UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

TURNING LOSSES INTO GAINS: SIDS AND MULTILATERAL TRADE LIBERALISATION IN AGRICULTURE

UNITED NATIONS
New York and Geneva, July 2003

NOTE

- The symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.

- The views expressed in this volume are those of the authors and do not necessarily reflect the views of the United Nations Secretariat. The designations employed and the presentation of the material do not imply the expression of any opinion whatsoever on the part of the United Nations Secretariat concerning the legal status of any country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries, or regarding its economic system or degree of development.

- Material in this publication may be freely quoted or reprinted, but acknowledgement is requested, together with a reference to the document number. A copy of the publication containing the quotation or reprint should be sent to the UNCTAD secretariat:
Palais des Nations, 1211 Geneva 10, Switzerland.

UNCTAD/DITC/TNCD/2003/1

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

ACP	-	African, Caribbean and Pacific (group of States)
ADB	-	Asian Development Bank
ADF	-	Agricultural Development Fund
AGOA	-	African Growth and Opportunity Act (of the United States)
AIS	-	Agricultural Incentives Scheme
AMAD	-	Agricultural Market Access Database
AMB	-	Agricultural Marketing Board (Mauritius)
AMS	-	aggregate measurement of support
AoA	-	Agreement on Agriculture
AREP	-	Agricultural Research and Extension Project
ASCM	-	Agreement on Subsidies and Countervailing Measures (of the WTO)
ATPSM	-	Agricultural Trade Policy Simulation Model (of UNCTAD)
AVE	-	ad valorem equivalent
BADMC	-	Barbados Agricultural Development and Marketing Corporation
BAMC	-	Barbados Agricultural Management Company Limited
BAS	-	Barbados Agricultural Society
BBB	-	Barbados Blackbelly
BDS$	-	Barbados dollars
CAP	-	Common Agricultural Policy (of the EU)
CARDI	-	Caribbean Agricultural Research and Development Institute
CARIBCAN	-	Commonwealth Caribbean Countries and Canada
CARICOM	-	Caribbean Community
CBI	-	Caribbean Basin Initiative
CBS	-	Central Bank of Samoa
CBTPA	-	Caribbean Basin Trade Partnership Act (of the United States)
CCCT	-	Commonwealth Caribbean Countries' tariff
CCF	-	Caribbean Culinary Federation
CDB	-	Caribbean Development Bank
CET	-	common external tariff
CI	-	competitiveness index
CIDA	-	Canadian International Development Agency
c.i.f	-	cost, insurance and freight
CIRAD	-	Centre de Coopération Internationale en Recherche Agronomique pour le Développement
CoA	-	Committee on Agriculture
COMESA	-	Common Market of Eastern and Southern Africa
cs/lb	-	(US) cents per pound
CSO	-	Central Statistical Office (Government of Mauritius)
CTA	-	ACP-EU Technical Centre for Agricultural and Rural Development
DCs	-	developing countries
EBA	-	Everything-but-Arms (initiative of the EU)

EC	-	European Commission
ECCB	-	Eastern Caribbean Central Bank
ECLAC	-	Economic Commission for Latin America and the Caribbean
EDF	-	European Development Fund
EEZ	-	exclusive economic zone
EFG	-	Export Finance and Guarantee Scheme (Govt. of Samoa)
EPA	-	Economic Partnership Agreement (Cotonou Agreement)
EPS	-	Entry Price System
EPZ	-	export processing zone
EU	-	European Union
FAO	-	Food and Agriculture Organization of the United Nations
FRS	-	freight rebate scheme
FTAA	-	Free Trade Area of the Americas
GATT	-	General Agreement on Tariffs and Trade
GDP	-	gross domestic product
GEGS	-	Government Export Guarantee Scheme (of Samoa)
GNI	-	gross national income
GoB	-	Government of Barbados
GPT	-	generalized preferential tariff
GSP	-	Generalized System of Preferences
HACCP	-	hazard analysis critical control points
HS	-	Harmonized System (Harmonized Commodity Description and Coding System)
HTFA	-	heat treatment forced air
IEU	-	Irrigation Engineering Unit
IFAD	-	International Fund for Agricultural Development
IFRC	-	Islamic Federal Republic of the Comoros
IICA	-	Inter-American Institute for Cooperation on Agriculture
IOC	-	Indian Ocean Commission
ISO	-	International Standards Organization
kg	-	kilogramme
LDC	-	least developed country
LDCs	-	least developed countries
MADR	-	Modernization and Democratization Reserve (Govt. of Mauritius)
MAMR	-	Ministry of Agriculture and Marine Resources (Seychelles)
MARD	-	Ministry of Agriculture and Rural Development, Barbados
MCA	-	Mauritius Chamber of Commerce
MCCI	-	Mauritius Chamber of Commerce and Industry
MFN	-	most favoured nation
MSA	-	Mauritius Sugar Authority
MSS	-	Mauritius Sugar Syndicate
NAFTA	-	North American Free Trade Area (or Agreement)
NFIDC	-	net food importing developing country
NTB	-	non-tariff barrier

NTCs	-	non-trade concerns
OECD	-	Organisation for Economic Co-operation and Development
OECS	-	Organization of Eastern Caribbean States
PICTA	-	Pacific Island Countries Trade Agreement
PPP	-	purchasing power parity
RDC	-	Rural Development Commission
RPI	-	retail price index
SADC	-	Southern African Development Community
S&DT	-	special and differential treatment
SDEs	-	small developing economies
SIDS	-	Small island developing State
SIE	-	Sugar Industry Efficiency Act (of Mauritius)
SITZ	-	Seychelles International Trade Zone
SMB	-	Seychelles Marketing Board
SPARTECA	-	South Pacific Regional Trade and Economic Cooperation Agreement
SPS	-	sanitary and phytosanitary (measures)
SSG	-	Special Safeguard under Article 5 of the AoA
SSM	-	Special Safeguard Mechanism
STE	-	State trading enterprise
TBT	-	technical barriers to trade
TLB	-	taro leaf blight (disease)
TRIPS	-	Trade-related aspects of intellectual property rights (a WTO Agreement)
TROPRO	-	Tropical Produce Support Project
TRQ	-	tariff rate quota
UNCTAD	-	United Nations Conference on Trade and Development
UR	-	Uruguay Round
VAGST	-	value added goods and services tax
VRS	-	Voluntary Retirement Scheme (Mauritius)
WISIC	-	West Indian Sea Island Cotton
WTO	-	World Trade Organization

ACKNOWLEDGEMENTS

The publication of this book marks the conclusion of the UNCTAD project, Analysing specific Needs of Small Island Developing States in Multilateral Liberalization of Agricultural Trade. The project was designed and implemented in accordance with paragraph 133 of the UNCTAD X Bangkok Plan of Action (TD/386), which states:

> *"133. UNCTAD should assist developing countries in multilateral negotiations on agriculture. This should be supported by analytical work and technical assistance to developing countries on: (i) ways and means to improve market access for their agricultural products; (ii) domestic support, including in the context of their efforts to increase productivity and food security; and (iii) export subsidies and other kinds of export support. In this context, UNCTAD should analyse the impact on all developing countries of the reform process, as foreseen in Article 20 of the WTO Agreement on Agriculture, with attention being paid to the concerns of LDCs and net food-importing developing countries. In its analytical work, UNCTAD should also address the needs of small island developing economies. UNCTAD should further undertake analytical work on major agricultural concerns of developing countries."*

The aim of the project was to produce a set of comprehensive studies on the following issues: (i) the impact of "small-islandness" on the capacity of small island developing states (SIDSs) to benefit from multilateral agricultural liberalization; and (ii) policy options in the post-Uruguay Round WTO negotiations on agriculture from the perspective of SIDS.

In the period from April to September 2002, five studies were undertaken under this project: one diagnostic study, which provided a quantitative analysis, and four case studies, on Barbados, the Windward Islands, the Indian Ocean islands and the Pacific islands. The findings from the studies were presented at the Forum on Small Island Developing States and Agricultural Trade Liberalization held in Geneva on 7 November 2002.

The project was designed and executed by a team of officials from the Division on International Trade in Goods and Services, and Commodities: Miho Shirotori (the project manager), Luca Monge-Roffarello, David Vanzetti, Wojciech Stawowy and Jocelyn Maximo. The project received invaluable support and substantive contributions from Manuela Tortora and Pierre Encontre of UNCTAD, Roman Grynberg of the Commonwealth Secretariat, and Panos Konandreas of the Food and Agriculture Organization of the United Nations (FAO). Four case studies were undertaken, by Margaret Malua (on the Pacific Islands), Gary Melville (on the Windward Islands), Gregg Rawlins (on Barbados) and Jean-Michel Salomon (on the Indian Ocean islands). Michael Swidinsky, together with Luca Monge-Roffarello and David Vanzetti, carried out the diagnostic study. These studies constitute the core of the project.

We are particularly grateful to the Government of Japan, whose financial support made the implementation of the project possible.

INTRODUCTION

One of the core mandates of the United Nations Conference on Trade and Development (UNCTAD) has been to assist developing countries to effectively participate in multilateral trade negotiations, under the aegis of both the General Agreement on Tariffs and Trade (GATT) and, subsequently, the World Trade Organization and the current negotiations under the so-called "Doha Development Agenda". In recent years, UNCTAD's technical assistance activities in this area have been guided by the adoption of a "positive agenda" for developing countries.

The "positive agenda", as initiated in 1999 by the Secretary-General of UNCTAD, Mr. Rubens Ricupero, proposes a proactive, rather than reactive, negotiating agenda by developing countries in multilateral trade negotiations. This approach also aims at enabling developing countries to "... *build their capacity to identify their interests, formulate trade objectives and pursue those objectives in international trade negotiations*".[1]

Of course, individual developing countries also have their own specific interests and trade objectives, and issues under multilateral trade negotiations do not always suggest a common goal for all developing countries. The WTO negotiations on agriculture, in particular on market access, is one area where the division among developing countries is evident. While substantial reductions in tariffs on a most-favoured-nation (MFN) basis could increase the market share for agricultural exporting developing countries, it could well be as a result of trade diversion from other developing country suppliers whose preferential access to the market has been eroded. The estimated values of agricultural liberalization to developing countries as a whole should be treated with care, as some significant losses to a group of developing countries may be written off in the process of aggregation.

Concerned that their potential losses from agricultural liberalization had remained unrecognized in the WTO negotiations on agriculture, a group of small island developing states (SIDSs) requested UNCTAD in 2001 to undertake a detailed analysis on how best their interests could be reflected in these negotiations. Their main concerns were expressed as follows:

> *"In the case of Small Island Developing States (SIDS), their general weakness in agricultural production is a direct consequence of diseconomy of scale, diseconomy of scope, and high unit costs of input factors and transport, that are inherent to SIDS-specific characteristics, such as smallness, remoteness, geographical dispersion, vulnerability to natural disasters, scarcity of resources (land, water, human resources and other input factors). (...) Structural weaknesses have also limited SIDS' ability to take advantage of new trading opportunities, in particular as regards market access under the Uruguay Round. It must be noted that because of their inherent constraints, it would be extremely difficult for SIDS to be able to achieve higher levels of competitivity."*[2]

Objective of the Project

The UNCTAD project on Analysing SIDS-specific Needs in Multilateral Agricultural Liberalization aimed at the following two broad objectives: (i) to analyse how exactly "small-islandness" influences SIDSs' capacity to benefit from multilateral agricultural liberalization; and (2) to identify a set of possible policy options that would allow SIDSs, along with other developing countries, to benefit from ongoing agricultural liberalization.

Five studies were undertaken under the project: one diagnostic study and four case studies covering the

[1] See Positive Agenda and Future Trade Negotiations, UNCTAD (UNCTAD/ITCD/TSB/10), 2000.
[2] WTO, Communication from Dominica, Jamaica, Mauritius, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago to the Negotiations on Agriculture, (G/AG/NG/W/97), 29 December 2000.

Indian Ocean islands, the Pacific islands, the Windward Islands and Barbados. These studies are presented in Chapter I of this book. The findings from the studies were then discussed at a forum on Small Island Developing States and Agricultural Trade Liberalization, held in Geneva on 7 November 2002. These are summarized in Chapter II.

1. Diagnostic study

The objective of the diagnostic study was first to examine the pattern of agricultural trade of SIDSs in the world market, then to quantitatively assess the impacts of continued multilateral agricultural liberalization on SIDSs, using UNCTAD's Agricultural Trade Policy Simulation Model (ATPSM). The study found that SIDSs' agricultural trade was similar to that of the least developed countries (LDCs). It accounts for a much greater share in the economy than it does in other developing countries. In SIDSs, agricultural exports (imports) account for about 7.4 per cent (14.7 per cent) of the GDP, compared to the developing country average of 2.7 per cent (7.0 per cent). This suggests that SIDSs, like LDCs, are economically dependent on earnings from mainly tropical agricultural exports, as well as being highly dependent on imports of basic foodstuffs.

The main characteristic of SIDs' agricultural exports is their "concentration" in terms of product composition and destinations. They export mainly raw cane sugar, coconut, cocoa and bananas to two markets: the European Union and the United States, which account for over 52 per cent and 27 per cent respectively of their total agricultural exports. Almost all these exports benefit from preferential market access autonomously granted by these markets. This make their earnings from agricultural exports extremely vulnerable to external shocks, such as commodity price fluctuations and changes in import policies of the importing market. Concerning agricultural imports, almost all SIDSs studied are net food-importers. Their main imports comprise basic foodstuffs such as cereals, meat, dairy products and animal and vegetable fats.

Quantitative analysis in the diagnostic study confirmed the SIDSs' concerns that they are likely to lose out in the ongoing multilateral trade liberalization. The study estimated that agricultural liberalization would increase world prices of temperate agricultural products more, relative to prices of tropical products, leading to a rising food import burden on SIDSs. At the same time, as MFN tariff cuts will reduce the margin of preferences, SIDSs' export revenues and receipts of quota rents will probably fall as their market share is taken over by lower-cost suppliers. Under each of three liberalization "scenarios" created for the analysis, the ATPSM estimated that SIDSs would face the largest welfare losses among developing countries. Agriculture-exporting developing countries would make substantial gains while other agriculture-importing developing countries might lose under some scenarios, but not as much as SIDSs.

The study then tested if an additional element to these scenarios, that of special and differential treatment for SIDSs, might counterbalance their welfare losses. The assessment using the ATPSM model found that one compensatory measure, that of enhanced market access specifically granted to SIDSs, could turn their welfare losses to gains. This however would lead to another dilemma – the new gains to SIDSs would likely be offset by losses to other developing countries, especially agricultural-importing developing countries. These findings nevertheless encourage further attempts to seek out an optimal liberalization scenario, that would aim not only at maximizing global welfare gains, but also at achieving welfare gains to all parties involved in the negotiations.

2. Case studies

The main objectives of the four regional case studies were, first to provide an empirical examination of the impact of "small-islandness" on the agricultural trading environment of SIDSs, and secondly to identify what types of rules, or "modalities" (as referred to in the WTO negotiations on agriculture), are desirable from their own trade and development perspective in the continuing process of multilateral agricultural liberalization.

Concerning the impact of "small-islandness", all the studies indicated that the biggest problem is non-competitiveness of their agricultural products due to the lack of economies of scale in production (smallness and topographical condition) and high transport costs (remoteness). SIDSs' agricultural products are generally more expensive than the products they import or those that compete in the same markets as their exports.
With respect to agricultural products for domestic consumption, the studies suggest that many SIDSs used to employ strict border measures, such as quantitative restrictions on key products, to protect their domestic high-cost producers from external competition. Agricultural liberalization in the 1990s, some undertaken unilaterally and others through the implementation of the Uruguay Round Agreement on Agriculture (UR-AoA), has reduced SIDSs' use of such measures.

As for SIDSs' agricultural exports, their lack of competitiveness has been compensated by preferential market access granted to them in terms of tariff advantages or special quota arrangements. However, the prospect of such preferences continuing is becoming increasingly bleak due to the erosion of preferences under multilateral agricultural liberalization on the one hand, and to increasing attempts within the WTO to tighten the rules on non-reciprocal preferential trade arrangements which do not meet the criteria of non-discrimination among developing countries in terms of market access conditions. Two cases that have been brought by developing countries recently to the WTO Dispute Settlement Board question the WTO-consistency of non-reciprocal preferences granted by the EU.[3]
Another common feature of SIDSs as suggested by the studies is their vulnerability to external shocks. All the regions have experienced an abrupt, massive drop in agricultural production and trade in the last decade as a result of commodity price fluctuations and natural disasters (e.g. hurricanes or drought). Some agricultural products have survived such shocks, but some simply have vanished, as their production was unable to recover from damages caused by a shock.

The regional case studies also demonstrate that each region has its own specific areas of concern.
The study on the Indian Ocean Islands (Mauritius, the Comoros and Seychelles) provides an in-depth analysis of how "small-islandness" has negatively influenced the competitiveness of the these countries' agricultural products, which in turn explains why the generally accepted international economic theory – that trade liberalization increases efficiency gains – may not automatically apply to countries that have similar characteristics to SIDSs.

