers in the context of food security in the Caribbean region is closely linked to import dependency of the food supply, foreign exchange generation capacity of the tourism sector, the ability to diversify exports over the next five year period and the success in increasing the consumption of domestically produced foods. FAO has two projects underway in the Caribbean region directed at increasing food security, respectively through a focus on increasing domestic agricultural productivity, and trade development. The trends and challenges outlined in this document require continued careful analysis, programmatic decisions and policies to achieve the goals of sustainable development and food security for the region.