The study on the Windward Islands (Dominica, Grenada, St. Lucia and St. Vincent and the Grenadines) shows that these countries' development prospects are seriously threatened by the erosion of preference that have been granted to their single-export commodities (bananas). As their current effort to diversify from bananas would involve major economic adjustment costs, their main interest in the multilateral negotiations on agriculture is to ensure that the new rules will allow SIDSs adequate time and policy flexibility, along with technical and financial support from the international community, to achieve adjustments that would be the least costly to the economy.

The study on Barbados focuses on the development and implementation of government policies on agricultural revitalization in the context of the multilateral trade rules. While understanding the country's disadvantages in agricultural production vis-à-vis international competitors, the Government of Barbados considers that maintaining and enhancing the agricultural sector is important in the light of its non-trade concerns (i.e. food security, environment and landscape protection, which is essential also for sustainable tourism development) and rural employment). The study provides a comprehensive list of elements needed to be introduced into new WTO rules on agriculture, so as to enable Barbados to execute its agricultural policy measures without external policy constraints.

[3] Brazil requested the consultation on 1 October 2002 with the European Community concerning its export subsidies on sugar (WT/DS266/1), which partly refers to unfair treatment to Brazil's sugar exports to the EU vis-à-vis sugar exported by the ACP group. India requested on 6 March 2003 a panel to be established to examine whether the European Community's GSP scheme was discriminatory among developing countries (WT/DS246/5).

The study on the Pacific Islands (Fiji, Samoa and Tonga) shows their major concern is how to overcome the challenges arising from "small-islandness" in their efforts to build and improve their agricultural supply capacity. In these economies, where non-monetary agriculture accounts for over 70 per cent of total agricultural output, supply capacity improvement is directly linked to poverty alleviation. While the WTO trade rules on agriculture may have less impact on these islands compared to the other islands studied, it is reported that Samoa has recently faced difficulties in adjusting its agricultural policies to meet the conditions requested by WTO members in the ongoing negotiations for its accession to the WTO.

3. Forum on Small Island Developing States and Agricultural Trade Liberalization

The discussion forum on Small Island Developing States and Agricultural Trade Liberalization was attended by international researchers, Geneva-based negotiators, and representatives of relevant international agencies. The first segment of the forum was devoted to detailed discussions of the findings from the studies undertaken in the project. The participants then exchanged their views on a possible set of "optimal" modalities in the new WTO rules on agriculture that would accommodate SIDS-specific interests and concerns. The discussions at the forum also covered other areas of the WTO negotiations relevant to SIDSs, such as services, in order to examine the importance to SIDSs of the agricultural negotiations being undertaken under the aegis of the WTO.

Way Forward

This project is an example of the demand-driven, disaggregated approach of UNCTAD in providing technical assistance to all groups of developing countries, customized according to the specific needs of each different group of developing countries. UNCTAD continues to support developing countries, making the best use of its resources and applying a holistic approach to analysing the importance of trade in development.

DIAGNOSTIC STUDY

BY
UNCTAD STAFF MEMBERS*

* Luca Monge-Roffarello, Michael Swidinsky and David Vanzetti under the supervision of project manager, Miho Shirotori.

Blank page

Page blanche

TABLE OF CONTENTS

Blank page

Page blanche

I. AGRICULTURAL LIBERALIZATION A DOUBLE-EDGED SWORD

Small island developing States (SIDSs)[1] face a number of structural problems that render them less competitive in agricultural trade than many other developing countries. The United Nations, and in particular UNCTAD, has been studying the specific problems of island developing countries since the 1970s with a view to sensitizing the international community to their distinctive needs, and, more recently, to their specific vulnerability (Encontre, 1999).[2] To a greater extent than in most other developing countries, and notably as a result of acute limitations in the resource base and domestic market opportunities available to SIDSs, the magnitude, structure and variability of trade constitutes the most important factors affecting their socioeconomic performance and development capacity. On average, the ratio of merchandise imports to gross domestic product (GDP) is 47 per cent higher in SIDSs than in other small economies, while the ratio of their agricultural trade (exports and imports combined) to GDP is the highest amongst all countries. Larger countries can count on both their domestic and international markets to foster economic growth, but SIDSs have to rely on their export markets as the only avenue for reaping the benefits of economies of scale and capital accumulation (Streeten, 1993).

The constraints faced by SIDSs, which hamper their competitiveness in international markets are well documented.[3] Factors such as small size, insularity and remoteness, and problems associated with the local environment are all obstacles to achieving efficiency in production (Briguglio, 1995). Because of their small land base and population, SIDSs have limited ability to exploit economies of scale in agricultural production. Land scarcity, in particular, is a binding constraint on agricultural production, making SIDSs highly dependent on food imports. SIDSs are net agricultural importers and depend on a small number of agricultural exports to pay for their food import bill.

Similarly, small size restricts the capacity of SIDSs to diversify exports. The need to secure certain scale economies in production, distribution and other economic activities, together with the aim of taking advantage of some export market opportunities have, to varying degrees, led SIDSs to specialize in a narrow range of agricultural products. This has exposed them to instabilities in world markets. Insularity and remoteness also give rise to problems associated with transportation of agricultural imports and exports. SIDSs tend to import and export fragmented cargoes of agricultural products, leading to high per unit shipping costs. They do not have the flexibility of road transport in handling small shipments.

Additional costs might arise, in some instances, with the need to provide indivisible and expensive public goods to support agricultural production. This is bound to be particularly expensive given the limited production involved. Higher costs mean a loss of competitiveness, which in turn frustrates diversification.

Finally, environmental degradation (as well as proneness to natural disasters) and resource depletion may have serious implications for agriculture in SIDSs. Due to their small size, the depletion of arable land for economic development has had a disproportional effect on agricultural production. Limited freshwater and poor water management, along with population pressures and an expanding tourism industry, have led to water scarcity, further jeopardizing agricultural production.

---

[1] UNCTAD considers as SIDS all island developing countries and territories with a population of less than 5 million people. While both the United Nations and the Commonwealth Secretariat make use of population as the benchmark for determining smallness, there is no officially agreed international definition of smallness. The Vulnerability Report, 1985 of the Commonwealth Secretariat uses as a threshold a population of 1 million (subsequently increased to 1.5 million), but also regards as small States countries with a larger population, such as Papua New Guinea and Jamaica. Others (Briguglio, 1993, Downes, 1988) use a composite index of population, land area and GNP.

[2] In 1994, a Global Conference on the Sustainable Development of Small Island Developing States (Barbados, April/May 1994), resulted in a Programme of Action for the Sustainable Development of Small Island Developing States. In September 2002, the World Summit on Sustainable Development (Johannesburg, South Africa), in its Plan of Implementation (para.55), requested the United Nations General Assembly at its 57th session to consider convening a new international meeting on the Sustainable Development of Small Island Developing States

[3] See for example, Briguglio, 1995; UNCTAD, 1997; the Commonwealth Secretariat's Small States: Economic Review and Basic Statistics, Annual Series; Downes, 1988; Lockhart, Drakakis-Smith and Schembri, 1993; and Encontre, 1999.

Offsetting these inherent disadvantages to some extent are various preferential market access arrangement enjoyed by many SIDSs. These provide duty-free access to specific developed country markets. The European Union (EU) market for sugar is of greatest significance in this regard.

Liberalization is a double-edged sword for SIDSs. On the one hand, maintaining and obtaining market access is very important for trade-dependent economies. On the other hand, liberalization also provides additional competition, particularly if preferential access is eroded. While some SIDSs will be able to swim with the tide of liberalization, others will need help to adjust. Against this background, the objective of this study is twofold: to examine the pattern of agricultural trade of SIDSs in the world market, and to provide a quantitative assessment of the likely impacts of continued multilateral agricultural liberalization on SIDSs using UNCTAD's Agricultural Trade Policy Simulation Model (ATPSM). This is of particularly interest, given that liberalization may erode the preferential access currently provided to SIDSs.

In Section I the paper reviews the main characteristics of the agricultural sector in SIDSs, focusing on trade flows and constraints that affect their competitiveness in agriculture. An overview of the preferential trading arrangements available to SIDSs in their main markets and the importance of these schemes for their exports is also provided.

Section II provides a quantitative assessment, through the use of the ATPSM, of a number of scenarios derived from "modalities" that are being discussed in the ongoing World Trade Organization (WTO) negotiations on agriculture. The simulations show the potential impact of liberalization on prices, exports, government revenues, quota rents and overall welfare. While SIDSs as a whole may be worse off under certain assumptions, policies to improve their position are examined.

II. EXPORT-DEPENDENT SIDSs FEAR EROSION OF PREFERENCES

II.1 Agricultural production and trade patterns of SIDSs

For many SIDSs, the agricultural sector remains the backbone of their economies. It is characterized by a combination of large-scale commercial production of cash crops and a relatively small sector that produces food crops, primarily for local consumption. The most important food crops grown are starchy staples, mostly root and tuber crops. Rapid urbanization has lead to these staples being replaced by imported cereals (FAO, 1999a).

Annex I. and annex II. provide detailed trade statistics. The agricultural trade balance of selected SIDSs is shown in table 1. The import-to-export ratio differs greatly between SIDSs (see annexes for country break-downs), but as a group SIDSs are net agricultural importers — for every $1 exported, SIDSs import $1.10. Atlantic Ocean SIDSs have the highest import-to-export ratio, while Pacific Ocean SIDSs are net agricultural exporters.

Table 2 provides the top five agricultural import/export products of SIDSs by the degree of product concentration in their agricultural trade.

SIDSs import a wide variety of agricultural products, particularly cereals, meats, dairy products, and animal and vegetable fats. These agricultural imports consume 20 per cent of their total export earnings. For some SIDSs, their agricultural import bill exceeds total export revenue, for example, for Cape Verde by 240 per cent, Comoros by 197 per cent, Haiti by 117 per cent and Tuvalu by 109 per cent.

Table 3 compares the relative importance of agricultural trade of SIDSs with that of other country groups (developed, developing and LDCs). As exporters, SIDSs' agricultural exports are concentrated

in such products as raw cane sugar, coffee, cocoa and coconut. For many SIDSs, these few agricultural products are the main source of export earnings. On average, agricultural exports and imports by SIDSs account for 24 per cent and 14 per cent respectively of their total merchandise exports and imports; this shows a considerably higher dependence of their trade on the agricultural sector than the developing country average. In fact, this trade pattern of SIDSs is remarkably similar to that of the least developed countries (LDCs). In the case of Sao Tome Principe over 90 per cent of agricultural export earnings are derived from cocoa alone.

Apart from concentration of the type of exported products, SIDSs' agricultural exports also show a concentration of the destinations, further increasing their vulnerability to external shocks. As shown in table 4, the EU receives more than half of the total agricultural exports of SIDSs; it is the most important market for African SIDSs, accounting for 87 per cent of their agricultural exports. The Pacific SIDSs export around 65 per cent of their agricultural products (largely from Fiji and Papua New Guinea) to the EU, notwithstanding their geographical distance.

Similarly, the United States and Canada (though to a much lesser extent than the EU) are important markets for SIDSs, receiving 29 per cent of their agricultural exports. The Caribbean islands agricultural exports to these markets, range from 50 per cent in the case of Jamaica to 20 per cent for other, smaller, Caribbean Islands.

Japan captures only 3 per cent of total agricultural exports of SIDSs, but it has become an important market for the Pacific SIDSs, absorbing more than 6 per cent of their exports. This figure is substantially greater than the exports of SIDSs to: (i) Australia and New Zealand combined (despite the existence of the South Pacific Regional Trade and Economic Agreement (SPARTECA) between most Pacific SIDSs and these two countries); (ii) Mexico; or (iii) the whole of the South-East Asia region.

II.2 Preferential market access for SIDSs

The high geographical concentration of SIDSs' exports to the EU and the United States, coupled with a high level of product specialization, is probably due to the provision of non-reciprocal preferential market access to their products, stemming from historical trade relationships with these countries.

Preferential market access, in terms of tariff advantages and/or preferential quotas, are important for SIDSs agricultural exporters for two reasons. First, a preferential margin may provide substantial "quota rents" to SIDSs' exporters. Second, preferential margins, where substantial, can compensate for a general lack of price competitiveness of agricultural exports from SIDSs vis-à-vis low-cost exporters competing in the same markets.

This section provides an overview of preferential market access granted by the Quad (EU, Canada, Japan and the United States) to SIDSs' agricultural exports, and the values of such preferences.

European Union

Being the largest market for the agricultural exports of SIDSs, the EU has two preferential trading arrangements that are particularly important for SIDSs: (i) the EU/ACP Cotonou Partnership Agreement,[4] signed in 2000 between the EU 77 African, Caribbean and Pacific (ACP) States, 31 of which are SIDSs[5]; and (ii) the Everything-But-Arms (EBA) Initiative in favour of products originating in the 49 LDCs, 10 of which are SIDSs, under the aegis of the EU scheme of Generalized System of Preferences (GSP).

[4]Pending the ratification process, the Agreement was put into provisional application on 2 August 2000, according to the modalities laid down in Decision No 1/2000 of the ACP-EC Council of Ministers of 27 July 2000 (2000/483/EC, Official Journal L 195 of 1.8.2000: 46).

[5] SIDSs' new ACP members include the Cook Islands, the Federated States of Micronesia, the Marshall Islands, Nauru, Niue and Palau.

The Cotonou Partnership Agreement, which provides for an eight-year rollover of the previous trade preferences granted under Lomé (with minor improvements), grants SIDSs beneficiaries with duty-free access for most of their agricultural products,[6] except for a limited number of agricultural products on which a tariff reduction is granted. For SIDSs, particularly important are the three protocols on bananas (affecting mostly the Windward Islands), sugar (Fiji, Mauritius, Barbados, Jamaica, Trinidad and Tobago) and rum (Caribbean SIDSs) — those products alone account for 69 per cent of SIDSs' total exports to the EU.

The Cotonou Agreement creates a considerable level of preferential tariff margin not only over applied rates on a most-favoured-nation (MFN) basis, but also over most GSP rates (excluding the EBA). Table 5 shows that, for those products whose average MFN rates are above 20 per cent (accounting for almost half of SIDSs' exports[7] — largely sugar and bananas), SIDSs' agricultural exports to the EU receive preferential margins of 25 percentage points against MFN rates and 15 percentage points against GSP rates.

The EBA provides LDCs with duty-free treatment for all agricultural products (except bananas, rice and sugar) until 2007, including very sensitive products such as beef, dairy products, fruit and vegetables (fresh as well as processed), cereals, starch, vegetable oils, confectionary, pasta and alcoholic beverages.[8]

For those LDC-SIDSs, the EBA has now made the EU's GSP a more favourable scheme than the Cotonou preferences in terms of tariff treatment, product coverage and preferential tariff margins. The EBA initiative has also imparted greater stability to EBA-GSP preferences for LDCs, as the EU has undertaken to maintain this special preferential treatment for an unlimited period of time, exempting such treatment from the periodical reviews of the basic GSP scheme.

The United States

The United States recently renewed its GSP programme (applicable until 2006), which provides duty-free access for 5,000 tariff line items to over 100 beneficiary countries and territories. The GSP programme covers agricultural and fishery products that are not otherwise duty free or are subject to tariff quotas/ceilings. An additional 1,783 lines have been added to the list of eligible products for LDC recipients.

The recently approved United States Trade and Development Act of 2000 has expanded the preferences granted to sub-Saharan Africa under the African Growth and Opportunity Act (AGOA),[9] and to the Caribbean Basin under the Caribbean Basin Trade Partnership Act (CBTPA). The AGOA beneficiary countries (including SIDSs such as Cape Verde, Sao Tome and Principe, Mauritius and Seychelles) now receive a "super GSP"[10] (i.e. duty-free access for a wider range of products than the "normal" GSP programme).[11] The CBTPA provides trade preferences similar to those given under the AGOA to 24 beneficiary countries of the Caribbean Basin Initiative (CBI),[12] most of which are SIDSs. It also provides NAFTA-equivalent tariff treatment for certain items previously excluded from duty-free

[6] Duty-free treatment is also granted to fish and fish products, subject to specific rules of origin requirements.

[7] This figure is 88 per cent for African SIDSs.

[8] On most of such products, the pre-EBA GSP provided a percentage reduction of MFN rates, which would apply only to the ad valorem duties, thus leaving the specific duties still entirely applicable. This is no longer the case, as all dutiable products that were previously granted only a limited margin of preference or were subject to quantitative limitations are now entirely liberalized for LDCs.

[9] For basic and detailed information about United States legislation on the GSP programme (Title V of the Trade Act of 1974 as amended) and for detailed information about the AGOA, refer to the text and appendices of the Handbook on the GSP Scheme of the United States, UNCTAD document ITCD/TSB/Misc.58, of June 2000, also available on the UNCTAD GSP website. All AGOA-related documentation is also available on the Internet at: www.agoa.gov.

[10] All designated AGOA beneficiaries, including non-LDCs, have been granted duty-free treatment on all GSP-eligible products, including those on which only least developed beneficiary countries used to enjoy GSP treatment. This implies that former special GSP LDCs' preferences have been somewhat diluted, since other sub-Saharan non-LDC African countries can now benefit from them.

[11] In addition, the "AGOA-enhanced" GSP benefits will be in place for a period of eight years, and this longer-than-usual period of time is expected to provide additional security to investors and traders in qualifying African countries.

[12] These countries are: Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, Costa Rica, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Montserrat, Netherlands Antilles, Nicaragua, Panama, St. Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, and British Virgin Islands.

treatment under the CBI programme (e.g. canned tuna). The NAFTA-parity is provided with a view to partly offsetting the negative effects in term of trade and investment diversion experienced by these countries since the entry of Mexico into NAFTA.[13]

Under these preferential schemes, approximately 60 per cent of SIDSs' exports (which include products such as cigars, beer, alcohol and certain food preparations) enjoy preferential margins of, on average, 4.2 percentage points over corresponding MFN rates. The preferential tariff margin increases — up to an average of 35 percentage points — as the MFN tariff increases. However, these large tariff margins apply only to a small share (6 per cent) of the total agricultural exports of SIDSs. It was not possible to calculate preferential margins for some 14 per cent of SIDSs' exports to the United States, largely sugar, as MFN tariffs are given in non-ad valorem technical rates and their ad-valorem equivalents (AVEs) could not be calculated.[14].

Canada

Canada provides two distinct preferential market access regimes that are of immediate relevance to SIDSs' agricultural exports: the Generalized Preferential Tariff (GPT) and the Commonwealth Caribbean Countries Tariff (CCCT) under the preferential trade agreement of the Caribbean Countries and Canada (CARIBCAN). The GPT, which is equivalent to the GSP, grants reduced tariff rates or duty-free access to 184 beneficiary countries and territories, including all SIDSs. In addition to the general GPT, LDCs receive duty-free market access to an additional 570 tariff lines. A further expansion of the preferences to LDCs came into effect on 1 January 2003, allowing for duty-free and quota-free access for all but a number of "sensitive" products.[15]

The CARIBCAN provides most Caribbean SIDSs[16] with duty-free market access for a large number of products, including all agricultural products. However, preferential tariff margins on those products are generally low, as corresponding MFN tariffs are already low — MFN duties on more than 53 per cent of SIDSs' agricultural exports are already zero. As these exports consist mainly of fresh fruits and vegetables, the Caribbean exporters seem to benefit more from their geographical proximity than from the tariff preferences they receive. In other words, for the majority of agricultural exports (some 94 per cent, including those exports already receiving duty-free MFN), SIDSs receive "empty preferences", either because of zero MFN duties or because similar preferential treatment is given to other developing countries.

Japan

Trade preferences for SIDSs (as for other developing countries) are made available under the Japanese GSP scheme, which was recently reviewed and extended for another decade, until 31 March 2011.[17] The extent of the product coverage and tariff treatment provided to beneficiary countries varies considerably among agricultural products.

Preferential GSP tariffs applicable to developing countries range from duty free to 20 per cent reduction in MFN duties. LDC beneficiaries enjoy duty-free entry for all products covered under the GSP scheme plus an additional list of products. Preferences to LDCs have been improved by increasing the number

[13] For example, according to the Caribbean Textile and Apparel Institute, approximately 150 companies have closed their operations and relocated to Mexico since NAFTA came into force.

[14] However, the ad valorem equivalent of all rate components estimated by the United States International Trade Commission is reported to be at 3.5 per cent only. (The US2002 Tariff Web-Database at http://dataweb.usitc.gov/scripts/tariff2002.asp contains further information.)

[15] Limited exceptions are provided for products such as dairy, poultry and eggs. See " Regulations Amending the General Preferential Tariff and Least Developed Country Tariff Rules of Origin Regulations" of 23 December, 2002 at http://canadagazette.gc.ca/partII/2003/20030101/html/sor19-e.html

[16] Anguilla, Antigua and Barbuda, Bahamas, Bermuda, Barbados, Belize, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, and the Turks and Caicos Islands.

[17] Under the scheme currently in force for fiscal year 2002/2003, Japan grants preferential treatment to 164 developing countries and territories. For detailed information on the current scheme, please refer to the Handbook on the Scheme of Japan 2002/2003 (document UNCTAD/ITCD/TSB/Misc.42), also available on the Internet.

of tariff items for duty-free and quota-free access specifically available to all 49 LDC exports as long as they request them.[18]

Despite the existence of the GSP scheme, the overwhelming majority of SIDSs' agricultural exports enter the Japanese market on a MFN basis — 66.3 per cent of SIDSs' exports, most importantly coffee and copra, enter Japan at zero MFN rates, while for another 31.5 per cent (including sugar, pumpkins and rum), preferences are simply not available. This implies that further agricultural trade liberalization, might not have a significant effect on the preferences granted to SIDSs in this market, but it might result in new trade opportunities for all those SIDSs products still affected by high MFN duties.

II.3 Liberalization and the erosion of preferences

Further liberalization in agriculture will affect the value of preferential market access currently provided to SIDSs. The impact of liberalization will depend on a number of factors. First, the impact of the erosion of preferences depends on the level of the preferential margin granted to the beneficiary exporting countries vis-à-vis other exporters. In terms of a geographical grouping, further MFN tariff cuts may result in a much faster erosion, if not elimination, of preferential tariff margins available to the Caribbean island countries than those to other SIDSs, as the preferences received by the Caribbean SIDSs on some 70 per cent of their exports are empty. However, the impact of the preference erosion on the trade flows of the Caribbean SIDSs would be on average less dramatic, as they are already exposed to a certain degree of competition with other developing country exporters, either on a MFN basis or within a GSP scheme of an importing country. Conversely, the African SIDSs enjoy the highest level of preferences in terms of preferential margins and product coverage, and are therefore subject to a relatively lower level of erosion of preferences following MFN tariff cuts. They will, however, loose quota rents by the reduction of out-of-quota (or outquota) tariffs. Further, should these preferences be considerably reduced as a result of the negotiations on agriculture, or be legally challenged by other WTO member(s),[19] adjustment costs arising from the preference erosion to these preference-dependent countries may be significant, as they have been rather sheltered against world competition.

Second, whether preferential tariffs are "linked" to or "de-linked" from MFN rates may result in different impacts upon the values of preferences after MFN tariff cut. In the case of the ACP-EU preferences, there are still a number of products whose preferences are expressed as a percentage of the MFN rate (and thus linked to MFN rates). If the initial MFN rates are sufficiently high, further MFN cuts will reduce the nominal preferential margins of the ACP preferences only marginally. Beneficiaries of such preferences are more likely to retain tariff advantages not only over MFN tariffs, but also over other preferences providing a less extensive degree of market access treatment. This might apply to such products as palm, cigars, fruits and vegetables (e.g. oranges, onions, garlic, carrots, peaches and cabbages), although SIDSs' exports of the latter items are currently limited. Where preferences to SIDSs are de-linked from the corresponding MFN rates, as in the case of the GSP scheme of the US, the only difference among various preferential schemes is the extent of the product coverage rather than the preferential margins provided. In this case, MFN tariff cuts will inevitably reduce SIDSs' preferential margins.

Third, the recent initiatives undertaken to provide better market access for LDCs and countries in the sub-Saharan African region have yet to fully materialize. As they are creating additional and substantial preferential margins for certain SIDSs and for certain products, the negative impact in terms of preferential margins coming from further trade liberalization might be somehow mitigated.

Finally, although the current preferences are wide, they could be expanded further. For example, the ACP-EU preferences are quite limited for agricultural and processed products, which are subject to the

[18] With the recent addition of Zambia, the Democratic Republic of the Congo, Kiribati and Tuvalu to the list of GSP beneficiaries, there are currently only two LDCs (Comoros and Djibouti) that, despite being eligible for duty/quota-free treatment under the Japanese scheme, have yet to request this.

[19] The current attempt by Brazil and Australia to dispute the EU sugar regime at the WTO shows how critical the situation might become.

Common Organization of the Market (listed in the "Joint Declaration concerning agricultural products"),[20] and for products that are subject to specific rules under the Common Agricultural Policy (CAP). Many of those sensitive products (namely meat and diary products, cheese, tomatoes, mandarins and some cereals) are subject to a combined tariff which is made up of an ad-valorem component and a specific-rate component. Preferential market access for those products normally takes the form of an *elimination* of the ad-valorem component and a *reduced* level of a specific-rate component whose ad-valorem equivalent can go up as high as 80 per cent.

Similarly, for certain categories of processed agricultural products under the Harmonized System (HS) — chapters 4 (milk and milk products), 17 (sugar and sugar confectionery), 18 (cocoa and cocoa preparations), 19 (processed foodstuffs), 20 (beverages) and 21 (miscellaneous edible preparations) — the EU maintains a system of a technical tariff that includes the so-called agricultural component (i.e. a combination of ad-valorem and specific duties that may vary according to the presence in different percentages, or quantities of certain ingredients, such as sugar, starches or glucose and milk fat, or proteins contained in the final products). However, it is the specific component that constitutes the bulk of the protection and not the ad valorem part.

In addition, around 15 products, mainly fruits and vegetables, as well as some processed products such as fruit juices, are subject to the entry price system (EPS).[21] Neither ACP nor GSP beneficiary countries are granted special preferences for products subject to the EPS.[22] The Cotonou Agreement envisages the amelioration of ACP preferences[23] during the transitional period, and the European Commission has already tabled a proposal for improving the current market access conditions given to the ACP countries.[24]

III. SURVIVING AGRICULTURAL LIBERALIZATION: A QUANTITATIVE ASSESSMENT

The ongoing WTO negotiations on agriculture are expected to result in further reductions, if not an elimination, of tariffs on and trade-distorting subsidies to agricultural products in the world. A recent UNCTAD study estimates that a worldwide reduction of 50 per cent in all agricultural tariffs will bring about an aggregate welfare gain of $21.5 billion to the world.[25] However, the distribution of the welfare gains is likely to be uneven among regions. The same study suggests that the welfare gains to some groups of developing countries, particularly those in sub-Saharan Africa and Latin America, that are dependant on non-reciprocal preferential treatment, may be substantially less than the gains to such regions as Oceania, South-East Asia and North Africa.

Insignificant welfare gains, or indeed losses, to SIDSs from multilateral agricultural liberalization may be due to: (i) a rise in agricultural prices induced by liberalization, and (ii) the erosion of preferences.

---

[20] See the Joint Declaration concerning agricultural products referred to in Article 1(2)(a), containing the preferential treatment applicable to agricultural products and foodstuffs originating in ACP States, Annex to Decision 1/2000 of the ACP-EC Committee of Ambassadors of 28 February 2000, on transitional measures valid from 1 March 2000 (EU OJ L 217, 26.8.2000: 189 ff.).

[21] The EPS trade regime has replaced the old reference price system as one of the results of the "tariffication" process carried out in the Uruguay Round, whereby all non-tariff measures had to be converted to bound tariffs. To explain briefly how the EPS works, it is useful to think of it as a dual system where two separate sets of tariffs apply according to a core variable that is represented by the entry price. Applicable tariffs are either ad valorem or specific duties. Under this system, as long as the c.i.f. import price of a particular product complies with the entry price (i.e. is either equal or higher) a "general" bound tariff applies. However, if the import price falls below the entry price, an additional duty is charged on top of the general one, up to a maximum tariff level (also bound). In reality, the system is slightly more complex, since there are several entry prices for the same product, and for each of them a different additional duty applies. Indeed, and although set a priori, entry prices change according to seasons, being lower during the harvest season in the EU, so as to provide maximum protection to EU producers.

[22] Under the Euro-Mediterranean agreements with Morocco and Israel, for example, the EU has granted reductions of entry prices subject to quota levels on some products for Morocco and oranges for Israel. Bearing in mind the functioning of the entry price system, this preferential margin may end up being the most effective, since these countries will be effectively able to undercut the supply price of all the other suppliers.

[23] Article 1 of Annex V of the ACP-EU Partnership Agreement

[24] Proposal for a Council regulation on "the arrangements applicable to agricultural products and goods resulting from the processing of agricultural products originating in the African, Caribbean and Pacific States (ACP States)", Brussels, 21.06.2002 COM(2002) 335 final 2002/0129 (ACC)

[25] Cernat, Laird and Turrini, Back to Basics: Market Access Issues in the Doha Agenda, UNCTAD, 2002.

It is thought that agricultural liberalization would raise world prices of temperate agricultural products more, relative to prices of tropical products, leading to an increase in food import bills for SIDSs, which import temperate products and export a narrow range of tropical products. At the same time, as MFN tariff cuts reduce the margin of preferences, importers are likely to seek supplies from low-cost countries. For example, assuming exporters of sugar to the EU are receiving EU prices, any lowering of those prices will make other exporters, such as Brazil, more competitive.

This section examines the likely impacts of agricultural trade liberalization on SIDSs under different liberalization "scenarios", with a view to identifying liberalization "modalities" that would at least "compensate" for possible negative impacts from liberalization, if not creating welfare gains.

III.1 The ATPSM modelling framework

To assess the potential impacts of agricultural liberalization on SIDSs, UNCTAD's Agricultural Trade Policy Simulation Model (ATPSM) Version 1.1 is used in this study.[26] ATPSM is a partial equilibrium model that can be used to evaluate agricultural trade policy changes in the main areas covered by the Uruguay Round Agreement on Agriculture (AoA) – market access, export subsidies and domestic support. The model distinguishes between bound and applied tariffs, as well as between inquota and outquota tariffs on products under tariff rate quotas (TRQs). It can be used to assess the impact of policy changes on quota rents, forgone and received. As quota rents are an important contributor to agriculture in SIDSs, this feature of the model is desirable in applications discussed here.

Unlike a general equilibrium model, ATPSM is confined to the agricultural sector, and does not account for interactions with other sectors of the economy. As a result, capital and labour used in agricultural production cannot be reallocated across non-agricultural sectors in response to a shock. It is assumed that this limitation will have little bearing on the empirical results, since SIDSs have few alternative sectors for resources to shift into from agriculture.

ATPSM can simulate and evaluate the various agricultural trade policy changes that may be suggested in the WTO negotiations on agriculture, such as:

- MFN (bound or applied) and/or TRQ inquota tariff cuts;
- Changes in TRQ quantities;
- Reductions in trade-distorting domestic support (e.g. market price support);
- Reductions in export subsidies; and
- Different percentage changes in all the above policies, applied to selected countries or country groups and commodities.

The ATPSM model produces five categories of economic estimates: (i) volume changes in production, consumption, imports and exports; (ii) trade value changes (changes in export, import and net trade revenue); (iii) welfare changes (changes in producer surplus, consumer surplus and net government revenue); (iv) price changes (at world, wholesale and farm gate levels); and (v) changes in tariff quota rents – in 161 countries, including 25 of the 32 SIDSs members,[27] for the agricultural commodities shown in table 7.

---

[26] The ATPSM equation structure and other details can be found in annex 1 or in UNCTAD, 2002.

[27] The definition of small island developing States is somewhat debatable. Possibly contentious in the ATPSM list are Cuba, a large sugar exporter, and Haiti. Other SIDS included in ATPSM are: Bahamas, Barbados, Cape Verde, Comoros, Cuba, Dominica, Dominican Republic, Fiji, Grenada, Haiti, Jamaica, Kiribati, Maldives, Mauritius, Papua New Guinea, Sao Tome and Principe, Solomon Islands, St. Lucia, St. Vincent and the Grenadines, the Seychelles, Trinidad and Tobago and Vanuatu.

ATPSM is both simple and complex. Its simplicity derives from linear demand and supply curves. The complexity follows from the policy detail in the model. For this reason it is necessary to explain in the next section how the model works. Next we look at the initial data, particularly the distribution of rents. We then postulate some likely liberalization scenarios, examine the results and the implications.

Quota rents

The Uruguay Round led to the establishment of TRQs: a two-tier tariff system based on import quotas. Imports below the quota level are levied at rates that are substantially lower than the corresponding outquota MFN tariff rates. During the Uruguay Round, the quota quantities were either set as 3 per cent, growing to 5 per cent of the level of domestic consumption observed during the 1986-1988 base period, or they were based on historical trade flows. Not all countries utilize the TRQs; only 43 WTO member countries established over 1,370 TRQs.

The introduction of a two-tier tariff system created a new category of economic effects — tariff quota rents. A quota rent is the difference between the outquota and inquota tariffs times the value of the quota, (as illustrated in figure 3). Assuming the quota, q, is full and the domestic price reflects the higher outquota tariff, $t2$, exporters with quota can supply goods over the lower tariff, $t1$, and receive the higher domestic price. Once the quota is filled, outquota imports are taxed at the higher tariff rate and no further rents are generated. Clearly, reduction in outquota tariffs reduces the quota rent.

An important question concerns the distribution of the rents between exporters, processors, distributors, taxpayers and consumers, on which the effects of liberalization largely depend. Rents may be captured by the government by auctioning rights to import or export, but often they accrue to other groups, depending on how quotas are allocated. There is, however, no one uniform method for the administration of TRQs; thus there is no general rule on how quota rents and tariff revenues will change with trade liberalization. In this study, it is assumed that all the quota rents in the sugar market accrue to the producers in exporting countries. For the remaining products, the rents are assumed to be shared equally between exporters and importers. The rents not captured by exporters are assumed to accrue eventually to government revenue in the importing country, instead of being transferred to consumers in the importing countries.

To estimate the actual size of a quota rent, it is necessary to have observations of global quotas, bilateral quotas, inquota and outquota tariff rates, world market prices and imports. To determine how the rents are allocated between countries requires some judgment.

The size of the global quotas (i.e. the total level of imports at the lower tariff level) are obtained from annual notifications made to the WTO by TRQ-using countries, but these notifications do not always provide a breakdown of quotas among different exporting countries. The model uses bilateral trade flows to estimate the distribution of global quotas among countries.[28]

The final key assumption relates to the quota fill rate (i.e. the ratio of actual imports to the total TRQ quantity of the product concerned). Ideally, the quota fill rate should determine the domestic price, so that if the quota is unfilled, domestic prices should be determined by the inquota tariffs, and prices should be high only if the quota is filled or overfilled. However, it is often observed that quotas are unfilled but domestic prices are nonetheless high. This may be because administrative constraints prevent the quotas being filled. More to the point, countries with high domestic prices are unlikely to accept their erosion by a shift in the supply of imports. As a result, the assumption here is that the outquota tariffs (or possibly the applied tariffs) determine the domestic market price. This implies that global quotas should not exceed imports, and quotas are reduced to the level of imports where the data suggests this is necessary. The calculation of tariff revenues and rents in the model is based on these assumptions.

[28] For this reason, estimated rents may differ from reality in cases where a country exports at the over-quota level in addition to its quota share.

The assumptions made above imply that changes in inquota tariffs and TRQ quantities will not have price and production quantity effects, as these instruments are not binding. They do, however, change the distribution of rents.

Data

Data on production quantity for the year 2000 are compiled from FAO supply utilization accounts (see FAOSTAT). Price data are from the FAO Yearbooks, using an average for the period 1996–1998. Parameters on elasticities and feedshares are also provided by FAO. These are based on a trawling of the literature and are not econometrically estimated specifically for the model. Inquota tariffs, outquota tariffs and the size of the global quotas as notified to the WTO are obtained from the Agricultural Market Access Database (AMAD)[29] and aggregated to the ATPSM commodity level using a simple average wherever trade exists. Specific tariffs are converted to ad valorem equivalents based on unit values calculated for each country at the Harmonized System (HS) six-digit level. Data on trade-distorting domestic support and export subsidies are derived from the notifications submitted to the WTO. Bilateral trade flow data for 1995, which were used to allocate global quotas to individual exporting countries, are provided by UNCTAD. The UNCTAD Trade Analysis and Information System (TRAINS) database is a source of applied tariff information which determines whether cuts in bound rates are effective.

The main drawback to using ATPSM for this study is that it does not include information on bilateral tariffs (e.g. preferential tariff rates), and thus cannot capture trade diversion and trade creation effects from changes in preferential arrangements. However, this is consistent with the assumptions that the quotas are filled and that changes in rents do not change production.

III. 2 Current protection levels and rents

Good indicators of the ongoing level of border protections are global tariff revenues and rents, as these are the product of the level of protection (i.e. the higher the MFN tariffs, the greater the tariff revenues and rents for a given import flow) and trade flows. The base period data of these global indicators are shown in the first two columns in table 8. Across commodities, temperate goods are subject to relatively higher levels of border protection in developed countries than tropical products (with the notable exception of sugar and bananas). Developing countries, however, may levy substantial tariffs on tropical products.

Also shown in the table are the initial values of three variables important to SIDSs: tariff revenues; export revenues and rent received. It is immediately apparent that sugar is the key commodity of interest to SIDSs, capturing more than 50 per cent of the total export revenues and 90 per cent of rents received. Next in importance are vegetable oils (copra), coffee, cocoa and bananas. The bulk of the SIDSs' export revenues and virtually all the quota rents received emanate from EU and United States sugar policies. The major supplier of EU sugar imports (1.3 million tonnes) is Mauritius with a quota of 487,000 tonnes. The United States imports 1.1 million tonnes of sugar under a quota from developing countries plus Australia, the only developed country exporter of cane sugar. China has imports of 0.6 million tonnes, the bulk of which come from Cuba, Thailand, India and Australia.

Multilateral trade liberalization will influence the level of these three variables: tariff revenues and rents received are most likely to decrease, while export revenues may improve. The next section examines the extent of such impacts and how they vary according to different trade liberalization scenarios.

[29] AMAD is available to all users at: http// www.amad.org.

III.3 Five alternative scenarios

Taking into account the proposals and discussions made so far during the ongoing WTO negotiations on agriculture, the following five scenarios were selected for examination:

(1) Ambitious

Across-the-board reductions in outquota (MFN) bound tariffs using the Swiss formula with a coefficient of 25, and total elimination of export subsidies and production-distorting domestic support.

(2) Conservative – the Uruguay Round approach

A 36 per cent cut in outquota bound tariffs, 36 per cent reductions in export subsidy spending and 20 per cent cut in trade-distorting domestic support in developed countries; two thirds of these reductions in developing countries and no reductions in LDCs.

(3) Tariff-50

A 50 per cent cut in outquota bound tariffs in all countries.

(4) Preferential

Scenario 3 plus removal of inquota tariffs on SIDSs' exports under quota.

(5) Compensatory

Scenario 3 plus removal of all tariffs on all SIDSs' exports.

Scenario 1, consisting of elements that have been proposed to the WTO negotiations on agriculture by major agricultural exporters such as the United States and the Cairns Group members, will lead to substantial agricultural liberalization. The "Swiss formula" is designed in such a way that it eliminates tariff peaks and substantially reduces tariff escalation.[30] A coefficient of 25 (as proposed by the United States and the Cairns Group) sets an effective tariff ceiling at 25 per cent, and achieves very deep cuts indeed — tariff rates of 100 per cent, 200 per cent and 300 per cent are reduced to 20 per cent, 22 per cent and 23 per cent respectively.

Scenario 2 is almost a replica of the liberalization approach employed during the Uruguay Round. The only difference is that in this scenario, a linear cut of 36 per cent applies to the tariffs across all products, unlike the actual Uruguay Round approach where tariffs on sensitive commodities were reduced by the minimum reduction rate of 15 per cent so long as an average cut of 36 per cent across products was achieved.

Scenario 3 focuses purely on the impact of tariff cuts. Reductions in MFN bound tariffs (putting aside proposals to make reductions from the applied tariffs) are likely to have the greatest impact on SIDSs through the erosion of preferences, causing reductions in quota rents. Scenario 3 is also a reasonable middle ground between scenarios 1 and 2, and will serve as a benchmark for assessment of the impact from the following scenarios 4 and 5.

Scenarios 4 and 5 are aimed at assessing whether SIDSs could be compensated for the losses stemming from preference erosion by changes in other policy variables, such as the size of the inquota tariffs or the TRQ quantities. Scenario 4 looks at the likely impact of elimination of inquota rates for SIDSs' exports under TRQs. Scenario 5 looks at a situation of elimination of all outquota (MFN) rates applicable to SIDSs, which is equivalent to an expansion of TRQs only to SIDSs. As the quota rents are determined by (i) the difference between the inquota and outquota tariff rates, and (ii) the quota quantities, changes in one of the variables (e.g. global reductions of MFN tariffs) may possibly be offset by changes in the others (e.g. SIDS-specific expansion of TRQs).

[30] The "Swiss formula" takes the following structure: T1 = (T0/c)/(T0+c), where T1 is the new tariff rate, T0 is the initial tariff rate and c is the reduction coefficient.

III.4 Results

In order to interpret the outcome of the simulations, we need to take into account the following elements. First, reductions in outquota tariff rates do not necessarily mean that the gap between domestic and world prices is reduced by 50 per cent. In cases where applied tariffs are below the bound outquota rates, a 50 per cent cut in the outquota tariffs may result in a less than 50 per cent cut, or even no change at all, in the applied rates. Second, EU sugar and dairy production is assumed not to be responsive to changes in prices, due to the existence of production quotas for those products.

Prices

The impact on world prices for the first three scenarios is shown in table 9. The price changes are correlated with the level of distortions removed. That is why the "ambitious" scenario shows relatively greater price rises on products that are subject to high levels of tariffs, trade-distorting domestic support and/or export subsidies (e.g. dairy products, wheat) than the other two approaches. The model estimates similar levels of price changes for the "conservative" scenario and the "tariff-50" scenario. As expected, the results shows that prices of tropical products (e.g. sugar, copra oils and bananas) increase less than those of temperate products, which implies a decline in the terms of trade facing the majority of SIDSs.

While price rises are indicative of the level of distortions, of greater interest to policy makers in SIDSs are the impacts of liberalization on export revenues, tariff revenues, changes in quota rents and overall welfare. The welfare impact is calculated based on the changes in (i) consumer surplus, (ii) producer surplus, and (iii) government revenues. The estimation of these data are shown for SIDSs and for the world in table 10.

Export revenues

A comparison of estimated export revenues across different scenarios suggests that export revenues increase in proportion to the level of market access improvement. The increase in export revenues under the "ambitious" scenario ($40.4 billion) is almost three times greater than the estimated increase under the "conservative" scenario.

Under the "tariff-50" – or the benchmark – scenario, export revenues to SIDSs rise from $2.1 billion to $2.4 billion, an increase of $166 million (or 8 per cent). Sugar ($69 m), other tropical fruits ($ 19 million), citrus ($16 million) and bananas ($17 million) are the major beneficiaries. Scenarios 4 and 5 do not show changes in export revenues from the benchmark, due to the assumption that changes in quota rents alone do not affect the supply decisions of the producers of the exported products concerned (hence the level of export quantity remains the same). This assumption is reasonable for small changes in quota rents.[31]

Tariff revenues

Tariff revenues are determined by the combination of tariff rates, import quantities and import prices. The simulation results in table 10 show a wide variation in the degree of changes in tariff revenue across different scenarios. Concerning tariff revenues at the global level, the "ambitious" scenario will lead to the smallest losses, largely because tariff revenues forgone are offset by reductions in domestic support and export subsidies. The continuation of spending on these government subsidies results in substantial losses in government revenues in the "conservative" and benchmark scenarios.

Looking at scenarios 4 ("preferential") and 5 ("compensatory"), reducing inquota or outquota tariffs on SIDSs' exports involves losses in tariff revenues for importing countries equal to the gains in quota

[31] This assumption may no longer hold if suppliers depend on the receipt of rents to cover their costs. At some point, declining rents will lead to a fall in production below the quota level.

rents received by SIDSs' exporters. In the "compensatory" scenario, importing governments' revenue losses are $187 million over and above the $4.18 billion in the benchmark scenario. The magnitude of a global loss in tariff revenues (or an increase in quota rents for SIDSs) is determined by the degree of rent capture. It is assumed in this study that half the loss in tariff revenues (i.e. quota rents) for all products except sugar is clawed back by the importing government. These revenue losses effectively arise from transfers between taxpayers and producers, and do not involve any efficiency gains or losses. Concerning SIDSs, the benchmark scenario leads to a 13 per cent reduction of tariff revenues from the estimated initial level of $425 million, to $369 million.

Quota rents

Global quota rents in the agricultural sector represented in the database are initially estimated to be around $9.7 billion prior to any policy change. In total, SIDSs receives $285 million in the initial database, of which $272 million is from sugar (table 8). The rents are reduced by $166 million under the benchmark scenario, of which $160 million can be attributed to sugar. About $16 million of this loss is offset by allocative efficiency gains (due to tariff reductions in the SIDSs themselves) and increased export prices (due to tariff reductions in other countries).

A comparison of the changes in SIDSs' quota rents under the "preferential" scenario with the benchmark scenario suggests that eliminating inquota rates for all SIDSs' inquota exports does not fully offset the effect of outquota tariff reductions. The additional quota rent of $88 million over the benchmark level can be attributed to sugar ($82 million). Much of this accrues to Cuba, which is the major supplier to China. The quota gains may be overestimated, as the model does not take into account preferential tariffs provided by major markets (e.g. the EU. The initial EU inquota tariffs are 13 per cent on bananas and 2.3 per cent on sugar (on which the inquota tariff revenues of the EU is calculated), but almost all SIDSs' inquota exports of sugar and bananas already receive duty-free access under the EU-ACP Cotonou Partnership Agreement. However, China imports 0.6 billion tonnes over an inquota tariff of 15 per cent. This accounts for much of the increase in quota rents under the preferential scenario.

The "compensatory" scenario, on the contrary, results in a $83 million increase in the quota rents transferred from the initial level, and a $249 million increase from the benchmark result. That is to say, removing tariffs on all SIDSs' exports within and out of quota (which is equivalent to increasing the size of global quotas to accommodate all of SIDSs' exports) is more than sufficient to offset the $166 million losses in quota rents resulting from a 50 per cent cut in MFN tariffs by importing countries.

Welfare

Putting together the various changes in prices, exports, tariff revenues and quota rents, the greater the degree of liberalization, the greater are the welfare gains to the world as a whole (scenarios 4 and 5 do not change global welfare from the benchmark). A greater global welfare increase under the "tariff-50" (benchmark) scenario than under the "conservative" scenario arises from gains by developing countries as a whole, as more substantial tariff cuts by developing countries under the benchmark case increases largely due to consumer surplus increases in those countries. However, the impact of liberalization on SIDSs appears to be negative — welfare gains for SIDSs are expected only under the compensatory scenario.

Table 11 provides a breakdown of the welfare impacts of each of the five scenarios across different groups of countries. It is apparent that gains from agricultural liberalization to SIDSs are more limited compared to other groups of countries listed. Under the "ambitious" scenario, for instance, only SIDSs are expected to incur welfare losses while all other groups gain. Under the "conservative" scenario, in which export subsidy reductions are relatively important, LDCs will also experience a welfare loss due to a combination of higher import prices and the absence of efficiency gains from liberalization (LDCs are exempted from making reduction commitments), though they will make welfare gains of $800

million in other scenarios. Welfare gains to a group of developing country agricultural importers appear to be modest — they experience gains only under the "ambitious" scenario, whereas in other scenarios import price rises and losses in tariff revenues lead to welfare losses. Extending compensation to the SIDSs, (scenario 5) tends to make non-SIDSs slightly worse off. The major costs are borne by the developed countries, predominantly those of the European Union and the United States, which provide compensation through extended preferential access.

A breakdown of the welfare impact under the benchmark scenario — for individual SIDSs by commodity — is presented in table 12. The largest welfare losses anticipated are incurred by Mauritius, Jamaica and Fiji. The major losses by commodity occur in sugar (due to loss of quota rents) and wheat, dairy products and meat (due to increases in food import prices).

The importance of quota rents to the welfare figures highlights the assumption about their distribution. In an alternative simulation, where all rents are assumed to accrue to importers, SIDSs' welfare under the benchmark scenario rises by $16 million, rather than falling by $166 million.

III.5 Some limitations

The major limitation of this analysis is the lack of knowledge of the distribution of quota rents. This is unfortunate, as these have a considerable bearing on the overall results for SIDSs. Another limitation is that this model is likely to overestimate the amount of quota rents accruing to the world in general, due to the assumption that quotas are effectively filled and that outquota or applied tariffs, rather than inquota tariffs, drive domestic prices. Rents accruing to SIDSs in particular may be further overestimated as the model does not take into account various reciprocal or non-reciprocal preferential tariffs most SIDSs receive in major markets for their agricultural exports. A final consideration is the assumption that producers don't respond to changes in rents, which further implies no trade diversion. These are reasonable for small policy changes but less so for elimination of tariffs. Preference erosion is expected to benefit low-cost producers from liberalization of markets in which they were excluded from preferential market access (e.g. Brazilian sugar in the EU market).

IV. CONCLUSIONS

In spite of these limitations, several implications can be drawn from the results.

First, preferences provide significant benefits to some SIDS members, and trade liberalization will lead to some erosion of these preferences. This will have a significant impact in some cases, particularly for those SIDSs currently enjoying quota rents. Sugar and banana producers are likely to be the sectors most affected. Yet the magnitude of the overall impact depends on the chosen scenarios, being the highest in the "ambitious" scenario and the lowest in the "conservative " scenario.

Second, the results of the simulations suggest that there is scope for these countries to be compensated. This was considered to be desirable in two distinctive ways. One possibility would be to provide inquota duty-free treatment for all those SIDSs' exports already benefiting from quotas. Although the gains are insufficient to compensate entirely for the rent losses stemming from the benchmark simulation ("tariff-50" scenario), they are nonetheless positive for SIDSs. However, there might be individual SIDSs currently not capturing quota rents that may be inclined to favour liberalization, as estimates indicate that if quota rents are ignored there are positive net benefits from improved market access and efficiency gains from domestic reform. Similarly, low-cost SIDS producers may find themselves shut out of markets by the import quota system and may be favoured by the erosion of preferences.

Another avenue bringing significant benefits to (certain) SIDSs would be to expand import- duty-free quotas to cover all SIDS exports. According to the model's estimates, this would entirely compensate

for losses in the rents. Given the high degree of specialization by SIDSs on a limited number of products, additional preferential quotas appear, therefore, to guard beneficiaries against the erosion of preferential tariff margins and quota rents. However, this assumes that beneficiary countries are capable of filling the additional quotas. Tellingly, this particular scenario, that has been selected as a possible modality to compensate SIDSs, would have no, or very limited, effects on the welfare gains of developing countries.

Finally, compensation, if any, might be sought both within the WTO framework and bilaterally. In fact, given the high geographical concentration of SIDS exports in a few markets, there may yet be scope for improving the effectiveness of non-reciprocal preferential market access via expansion of product coverage, expansion of quantitative limits on preferential market access, or lowering of preferential tariff rates, with a view to offsetting the impacts of MFN tariff cuts.

BIBLIOGRAPHY

Briguglio L (1993). *The Economic Vulnerabilities of Small Island Developing States.* Study commissioned by CARICOM for the Regional Technical Meeting of the Global Conference on the Sustainable Development of Small Island Developing States, Port of Spain, Trinidad and Tobago, July 1993.

Briguglio L (1995). Small island developing states and their economic vulnerabilities. *World Development,* 23 (9):1615-1632.

Cernat L, Laird S and Turrini A (2002). Back to basics: Market access issues in the Doha Agenda. Discussion paper (forthcoming) Geneva, UNCTAD.

Commonwealth Secretariat (various years). *Small States: Economic Review and Basic Statistics.* Annual Series. London, Commonwealth Secretariat.

Downes AS (1988). On the statistical measurement of smallness: A principal component measure of size. *Social and Economic Studies*, 37(3): 75-96.

Encontre P (1999). The vulnerability and resilience of small island developing States in the context of globalization. *Natural Resources Forum*, 23: 261-270.

FAO (1999a). Sustainable Production, Intensification and Diversification of Agriculture, Forestry and Fisheries in Small Island Developing States. Paper presented at the Special Ministerial Conference on Agriculture in Small Island Developing States, FAO, Rome, 12 March.

FAO (1999b). Trade Issues Facing Small Island Developing States. Special Ministerial Conference on Agriculture in Small Island Developing States. Paper presented at the Special Ministerial Conference on Agriculture in Small Island Developing States, FAO, Rome, 12 March.

Houck J (1992). *Elements of Agricultural Trade Policies.* Prospect Heights, IL, United States, Waveland Press, Inc.

IMF (2002). *IMF Primary Commodity Prices: Actual Market Prices for Non-Fuel Commodities and Petroleum, 1997* (current). http://www.imf.org/external/np/res/commod/index.asp.

Lockhart DG, Drakakis-Smith D and Schembri J (1993). *The Development Process in Small Island States.* London, Routledge.

OECD (2001). *The Uruguay Round Agreement on Agriculture: An evaluation of its implementation in OECD countries.* Paris, Organisation for Economic Co-operation and Development.

Streeten P (1993). The special problems of small countries. *World Development* (21):2: 197-202.

Tangermann S (2001). The future of preferential trade arrangements for developing countries and the current round of WTO negotiations on agriculture. FAO discussion paper no.3, FAO Geneva Round Table on Selected Agricultural Trade Policy Issues. Rome, FAO

UNCTAD (1997). The vulnerability of small island development States in the context of globalization: Common issues and remedies. Background Paper for Expert Group Meeting on Vulnerability Indices for SIDS, in New York, December 1997.

UNCTAD (2002). *Handbook on the UNCTAD Agricultural Trade Policy Simulation Model* (ATPSM), *Version 1.1.* Geneva, UNCTAD.

Wainio J, et al. (2001). Options for reducing agricultural tariffs in agricultural policy reform in the WTO: the road ahead. *Agricultural Economic Report* No. 802, USDA-ERS.

Yamazaki F (1996). Potential erosion of trade preferences in agricultural products. *Food Policy*, 21 (4/5): 409-417.

ANNEX

Annex 1. Some technical details concerning ATPSM

The Agricultural Trade Policy Simulation Model (ATPSM) is a comparative static, deterministic, linear, partial equilibrium, global model with 36 commodities and 162 countries or regions. Technical specifications of the model are provided in this section.

Price determination

One principal characteristic of the model is that domestic prices are all functions of world market prices and border protection or special domestic support measures. Thus no data is provided about the domestic prices and no transaction costs (such as wholesale and retail margins) are taken into account. All protection measures are expressed in tariff equivalents.

A second characteristic is two-way trade. In the ATPSM database, a country is often an importer and exporter of the one (aggregated) good. To accommodate this feature of trade data, composite tariffs for determining the domestic consumption and production price are estimated. The composed tariffs are derived by dividing the volumes into three groups, imports, exports and production, supplied to the domestic market (S_d).

First, a domestic market tariff (t_d) is computed as the weighted average of two trade taxes, the export subsidy rate (t_x) and the import tariff (t_m), where the weights are exports (X) and imports (M):

$t_d = (X\, t_x + M\, t_m)/(M + X)$;

Then a consumption (domestic market) tariff is computed as the weighted average of the import tariff (t_m) and the domestic market tariff (t_d), where the weights are imports (M) and domestic supply (S_d):

$t_c = (M\, t_m + S_d\, t_d) / D$;

Similarly, a supply (domestic market) tariff is computed as the weighted average of the import tariff (t_m) and the domestic market tariff (t_d), where the weights are exports (X) and domestic supply (S_d) plus the domestic support tariff (t_p):

$t_s = (X\, t_x + S_d\, t_d) / S + t_p$;

These calculations are applied to both the baseline and final tariffs.

Model equations

The equation system for all countries essentially has the following four equations, specifying domestic consumption, production, exports and imports:

1) $$\hat{D}_{i,r} = \eta_{i,i,r}\left[\hat{P}_{wi} + t_{ci,r}/(1+t_{ci,r})\right] + \sum_{\substack{j=1 \\ i\neq j}}^{J} \eta_{i,j,r}\left[\hat{P}_{wi} + t_{ci,r}/(1+t_{ci,r})\right];$$

2) $$\hat{S}_{i,r} = \varepsilon_{i,i,r}\left[\left[\hat{P}_{wi} + t_{si,r}/(1+t_{si,r})\right]\right] + \sum_{\substack{j=1 \\ i\neq j}}^{J} \varepsilon_{i,j,r}\left[\hat{P}_{wj} + \left[t_{s,i,r}/(1+t_{s,i,r})\right]\right];$$

3) $\Delta X_{i,r} = X_{i,r}\hat{S}_{i,r}$;

4) $\Delta M_{i,r} = D_{i,r}\hat{D}_{i,r} - S_{i,r}\hat{S}_{i,r} + \Delta X_{i,r}$;

where *D, S, X,* and *M* denote demand, supply, exports and imports respectively,
^ denotes relative changes and Δ absolute changes,
P_w denotes world price, t_c denotes the domestic consumption tariff and t_s denotes the domestic production tariff, denotes supply elasticity and $\eta_{i,i,r}$ denotes demand elasticity, i and j are commodity indices and r is a country index.

By transforming $\hat{D}$, $\hat{S}$, and and to vectors with dimensions of 5832 (162 * 36) by 1, the equation system above can be simplified and solved by matrix inversion. Further details are available from UNCTAD (2002).[32]

[32] The ATPSM model, plus the documentation and data, are available free of charge from UNCTAD on request, at e-mail: atpsm@unctad.org

TABLES AND FIGURES

Table 1. Agricultural trade balance (average for the period 1996-2000)

SIDS regions	Ratio of agricultural imports to agricultural exports	Share of agricultural imports in total imports (%)	Share of agricultural exports in total exports (%)	Share of agricultural imports in total exports (%)
Africa	1.4	21	21	29
Caribbean	1.3	16	18	24
Pacific	0.6	18	23	14
All SIDSs	1.2	16	19	23

Source: FAOStat; UNSD Comtrade

Africa - Cape Verde, Comoros, Maldives, Mauritius, the Seychelles, and Sao Tome and Principe;
Caribbean - Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago;
Pacific - Cook Islands, Fiji, Kiribati, Papua New Guinea, Western Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu;

Table 2. Top 5 agricultural imports and exports (average for the period 1996–2000)

SIDS Region	Import rank	Product code	Product Description	% of total agricultural imports	Export rank	Product code	Product Description	% of total agricultural exports
Africa	1.	04	Dairy produce and birds' eggs	15	1.	170111	Cane sugar	83
	2.	10	Cereals	11	2.	010600	Other live animals.	2
	3.	02	Meat and edible meat, meat offal	8	3.	170310	Cane molasses	1
	4.	15	Animal or vegetable fats	10	4.	180100	Cocoa beans, whole or broken	1
	5.	22	Beverages, spirits and vinegar	9	5.	090500	Vanilla	1
			Total	53			**Total**	89
Caribbean	1.	10	Cereals	20	1.	170111	Cane sugar	35
	2.	04	Dairy produce and birds' eggs	11	2.	240210	Cigars, cheroots and cigarillos	12
	3.	15	Animal or vegetable fats	8	3.	220840	Rum and tafia	11
	4.	22	Beverages, spirits and vinegar	7	4.	080300	Bananas, including plantains	8
	5.	02	Meat and edible meat, meat offal	7	5.	090111	Coffee, not roasted	4
			Total	53			**Total**	70
Pacific	1.	02	Meat and edible meat, meat offal	24	1.	090111	Coffee, not roasted	24
	2.	04	Dairy produce and birds' eggs	11	2.	170111	Cane sugar	20
	3.	21	Miscs. edible preparations	8	3.	151110	Palm oil	18
	4.	15	Animal or vegetable fats	8	4.	120300	Copra	10
	5.	10	Cereals	7	5.	180100	Cocoa beans, whole or broken	8
			Total	57			**Total**	80
All SIDSs	1.	10	Cereals	18	1.	170111	Cane sugar	37
	2.	04	Dairy produce and birds' eggs	12	2.	240210	Cigars, cheroots and cigarillos	9
	3.	02	Meat and edible meat, meat offal	9	3.	220840	Rum and tafia	8
	4.	15	Animal or vegetable fats	8	4.	090111	Coffee, not roasted	8
	5.	22	Beverages, spirits and vinegar	7	5.	080300	Bananas, including plantains	6
			Total	54			**Total**	68

Source: UNSD COMTRADE.

Africa - Cape Verde, Comoros, Maldives, Mauritius, the Seychelles, and Sao Tome and Principe.

Caribbean - Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago.

Pacific - Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Papua New Guinea, Western Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu.

Table 3. Importance of agricultural trade, 2000

Country groups	Agricultural exports in total exports (%)	Agricultural imports in total imports (%)	Imports/ exports ratio in agriculture	Ratio of agricultural exports to GDP (1999)* (%)	Ratio of agricultural imports to GDP (1999)* (%)
Developed	6.8	6.5	1.1	1.1	2.9
Developing (excl. LDCs)	7.2	6.7	0.98	2.7	7.0
LDCs	31.4	16.4	1.1	3.7	7.4
SIDSs**	24.0	14.0	2.5	7.4	14.7

Sources: Trade information is from UN COMTRADE; GDP data are taken from World Bank, *World Development Indicators*.

*Data on GDP available only for selected countries.

** For this table, trade data was available for the following SIDSs: Bahamas, Barbados, Comoros, Dominica, Fiji, Papua New Guinea, Mauritius, Grenada, Jamaica, Maldives, Saint Vincent and the Grenadines, Saint Lucia, Saint Kitts and Nevis and Trinidad and Tobago.

Table 4. Concentration of SIDSs' agricultural trade (%), 2000

	All SIDSs	**African SIDSs**	**Caribbean SIDSs**	**Pacific SIDSs**
European Union	**52.1**	87.1	41.6	65.0
United States	**27.1**	5.2	37.6	8.2
Canada	**1.6**	0.8	2.3	0.1
Japan	**3.1**	1.8	2.4	5.8
Australia/New Zealand	**0.7**	0.1	0.3	2.1
Mexico	**0.5**	0.1	0.8	0.0
South-East Asia	**2.6**	2.0	0.3	9.4
Others	**12.0**	2.8	14.4	9.4
Regions in total SIDSs' exports (%)	**100**	**10.90**	**65.37**	**23.73**

Sources: Trade information is from UN COMTRADE

Table 5. SIDSs' agricultural exports to the Quad:* Average tariffs and preferential margins**

European Union

Year: 2000	% in total SIDSs' exports	MFN rate	GSP rate	LDC rate	ACP rate	Pref. margin 1 (MFN - GSP)	Pref. margin 2 (MFN -ACP)	Pref. margin 3 (=GSP-ACP)
MFN = 0%	14	0	0	0	0	0	0	0
0% < MFN =< 10%	35	6.0	3.8	0	0.2	2.6	6.1	3.5
10% < MFN =< 20%	2	14.8	10	0	1.1	4.7	13.7	9.0
MFN > 20%	48	39.9	19.2	0	10.3	10.4	25.1	14.7

United States

Year: 2000	% in total SIDSs' exports	MFN rate	GSP rate	LDC rate	CBI rate	Pref. margin 1 (= MFN - GSP)	Pref. margin 2 (=MFN -CBI)
MFN = 0%	20	0.0	0.0	0.0	0.0	0.0	0.0
0% < MFN =< 10%	60	4.2	0.0	0.0	0.0	4.2	4.2
10% < MFN =< 20%	5	14.2	0.0	0.0	0.0	14.3	14.1
MFN > 20%	1	49.1	0.0	0.0	0.0	34.7	33.3
MFN AVE n/a (sugar)	14	n.a	n.a	n.a	n.a	n.a	n.a

Canada

Year: 1998	% in total SIDSs' exports	MFN rate	GSP rate	LDC rate	CBCAN rate	Pref. Margin 1 (=MFN-GSP)	Pref. Margin 2 (=MFN-CBI)
MFN = 0%	55	0.0	0.0	0.0	0.0	0.0	0.0
0% < MFN =< 10%	39	*5.4*	2.0	0.0	0.0	3.1	5.4
10% < MFN =< 20%	6	11.4	5.3	0.0	*0.0*	5.7	11.4

Japan

	% in total SIDSs' exports	MFN rate	GSP rate	LDC rate	Pref. margin 1 (= MFN - GSP)
MFN = 0%	66	0.0	0.0	0.0	0.0
0% < MFN =< 10%	17	5.0	1.2	0.0	2.3
10% < MFN =< 20%	2	13.8	8.2	0.0	3.8
MFN > 20%	15	89.2	excl.***	excl.	excl.

***Quad comprises the EU, the United States, Canada and Japan.**

****This table reports the average GSP rates and other rates for those products covered by preferences only. Heace, in the case of Japan, for example, it does not mean that 17 per cent of SIDSs' exports have an average GSP rate of 1.2; it is simply the average of those products enjoying GSP treatment within that MFN rate range.**

***** Preferences are not offered on these tariff items.**

Table 6. Preferential trading arrangements for SIDSs in the Quad

African SIDSs

EU	**Canada**
ACP: Cape Verde, Sao Tome & Principe, Comoros, Seychelles, Mauritius ***GSP:*** same as ACP +Maldives ***GSP-EBA:*** Cape Verde, Sao Tome & Principe, Comoros +Maldives	***GSP:*** Cape Verde, Sao Tome & Principe, Comoros, Seychelles, Mauritius +Maldives ***GSP-LDC:*** Cape Verde, Sao Tome & Principe, Comoros, +Maldives
United States	**Japan**
GSP: Cape Verde, Sao Tome & Principe, Comoros, Seychelles, Mauritius ***GSP-LDC:*** Cape Verde, Sao Tome & Principe, Comoros ***GSP-AGOA:*** Cape Verde, Sao Tome & Principe, Mauritius and Seychelles	***GSP:*** Cape Verde, Sao Tome & Principe, Comoros, Seychelles, Mauritius +Maldives ***GSP-LDC:*** Cape Verde, Sao Tome & Principe +Maldives

Caribbean SIDSs

EU	**Canada**
ACP: Bahamas, Dominican Republic, Antigua and Barbuda, Barbados, Dominica, Grenada, Haiti, Jamaica, St. Kitts and Nevis, Saint Lucia, St. Vincent and the Grenadines, Trinidad and Tobago ***GSP:*** same as ACP + Cuba ***GSP-EBA:*** Haití	***GSP:*** Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Grenada, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad and Tobago ***GSP-LDC:*** Haiti ***CARIBCAN:*** Antigua and Barbuda, Bahamas, Barbados, Dominica, Grenada, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago
United States	**Japan**
GSP: Bahamas, Dominican Republic, Antigua and Barbuda, Barbados, Dominica, Grenada, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago ***GSP-LDC:*** Haiti ***CBI/ CBTPA:*** same as GSP	***GSP:*** Antigua and Barbuda, Barbados, Dominica, Grenada, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago ***GSP-LDC:*** Haití

Pacific SIDSs

EU	**Canada**
ACP: Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Palau, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, Vanuatu, Samoa. ***GSP:*** same as ACP **GSP-EBA :** Kiribati, Solomon Islands, Tuvalu, Vanuatu, Samoa	***GSP:*** Fiji, Kiribati, Marshall Islands, Nauru, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, Vanuatu, Samoa. ***GSP-LDC:*** Kiribati, Solomon Islands, Tuvalu, Vanuatu, Samoa
United States	**Japan**
GSP: Fiji, Kiribati, Palau, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, Vanuatu ***GSP-LDC:*** Kiribati, Solomon Islands, Tuvalu, Vanuatu, Samoa	***GSP:*** Fiji, Kiribati, Marshall Islands, Federated States of Micronesia, Nauru, Palau, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, Vanuatu, Samoa. ***GSP-LDC:*** Kiribati, Solomon Islands, Tuvalu, Vanuatu, Samoa

Table 7. Commodity coverage in ATPSM

01100 Bovine meat	05440 Tomatoes
01210 Sheep meat	05700 Non-tropical fruits
01220 Pig meat	05710 Citrus fruits
01230 Poultry	05730 Bananas
02212 Milk, fresh	05790 Other tropical fruits
02222 Milk, conc.	07110 Coffee (green)
02300 Butter	07120 Coffee roasted
02400 Cheese	07131 Coffee extracts
04100 Wheat	07210 Cocoa beans
04400 Maize	07240 Cocoa butter
04530 Sorghum	07220 Cocoa powder
04300 Barley	07300 Chocolate
04200 Rice	07410 Tea
06100 Sugar	12100 Tobacco leaves
22100 Oil seeds	12210 Cigars
42000 Vegetable oils	12220 Cigarettes
05420 Pulses	12230 Other tobacco, mfd.
05480 Roots & tubers	26300 Cotton linters

Table 8. Global distortions: Revenues and rents by commodity (in $ million)

	World		SIDSs		
	Tariff revenue	**Rent forgone**	**Tariff revenue**	**Export revenue**	**Rent received**
Bovine meat	3 859	105	7	4	0.00
Sheep meat	241	589	24	0	0.00
Pig meat	615	66	6	0	0.00
Poultry	2 183	165	37	3	0.00
Milk, fresh	87	2	0	1	0.00
Milk, conc.	1 093	419	36	2	0.23
Butter	534	169	10	0	0.00
Cheese	1 057	360	16	6	0.62
Wheat	1 882	2 315	27	14	0.64
Rice	705	955	85	3	0.22
Barley	439	583	0	0	0.00
Maize	2 652	2 120	10	0	0.00
Sorghum	74	17	0	0	0.00
Pulses	338	1	8	1	0.00
Tomatoes	184	35	0	0	0.00
Roots & tubers	103	0	5	7	0.00
Apples	1 119	15	8	0	0.00
Citrus fruits	537	15	1	23	0.05
Bananas	639	390	1	91	11.36
Other tropical fruits	251	0	0	18	0.00
Sugar	1 850	789	35	1110	271.82
Coffee (green)	576	3	1	183	0.00
Coffee roasted	20	0	0	11	0.00
Coffee extracts	7	0	0	0	0.00
Cocoa beans	61	0	0	118	0.00
Cocoa powder	44	0	0	4	0.00
Cocoa butter	48	0	0	10	0.00
Chocolate	1 314	108	9	7	0.11
Tea	357	0	1	15	0.00
Tobacco leaves	2 173	20	1	75	0.04
Cigars	3 684	0	14	41	0.00
Cigarettes	27	0	0	51	0.00
Other mfd. tobacco	666	0	1	0	0.00
Oilseeds	2 634	188	8	34	0.10
Cotton linters	288	29	0	0	0.00
Vegetable oils	2 894	1	41	273	0.00
Total	35 235	9 457	394	2 106	285.19

Source : ATPSM database.

Table 9. Impacts on world commodity prices of alternative scenarios

	Ambitious	Conservative	Tariff-50
	(%)	(%)	(%)
Bovine meat	8	3	3
Sheep meat	10	4	7
Pig meat	4	2	2
Poultry	7	2	4
Milk, fresh	10	4	7
Milk, conc.	18	6	6
Butter	25	10	8
Cheese	16	7	7
Wheat	13	5	2
Rice	3	1	1
Barley	3	1	1
Maize	4	1	2
Sorghum	1	0	0
Pulses	4	1	1
Tomatoes	3	2	2
Roots & tubers	3	1	3
Apples	4	2	3
Citrus fruits	2	1	1
Bananas	2	1	1
Other tropical fruits	3	1	2
Sugar	10	3	4
Coffee (green)	1	0	1
Coffee roasted	0	0	0
Coffee extracts	0	0	1
Cocoa beans	0	0	0
Cocoa powder	1	1	1
Cocoa butter	1	1	1
Chocolate	6	3	5
Tea	4	1	2
Tobacco leaves	4	1	3
Cigars	6	2	4
Cigarettes	2	1	2
Other mfd. tobacco	14	5	8
Oilseeds	2	1	2
Cotton linters	2	1	1
Vegetable oils	4	1	2

Source : ATPSM simulations.

Table 10. Impacts of alternative scenarios on key variables ($ million)

	Ambitious	Conservative	Tariff-50	Preferential	Compensatory
Export revenues					
SIDSs	40 381	13 747	21 386	21 386	21 386
World	-96	1	-47	-47	-49
Govt. revenue					
SIDSs	-1 455	4 891	-4 176	-4 191	-4 363
World	-254	-124	-166	-78	83
Quota rents					
SIDSs	-4 638	-1 225	-1 926	-1 911	-1 740
World	-271	-145	-150	-62	97
Welfare					
SIDSs	24 981	10 737	12 944	12 944	12 944
World					

Source : ATPSM simulations.

Table 11. Impact on welfare of the five scenarios ($ million)

	Ambitious	Conservative	Tariff-50	Preferential	Compensatory
SIDSs	-271	-145	-150	-62	97
Developed agri. Importers[1]	6 971	2 706	3 801	3 801	3 768
Developed agri. Exporters[2]	2 779	1 427	1 321	1 333	1 314
European Union	10 806	6 286	3 917	3 925	3 873
Developing agri. Importers[3]	531	-139	-99	-88	-102
Developing agri. exporters[4]	643	136	362	323	317
All developed	19 958	11 083	9 442	9 463	9 354
All developing[5]	4 175	-89	2 647	2 622	2 736
Least developed countries	849	-194	855	860	854
World	**24 981**	**10 737**	**12 944**	**12 944**	**12 944**

1. Japan, Norway, Republic of Korea, Switzerland.
2. Australia, Canada, New Zealand, United States.
3. India, Kenya, Pakistan, Sri Lanka, Zimbabwe.
4. Argentina, Brazil, Indonesia, Malaysia, Philippines, Thailand, South Africa.
5. Excludes LDCs.

Source : ATPSM simulations.

Table 12. Welfare impacts by commodity group on individual SIDSs from 50 per cent tariff reduction ($ million)

	Meat	Dairy	Cereals	Vegetables	Fruit	Sugar	Beverages	Tobacco & cotton	Oilseeds	**Total**
Bahamas	-1.0	-0.7	-0.1	0.0	0.0	-0.1	0.0	0.5	0.0	-1.4
Barbados	-0.8	-0.8	-0.2	-0.1	-0.1	-3.6	-0.1	-0.2	-0.1	-6.0
Cape Verde	-0.1	-0.4	-0.3	0.0	-0.1	-0.1	0.0	0.0	-0.1	-1.1
Comoros	-0.2	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.4
Cuba	-3.8	-7.0	-6.6	-0.7	0.2	20.2	0.0	1.3	-1.0	2.5
Dominica	-0.2	-0.1	0.0	0.0	-0.4	0.0	0.0	0.0	0.0	-0.8
Dominican Rep.	20.8	-2.6	-4.6	0.1	-0.7	-2.3	0.1	1.9	-1.6	11.3
Fiji	-0.9	-0.6	0.0	0.3	0.2	-20.5	0.0	0.3	0.3	-20.9
Grenada	-0.4	-0.3	-0.1	0.0	0.0	-0.1	0.0	-0.1	0.0	-1.0
Haiti	1.3	-1.0	2.3	1.1	1.9	-0.9	0.1	0.0	-0.5	4.2
Jamaica	-4.0	-2.5	-1.6	-0.3	-0.7	-12.2	-0.1	0.0	-0.6	-21.9
Maldives	-0.2	-0.3	-0.1	0.0	-0.1	-0.1	0.0	-0.2	0.0	-1.1
Mauritius	1.7	-2.3	-1.1	-0.1	-0.3	-28.1	-0.3	-0.4	-0.4	-31.2
Papua New Guinea	-4.0	-0.4	-1.1	0.6	0.5	0.8	1.4	-0.2	4.2	1.8
Sao Tome & Principe	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
Seychelles	-0.1	-0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	-0.2
Solomon Islands	0.1	0.0	-0.2	0.9	0.0	0.0	0.0	-0.1	0.4	1.0
St. Lucia	-0.5	-0.3	-0.1	0.0	-1.3	-0.1	0.0	-0.1	0.0	-2.5
St. Vincent & the Grenadines	-0.3	-0.1	-0.2	0.0	-0.6	-0.1	0.0	0.0	0.0	-1.4
Trinidad & Tobago	-1.3	-3.2	-0.8	-0.2	-0.2	-0.2	-0.2	0.7	-0.6	-6.0
Vanuatu	0.1	0.0	-0.1	0.0	0.0	0.0	0.0	-0.1	0.1	0.0
Total	**6.2**	**-23.0**	**-14.9**	**1.6**	**-1.7**	**-47.5**	**0.8**	**3.3**	**0.1**	**-75.2**

Source : ATPSM simulations

Figure 1. SIDSs: Main agricultural exports as a percentage of total agricultural exports, 2000

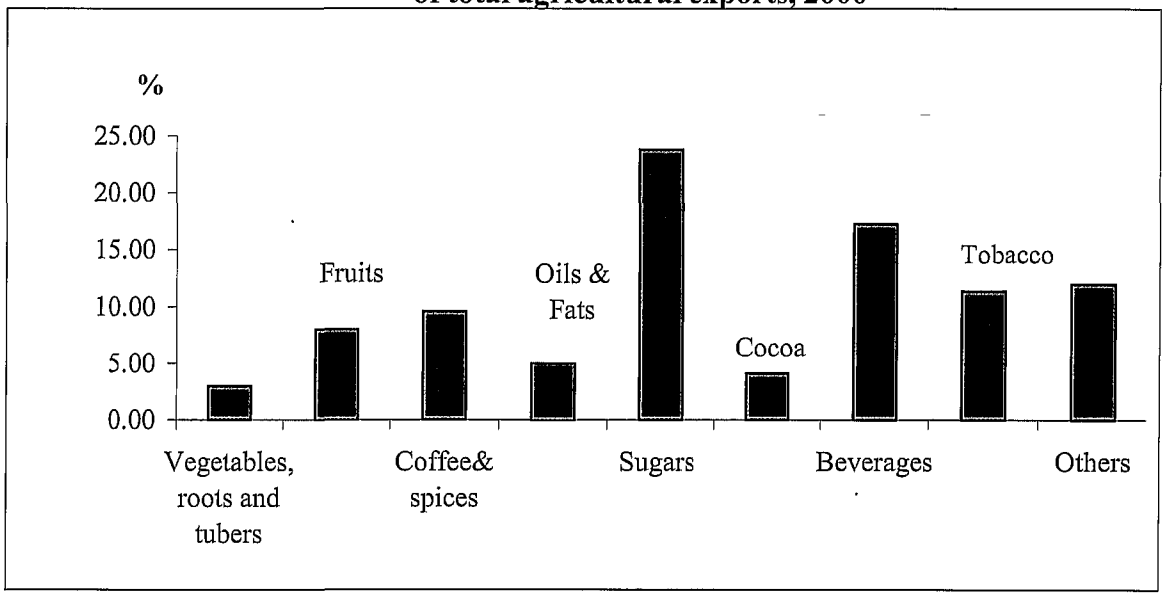


Figure 2. SIDSs: Destination of agricultural exports, 2000

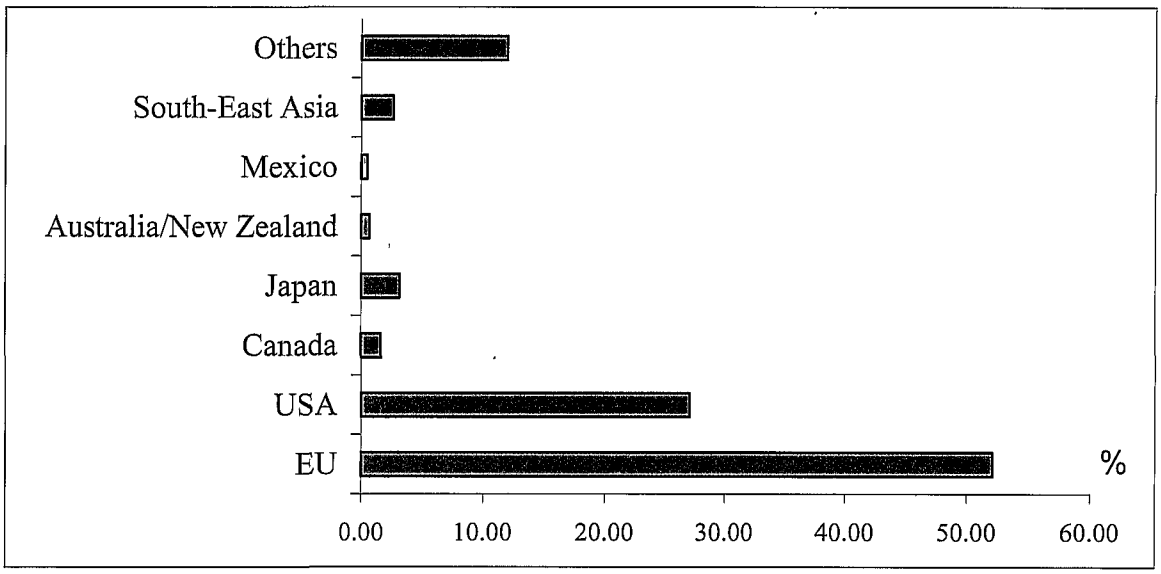
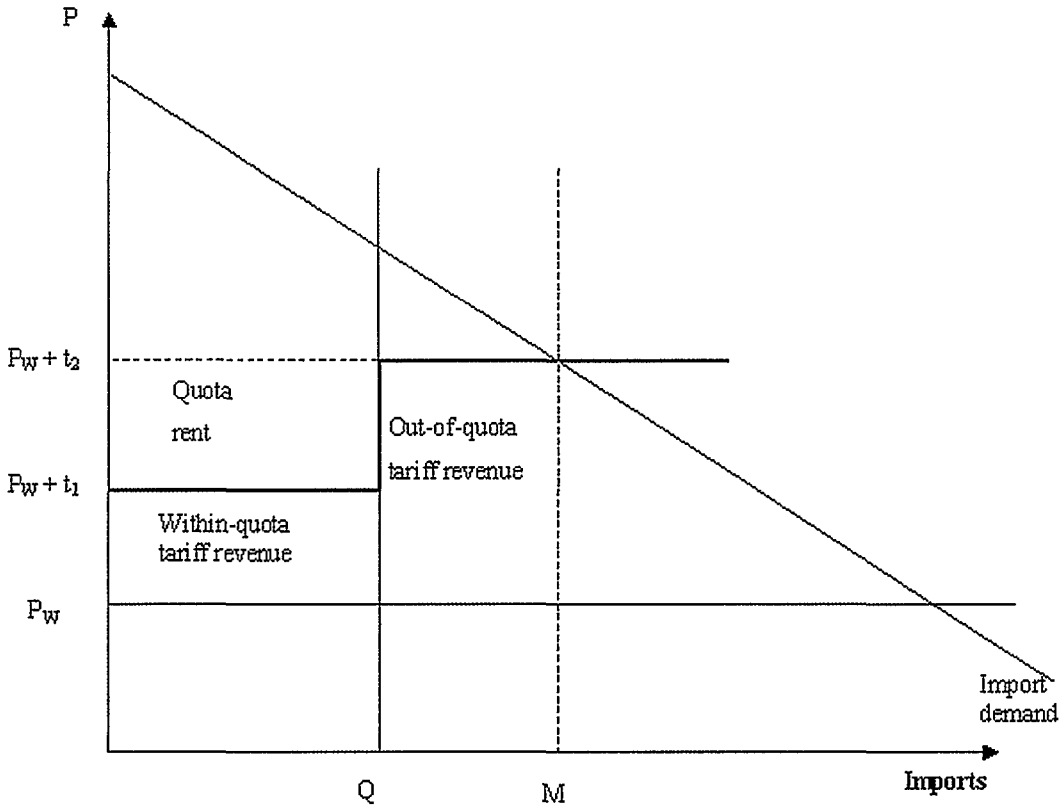


Figure 3: Quota rents with a binding out-of-quota tariff



CASE STUDY

BARBADOS

BY
GREGG C.E. RAWLINS*

* Planing Unit, Ministry of Agriculture and Riral Development, Barbados.

Blank page

Page blanche

TABLE OF CONTENTS

Blank page

Page blanche

EXECUTIVE SUMMARY

This Case Study on Barbados has been undertaken within the framework of the United Nations Conference on Trade and Development (UNCTAD) Project entitled *Analysing SIDS-Specific Needs in Multilateral Liberalization in the Agricultural Sector*, which is being pursued in fulfilment of a mandate contained in the UNCTAD X Bangkok Plan of Action. The study examines how "small-islandness" affects agricultural production and competitiveness in Barbados, identifies products of interest to Barbados in relation to both domestic production and exports, and assesses how the modalities proposed in the ongoing negotiations on agriculture within the World Trade Organization (WTO) would affect Barbados' production and trade through their impact on products of interest.

Barbados, one of the small island developing States (SIDSs) in the Caribbean region, has an area mass of approximately 432 sq. km, a 95-km coastline and a population of approximately 268,000. Barbados possesses many of the typical characteristics of SIDSs, including vulnerability to natural disasters, a highly open economy with a high level of dependence on imports, dominance of a single commodity – sugar – in the agricultural sector, high-cost and uncompetitive production systems, limited production and consumption capacity, and limited technical and financial capacity to respond to major challenges.

Several factors, directly related to Barbados' small area and limited natural resources, limited market size and other inherent structural weaknesses, have had profound negative effects on the production and competitiveness of domestically produced agricultural products. With respect to land, of its total land area of 43,176 ha, less than 20,000 ha are available for agriculture. The increase in competing demands for land (for housing, social/recreational purposes and alternative economic activity such as tourism), coupled with the practice of holding agricultural land for speculative purposes, has resulted in agricultural land being priced out of the reach of farmers. As a consequence, adequately sized tracts of land for commercial farming are in very limited supply, which inhibits the capacity of agricultural operations in Barbados to benefit from the economies of scale that characterize production in larger developing and developed countries.

Water is also a very scarce resource in Barbados which, with an estimated 300 cubic metres of water per citizen, ranks among the world's 15 most water-scarce countries While the water rates for farmers operating in the Government managed schemes are in the range of 0.33 – 0.44 Barbados cents per cubic metre, it should be stressed that those farmers outside the scheme face domestic water rates of 2.12 Barbados dollars (BDS$) per cubic metre, which makes viable agricultural production extremely challenging, particularly in the drier regions of the country.

Achieving competitiveness in domestic agricultural production and marketing is also constrained by the small domestic demand base, which makes it extremely difficult to produce at sufficiently high levels to achieve economies of scale. For example, domestic consumption of poultry in Barbados is only approximately 0.12 per cent of United States consumption. Therefore, in Barbados, the scope for investing in large-scale production operations and processing plants severely constrains the technologies employed and efficiencies realized.

The supply of inputs to the agricultural sector in Barbados is another problematic area that undermines international competitiveness. The existence of imperfect and undeveloped markets for inputs and services is a feature characteristic of SIDSs such as Barbados, resulting in higher input prices.

It is not surprising, therefore, that only a few select agricultural commodities have a competitive advantage in Barbados. Analyses conducted by the Ministry of Agriculture and Rural Development (MARD) have found that products such as poultry, pork, tomatoes, cauliflower and lettuce are domestically competitive only with the application of bound rates of duty. Such analyses have been supported by a report on the agricultural sector in Barbados commissioned by the Food and Agriculture Organization of the United Nations (FAO),[1] which reveals that there are only a few domestically produced commodities,

[1] *Strategic Report for the Barbados Agricultural Sector*, prepared by Dr. Bernard Francois, consultant, FAO, July 2000.

such as certain cuts of poultry, hot peppers and sweet potatoes, which are competitive with the imported product.

Apart from structural factors concomitant with "small-islandness", other factors, such as productivity and cost of labour, availability and cost of credit, and the relatively high cost of services, affect the cost of production and hence the competitiveness of Barbadian agricultural products.

While remoteness has not been a major challenge to Barbados, the relative distances from major markets have proven problematic. In many cases, exported volumes are relatively small, requiring the purchase of space on commercial passenger lines; and such space, due to excess demand, is often expensive when compared to dedicated freight. In addition, although Barbados has not recently suffered from severe natural disasters such as hurricanes, such an event presents a clear and ever-present threat to its agricultural sector, given the location of the island in relation to the path of tropical depressions, storms and hurricane systems which develop off the African coast.

The Government of Barbados (GoB) has initiated policies to address some of the inherent disadvantages facing its farmers. The key thrust of the Government and the Ministry of Agriculture and Rural Development (MARD), as articulated in the *Strategic Plan for the Agricultural Sector, 2001 – 2010*, has been to enhance competitiveness through a focus on non-price factors such as product quality and niche marketing. In addition to this overall focus, several initiatives have been undertaken which seek to address some of the constraints inherent in its "islandness". These include the finalization of a Land Use Policy, the implementation of the Land for the Landless Programme (an initiative that seeks to provide land to those landless farmers engaged in commercial agricultural production), provision of agricultural water through the Integrated Rural Development Programme, establishment of an Agricultural Development Fund (ADF), which will provide grant and loan funding to the farming community and the delivery of a revamped and improved Agricultural Incentives Programme administered by the MARD. Government policy measures have also provided an enabling trade environment, initially through non-automatic import licensing, and, more recently, through the application of bound rates of duty and special safeguards designed to stimulate and safeguard the production of sensitive commodities.

Technical support continues to be administered to the farming community by a number of local, regional and international institutions such as the Ministry of Agriculture, the Caribbean Agricultural Research and Development Institute (CARDI), the University of the West Indies, the FAO and the Inter-American Institute for Cooperation on Agriculture (IICA).

The performance of the agricultural sector, particularly in the most recent past, has been conditioned by significant changes in both the domestic and external trade and economic environment. While the contribution of the agricultural sector to gross domestic product (GDP) has been on the decline over the past 10 years, this indicator does not fully reflect the important multifunctional role played by the sector. Nevertheless, the sector continues to be plagued by adverse weather conditions, labour shortages and relatively low labour productivity, decreased acreage under cultivation, declining yields, larceny and the high cost of inputs and services.

The need to ensure an acceptable level of food security, based on an optimal combination of domestic production and imports, at the national and household levels, has served as a major policy objective guiding the development of the agricultural sector in Barbados. In addition to food and nutrition security, rural development, poverty alleviation and environmental protection, including the preservation of biodiversity, are key non-trade concerns (NTCs). The production of sugar cane is of particular relevance in this regard, since sugar cane cultivation contributes in large measure to the aesthetic appeal of the rural landscape and to the preservation of the environment, with obvious implications for the tourism industry.

Given the importance of NTCs, several products have been identified as sensitive within the agricultural sector in Barbados. In relation to the domestic market, products such as poultry, eggs, milk, pork,

tomatoes, cabbages, sweet peppers, lettuce, okras, carrots, cucumbers, melons, onions and sweet potatoes have been identified as highly sensitive, while others such as beef, mutton/lamb and yams are of strategic importance, and benefit from targeted policies. In addition, Barbados considers the production of key fruits such as bananas, plantains, mangoes, guavas, Barbados (West Indies) cherries and papayas, as well as herbs such as thyme, shallot and parsley, to be integral to the development of the agricultural sector.

Barbados implemented its WTO-compliant-tariff-only regime in April 2000. This market liberalization has had a negative impact on domestic production of such commodities as poultry, carrots, cabbages, pork, onions, tomatoes and sweet peppers.

Barbados reserved the right to utilize the Special Safeguard (SSG) provision under Article 5 of the Uruguay Round Agreement on Agriculture (AoA) to safeguard sensitive domestic production. However, analysis by the Ministry of Agriculture, and experience since the enactment of legislation to give effect to the SSG, have shown that this tool, in its current form, does not provide adequate coverage for all domestically produced, sensitive agricultural commodities.

The trade performance of Barbados has been similar to many other developing countries during the 1990s. The increasing divergence between imports and exports, and the further entrenchment of its status as a net food importing developing country (NFIDC), have been the predominant features of its trade over this period. Sugar has traditionally been, and continues to be, the predominant agricultural export crop in terms of both volume and value. However, export earnings from this commodity have, with the exception of 1996 and 1997, been on the decline.

Sugar has benefited for many years from preferential access to the market of the European Union (EU). As such, trade preferences have provided the basis upon which the agricultural sector in Barbados (and many other SIDSs) has developed. Despite the positive contribution of trade preferences to the sustained development of many small developing economies (SDEs) and SIDSs like Barbados, these arrangements have been subject to severe pressures and challenges in recent decades due to a number of developments and factors. These factors, individually and combined, could result in changes in the structure of the EU's sugar regime to the detriment of suppliers in the African, Caribbean and Pacific (ACP) group of States. This is a matter of major concern for Barbados, one of the highest-cost producers of cane sugar in the world, since it has serious implications for the levels of Government support that would be required to maintain this important industry.

Apart from the export of sugar under preferential arrangements, Barbados' experience in the export market over the period 1991 – 2000 has involved a wide range of products, but has been generally disappointing. Products exported included sweet potatoes, breadfruit, hot peppers, okras, yam, avocado, cut flowers and foliage, coconuts (not shelled), golden apples, paw paw, and sour sop. Barbados is currently exploring the possibilities for further developing non-traditional exports, with emphasis on value-added and higher priced (niche market) products such as herbs and spices.

With respect to market access opportunities arising from trade liberalization, there are a number of factors which retard the progress of SIDSs like Barbados. The relatively poor performance of countries such as Barbados, even with significant tariff preferences, demonstrates that there are other factors, apart from low tariffs (supply-side problems, limited export capacity, non-tariff barriers (NTBs) and domestic support policies), which need to be addressed before such countries can participate meaningfully in global trade. For Barbados, these have proven to be the greatest hindrance to increased market access and to any material benefits from WTO-related trade liberalization.

The peculiar circumstances and inherent structural weaknesses, which severely limit the capacity of SIDSs such as Barbados to participate and benefit from the multilateral liberalization process, must therefore be at the core of the development of optimal modalities for continuation of the reform process in trade in agricultural products. Full recognition of the diversity found in developing countries will be

a critical prerequisite for the development of a package of special and differential treatment (S&DT) provisions that is responsive to the needs of the smallest and most vulnerable economies, including SIDSs.

In the case of Barbados, the modalities must address **food security concerns**, the **multifunctional role of agriculture** and, in particular, sugar cane production, **preferential market access** and the need for adequate technical and financial assistance to address supply-side constraints and **build export capacity and international competitiveness**. Optimal modalities from the perspective of Barbados are presented in summarized form in the table below.

Summary table of possible optimal modalities for SIDSs in multilateral trade negotiations on agriculture

Item/parameter	Optimal modalities for SDEs and SIDSs
MARKET ACCESS	**Tariffs**
1. Product coverage	SDEs and SIDSs should identify list of food-security-sensitive products, which would be exempt from further reduction commitments as an S&D provision, possibly through a negative list approach. Criteria to be developed which would relate directly to a measure of the respective product's importance in the domestic food basket; domestic support levels should be below an agreed threshold (e.g. *de minimis*) to qualify for exemption.
2. Tariff reduction	For developed countries, a harmonized formula or similar approach to be developed to effectively address tariff peaks and tariff escalation. For SDEs/SIDSs, continuation of the Uruguay Round (UR) approach may be most suitable, particularly for sensitive products; the tariff reduction rate should be significantly lower (at least 50% lower) than that applicable to developed countries; the level of minimum tariff cut per tariff line to be lower than that required in the case of developed countries (e.g. 5%) so as to provide greater flexibility; a longer implementation period (10 years +) should be allowed.
3. Renegotiating bindings	SDEs/SIDS with zero or low bindings should be allowed to renegotiate, particularly where products are food-security-sensitive products (this is not as relevant to Barbados as to other SIDSs).
	Special Safeguard Mechanism (SSM)
	Developing countries (DCs), including SDEs and SIDSs, should have recourse to a SSM with the following elements: DCs, including SDEs and SIDSs, would designate eligible products using agreed criteria, and list these in a Schedule of Commitments; flexibility to use the measure would be accorded to countries using lowest levels of domestic support and export competition measures; it would be triggered when the import quantity exceeds a reference level of (X% e.g. 110%) of the average import level over the previous (Y e.g. 3 years) or when the c.i.f. import price of the shipment falls below the reference level equal to the average domestic market price in the previous (Z e.g. 3 years); The SSM would take the form of a quantitative restriction in terms of a quota or an additional duty which completely offsets the fall in prices; the duration would be for 1 year with a right to extend it; immediate notification to the Committee on Agriculture (CoA).

Item/parameter	Optimal modalities for SDEs and SIDSs
MARKET ACCESS	**Tariff quotas**
	SDEs and with tariff rate quota (TRQ) commitments should be exempt from further commitments (increase in volumes, reduced in-quota tariffs) for food-security-sensitive products, utilizing an approach which mirrors that proposed in the case of tariffs; Developed countries with TRQs for products of export interest to DCs should be required to expand volumes, reduce in-quota tariffs and improve their administration and transparency; Review of existing TRQs should not negatively affect current market access provided to DCs under preferential arrangements.
	Trade preferences
	Non-reciprocal tariff rates to DCs should be improved and bound during the reform process; Existing preferential arrangements should be exempt from challenge under Article XXIII of the GATT; A TRQ mechanism should be established with the following elements: Minimum percentage of the total annual volume of each TRQ should be reserved for imports from countries which are small-scale exporters of the product at an in-quota rate of 0%; All TRQs allocated to small-scale exporters that are unused after six months shall become available to other exporters on a most-favoured-nation (MFN) basis; A "small-scale exporter" is defined as a country whose export share of the product concerned in the world market is less than (X%); A list of products of export interest to small-scale producers shall be drawn up and will form the basis for members to open TRQ to small-scale exporters, the volume of which shall be determined as X% of domestic consumption of the product.
DOMESTIC SUPPORT	**"Green box" or exempt measures**
	A review is needed of "green box" criteria with a view to tightening the "green box" resulting in two categories of support – measures exempt and measures non-exempt from reduction commitments; Payments used by developed countries under AoA Annex 2, paragraphs 5-7 should be excluded from the "green box" or exempt category; SDEs and SIDSs should continue to have recourse to the category of "exempt" measures as established in Annex 2, with necessary adjustments and expansion to address DCs' concerns

Item/parameter	Optimal modalities for SDEs and SIDSs
DOMESTIC SUPPORT	**"Green box" or exempt measures**
	The following measures should be included in the exempt category: Government assistance to the agricultural sector to address the adverse effects of sudden changes in exchange rates on the prices of principal agricultural exports; Measures taken in the structural transformation of the agricultural sector to adjust away from a reliance on preferential markets; Domestic support measures to assist in the revitalization of rural areas in general, or to assist specific groups or subgroups of producers within rural areas.
	Special and Differential (S&D) Box – Article 6.2
	The S&D Box should be expanded to include: Support to encourage agricultural processing; Investment and input subsidies of a product-specific nature; Support to all farmers in SDEs and SIDSs that participate in productive activities which contribute significantly to the attainment of key development objectives, thus removing the limitation of such support to low-income, resource-poor farmers or small-scale, household farmers; Subsidies to agricultural marketing costs, including internal transport, post-harvest, storage and product quality improvement, both generally and of a product-specific nature.
	***De minimis* provisions**
	For SDEs and SIDSs, the *de minimis* level should be increased to at least 20% for both product-specific and non-product-specific support; For SDEs and SIDSs, the value of *de minimis* for non-product-specific domestic support may be reallocated to product-specific domestic support for products that are essential for food security and rural development in addition to product-specific *de minimis*.
EXPORT COMPETITION	**Export subsidies**
	Export subsidies that have a negative impact on food production systems in DCs, SDEs and SIDSs should be substantially reduced/eliminated. Two issues need to be addressed: Further develop instruments to operationalize the Marrakech Decision (e.g. provide technical and financial assistance for improving productivity and efficiency in domestic food production and marketing); and Provide safeguard preferences by offering flexibility to preference-giving countries in making commitments.

Item/parameter	Optimal modalities for SDEs and SIDSs
EXPORT COMPETITION	**Export subsidies**
	For SDEs and SIDSs, the provisions of Article 9.4 should be extended indefinitely, and expanded to include price risk management schemes and export credits, guarantees and insurance schemes.
	Export credits, guarantee and insurance schemes
	Need to discipline these forms of export competition to address subsidy elements, particularly where these are used for products of interest to SDEs and SIDSs.
OTHER SPECIAL AND DIFFERENTIAL TREATMENT PROVISIONS	Provision of technical and financial assistance to SDEs and SIDSs is needed to address supply-side constraints, build export capacity and competitiveness as a legally binding component of S &D. Necessary administrative and budgetary support should be clearly identified.

I. INTRODUCTION

I.1. Background to the case study

This case study on Barbados represents one of a number of country case studies conducted within the framework of the UNCTAD project entitled *Analysing SIDS-Specific Needs in Multilateral Liberalization in the Agricultural Sector*. The mandate for this project is provided in the UNCTAD X Bangkok Plan of Action, which, in paragraph 133, states: "... In its analytical work [on the multilateral negotiations in agriculture], UNCTAD should also address the needs of small island developing economies."

In fulfilment of this mandate, the UNCTAD Secretariat has facilitated the undertaking of an analytical study, comprising one diagnostic study and a number of country case studies which cover the representative regions where small island developing States (SIDS) are to be found. This case study on Barbados represents the Caribbean perspective.

The case study is divided into three sections. The first section examines, with the use of concrete examples, how "small-islandness" affects agricultural production and competitiveness in Barbados, and identifies some of the policies measures used as well as those envisaged to meet the challenges associated with "small-islandness". The second section seeks to assess Barbados' negotiating concerns by identifying and examining products of interest to domestic production as well as exports. The third section examines how the modalities proposed in the current agricultural negotiations within the World Trade Organization (WTO) would affect Barbados' interests in agricultural production and trade, through their potential impacts on products of interest.

It is hoped that this case study on Barbados, along with the other country case studies and the diagnostic study, will facilitate the development of a package of optimal modalities which SIDSs may propose in the current negotiations with a view to ensuring that the final outcome of the negotiations fully recognizes and accommodates the special circumstances of SIDSs. Such an outcome would enhance the integration of SIDSs into the multilateral trading system and contribute significantly to their sustained social and economic development.

I.2 Profile of Barbados – a small island developing State

Barbados, one of the small island developing States (SIDSs) in the Caribbean region, is the most easterly of the Leeward Islands chain; it is located at latitude 13° 10' north and longitude 59° 35' west. It has an area mass of approximately 432 sq km, with a 95-km long coastline and a population of approximately 268,000. Barbados possesses many of the typical characteristics of SIDSs, including vulnerability to natural disasters such as hurricanes, droughts and floods, a high level of dependence on imports, reliance on a monocrop – sugar – within the agricultural sector as the major source of foreign exchange, and the existence of production systems which are relatively high cost and uncompetitive. In addition, Barbados, like other SIDSs, has a rather limited production and consumption capacity, which has given rise to a general inability to influence key markets for inputs and outputs. Like many other SIDSs, it does not possess the requisite capacity — technical, financial and infrastructural — to adequately support key programmes that seek to address concerns relating to items such as food security and environmental degradation.

Barbados has a highly open economy; it imports more than 70 per cent of its food requirements, the majority of its inputs into agriculture and manufacturing and most consumer goods. It is a net food importing developing country (NFIDC) with food imports significantly exceeding food exports.

The domestic economy is highly vulnerable to changes in the international trading environment for both goods and services and to related external shocks, as well as to the economic performance of its major

trading partners, the United States and Europe (predominantly the United Kingdom). Whilst Europe is the main source of Barbados' exports, primarily under preferential trading arrangements, the majority of its imports are from the United States and Canada, with an increasing level of imports from within the region through the Caribbean Community and Common Market (CARICOM) trading arrangements.

Over the last 50 years, the Barbados economy has been transformed from an agriculture-based economy, heavily reliant on sugar production and exports, to a more diversified, service oriented economy, which is now heavily dependent on tourism and related services. During this transformation process, significant economic growth and development has taken place, which has in turn resulted in improved standards of living for Barbadians and the development of relatively high quality social services (such as education and health) and related infrastructure (telecommunications, transportation, electricity and water). Per capita income in 2001 stood at US$ 7,850 — 0.2 percentage point below that for 2000. At the end of 2001, the import cover stood at 37 weeks, compared to 21.7 weeks at the end of December 2000.

II. "SMALL ISLANDNESS" AND ITS IMPLICATIONS FOR AGRICULTURAL PRODUCTION AND TRADE IN BARBADOS

II.1 Smallness and its impact on production and competitiveness

Several factors directly related to Barbados' small area, limited market size and other inherent structural weaknesses have had profound negative effects on the production and competitiveness of domestically produced agricultural products. To a large extent, these effects are the result of an apparent inability to achieve economies of scale in production and marketing, and have precluded Barbados, and indeed many SIDSs, from fully participating in, and benefiting from, the multilateral trade liberalization process. Some of the limiting factors and their effects on competitiveness are identified below.

Land/farm size issues

In a small island like Barbados with a total land area of 43,176 ha, land is a very limited resource, with obvious implications on cost and availability for agricultural activities. The last Barbados Agricultural Census, conducted in 1989, found that the agricultural land resource had decreased from 24,905 ha in 1971 to 22,000 ha in 1989/90. Preliminary estimates and observed trends within the last five years indicate a further reduction in the agricultural land resource to less than 20,000 ha. Given this severely limited land resource, it has been found that competing uses such as housing, social and recreational facilities (e.g. schools and playing fields), and alternative economic uses such as golf courses and tourism-related projects, raise the price of agricultural land out of reach of the average farmer.

In addition, the overwhelming demand for land for competing uses has resulted in agricultural land being held for speculative purposes, and consequently not being actively cultivated. The relatively low average financial return to agriculture, which is less than the return to other activities such as tourism and real estate development, makes agriculture an unattractive area for investment by landowners. Compounding the issue of land cost and its availability is the fact that the area with the most fertile soils and greatest rainfall — the Scotland District (which covers one seventh of the total area of the island) — is prone to severe land slippage and erosion. These factors have collectively reduced the availability of adequately sized tracts of land for commercial farming, thus reducing the country's ability to realize its full potential with respect to agricultural production. In addition, even where land is available, it is priced so high that, if purchased for agricultural use, the impact on the overall cost of agricultural production would be significant, with serious consequences for international competitiveness.

The limited land resource available also has implications for the distribution of this scarce resource within the agricultural sector. According to the 1989 Agricultural Census, Barbados had a highly skewed land distribution pattern, with less than 1 per cent or 94 of the holdings (sugar plantations)

accounting for approximately 78 per cent of total agricultural land, while the other 99 per cent or 17,000 of the holdings accounted for the other 22 per cent of agricultural land. While this structure may have changed somewhat since the last census, analysis of data from the ongoing crop production survey reveals that this skewed land ownership pattern persists.

The 1989 Agricultural Census also revealed that approximately 90 per cent of the farmers in Barbados operate on holdings of 0.5 hectare or less. Landless farmers, classified as those with holdings of less than 0.025 hectare, accounted for approximately 24 per cent (4,161) of the total number of holdings. There was only one farm within the 500–1,000-ha range during that census period. That farm, Allendale Plantation in St. Peter, has since been taken out of agricultural production. Once again, while changes may have occurred since the last census, available information and observation suggests that a significant proportion of the farmers in Barbados continue to operate holdings of 0.5 hectare or less. This has serious implications for the capacity of these operations to benefit from economies of scale, with obvious consequences for the relative cost of production. It should be noted that the average size of holdings in excess of 50 ha was 180 ha, which, while considered large by local standards, would be considered small by international standards.

Water constraints

Like land, water is a limited resource in Barbados, with serious consequences for production and productivity in the agricultural sector. Under international standards, countries with less than 1,000 cubic metres of water per citizen are deemed to be in the water scarce zone. Barbados has an estimated 300 cubic metres of water per citizen, and ranks among the world's 15 most water scarce countries.

A "dry" year is considered a year when rainfall is below an annual average of 1,016 millimetres per parish. Annual rainfall for the period 1991–2000 averaged 1,360 millimetres per parish, which would be considered a relatively "wet" average by Barbadian standards (annex table 1). However, most of this rainfall occurs during the latter half of the year and, given the topography of the island and the lack of rivers and lakes, a high proportion of this rainfall runs off into the sea. In addition, several parishes in Barbados, where agriculture is practiced, receive relatively less rainfall. Coupled with this phenomenon is the fact that although Barbados does not have very dry years (a noted exception being 1997), severe dry spells do occur. For example, Barbados was forced to make *force majeure* claims for sugar exports below quota levels in 1995 and 2002 due to adverse weather conditions.

During the 1989 Agricultural Census, the drip irrigation system was predominantly found on plantations within the range of 20 to 50 ha. Smallholdings, which accounted for nearly 90 per cent of the total number of agricultural holdings, only had 4.8 per cent of the total irrigation equipment in 1989. Since 1989, there has been a marked increase in the number of small holdings utilizing drip and other forms of irrigation due to the implementation of Government programmes, which seek to provide technical and financial assistance and the necessary infrastructure for improved water access and management. Estimates show that agriculture currently uses around 6 million gallons per day, mainly on irrigated vegetables.

Within the rural districts, irrigation has been provided, since the mid-1980s, through the Irrigation Engineering Unit (IEU) of the Barbados Agricultural Development and Marketing Corporation (BADMC). This Unit currently operates and maintains 20 pump sites in 10 irrigation districts, and services over 490 farmer-clients with 560 service connections in the predominantly rural areas of Barbados. The water rate through this scheme is 44 cents per cubic metre, except in the Spring Hall Land Lease Programme, which charges a rate of 33 cents per cubic metre. For those farmers outside the scheme (which would include over 90 per cent of the total number of farm holdings), domestic water has traditionally been, and continues to be, a significant source of irrigation water. However, such farmers are charged the domestic rate of BDS$ 2.12 per cubic metre, which makes viable agricultural production, using domestic water, difficult. Many of these farmers, who fall outside the established irrigation schemes, have little choice but to engage in rain-fed type production, which severely limits production to certain times of the year.

The irrigation potential of Barbados has been documented in several studies, including the Barbados Water Resources Study.[2] This study estimates that water available for irrigation is sufficient to supply about 1,600 ha of land annually. In addition, the irrigation potential in the Scotland District has been widely acknowledged. However, the required resources to harness this water potential are limited, and, consequently, the ability to increase production throughout the year is limited. In the event that Barbados has to employ more technologically driven methods of harvesting water, the cost of water for agricultural purposes will increase, resulting in a corresponding increase in the cost of production.

Limited domestic market

Achieving competitiveness in domestic agricultural production and marketing is also constrained by the small domestic demand base, which makes it extremely difficult to produce at sufficiently high levels to allow for an adequate spread of overhead costs. This limited domestic market is understandable, given the fact that Barbados has a population of just over one quarter of a million people, which is small by international standards. Total domestic consumption levels for major agricultural commodities are insignificant in global terms, as evident by a comparison of domestic consumption and production/ consumption levels in larger countries. For example, total consumption of poultry meat in Barbados is estimated at 15,000 tonnes per annum, which is miniscule when compared with consumption in the United States, China and the EU, which stood at an estimated at 12.6 million, 11.8 million and 7.6 million tonnes, respectively, in 1998. The smallest plant in the United States processes approximately 600,000 birds per week, while the largest plant in Barbados processes an estimated 80,000 birds per week. Therefore, the scope for investing in large-scale production operations and processing plants in Barbados is severely constrained, with consequences for the technologies that can be employed and efficiencies realized.

Despite the growth in the tourism sector, with stay-over arrivals increasing from 394,222 persons in 1991 to 545,027 persons in 2000, ad hoc estimates show that the tourist population accounts for less than 5 per cent of the total resident population in Barbados. It is therefore quite easy, based on absolute arrivals, to overestimate the demand potential in the tourism sector there. Using an optimistic estimate of 5 per cent additional demand, this segment is not sufficient to raise consumption demand to the levels needed to achieve greater economies of scale and lower the overall costs of domestic production.

In addition, the *Five Segment Agribusiness Survey, 1999*, conducted by CARDI in collaboration with IICA, the ACP-EU Technical Centre for Agricultural and Rural Development (CTA) and the Caribbean Culinary Federation (CCF) in 17 Caribbean countries, analysed demand in the hotel and restaurant industries for key agricultural products. In the *Barbados Report*, it was estimated that in 1998 the average consumption per stay-over tourist for selected livestock products (chicken, pork, beef and lamb) was 7.22 lbs. per visitor, representing 7.4 per cent of total consumption that year. Similarly, estimated consumption of root crops by stay-over tourists using the results of the Five Segment Study, accounted for 5.9 per cent of total consumption. Thus the proportion of consumption by the tourist sector is not sufficient to compensate for the small domestic consumption of the resident population.

In addition, the close linkage between the players in the distributive sector, who tend to be biased towards imports, and the tourism sector, precludes greater advantage being made of any increased demand for agricultural products in the tourism sector. Such demand is often met through increased imports. Furthermore, the relatively high cost of domestic agriculture compared to imported products, the desire for the Barbados tourism product to remain internationally competitive, and the unreliability of guaranteed supplies and quality militates against increasing the share of domestic production to meet demand in the tourism sector.

[2] Barbados Water Resources Study prepared for the Government of Barbados by Stanley Associates Engineering Limited and Consulting Engineers Partnership Limited, 1978. Updated in 1997.

Further, the similarity in climatic conditions between Barbados and most other CARICOM countries means that similar products and varieties are produced throughout the region. As such, given the lower cost structures in some CARICOM countries, due to lower energy, labour, inputs and land costs, among others, Barbados tends to be a net importer of agricultural products from the CARICOM region. This further limits domestic production and attempts to capitalize on the liberalization of agricultural trade in the CARICOM region.

This limitation on production due to the small domestic market is further exacerbated by the lack of alternative marketing opportunities for domestically produced agricultural products, given the limited value-added processing linked to domestic production and the poor state of non-traditional agricultural exports. It is interesting to note that the underdeveloped state of value-added processing and agricultural exports is a direct result of the lack of competitiveness associated with high costs and limited levels of production of domestic agricultural products. This in turn is due to the structural weaknesses associated with "small islandness".

Input supply constraints

The supply of inputs to the agricultural sector in Barbados is another problematic area that undermines international competitiveness. Owing to the relatively low level of domestic production, it is generally difficult for Barbadian farmers to influence pricing policies of agricultural inputs either at the international level or at the domestic level, given the presence of an oligopolistic distributive sector, with a few main firms operating in the domestic market. The existence of imperfect and undeveloped markets for inputs and services is a feature characteristic of SIDSs such as Barbados. As a consequence, input prices are significantly higher than in other countries and these high prices contribute to the high cost of agricultural production.

In addition, the relatively small domestic production sector is unattractive for investors to undertake production of key agricultural inputs for sale in the local market, and where they do, as in the case of animal feeds — where there is a single manufacturer in Barbados — the operations suffer from diseconomies of scale, given the low level of domestic agricultural production and input use. In many larger economies, industrial operations produce some by-products, which are made available to the agricultural sector at minimal cost. The opportunities for these kinds of linkages are severely restricted in SIDSs owing to the low level of industrial activity and production of such useful by-products.

In general, because the agricultural sector is therefore heavily dependent on imported inputs, it is extremely vulnerable to external developments that may affect the supply of inputs. This high dependency on imported inputs also has implications for the quality of such inputs in terms of their appropriateness, given the significant differences between local conditions and the conditions in some of the countries where these inputs are manufactured.

Competitiveness of domestic production

It is not surprising, therefore, that only a few select agricultural commodities have a competitive advantage in Barbados. Any advantage is largely a result of the relatively high bound rates of duty that are applied to "sensitive"[3] commodities, rather than an inherent price competitiveness. Analyses conducted by the Ministry of Agriculture and Rural Development concerning the implementation of bound rates of duty, reveal that key commodities only remain competitive as a result of the application of the bound rates of duty. As illustrated in annex tables 2 and 3, this applies to products such as poultry, pork, tomatoes, cauliflower and lettuce. Such analyses have been supported by an FAO-commissioned report on the agricultural sector in Barbados.[4] Given the current production costs, and using the competitiveness index (CI) concept, defined as the difference between the domestic and imported product prices divided

[3] 'Sensitive' in the current context refers to products which have been important in terms of their contribution to employment and farm income (particularly in the rural areas), to product diversification and to food security.

[4] *Strategic Report for the Barbados Agricultural Sector*, prepared by Dr. Bernard Francois, consultant, FAO, July 2000.

by the import price [CI = (Pd-Pf)/Pf], this study reveals that there are only a few domestically produced commodities, such as certain cuts of poultry, hot peppers and sweet potatoes which have a CI of less than one and are therefore competitive with the imported product.

Structural factors associated with "small-islandness" may be the primary reasons for the high cost of agricultural production in Barbados, negatively affecting its competitiveness. However, it must be noted that there are also other factors having an impact on competitiveness. Factors such as productivity and labour costs, availability and cost of credit, and the relatively high cost of services affect the cost of production and hence the competitiveness of Barbadian agricultural products. Although no analyses have been undertaken to measure the extent to which various factors associated with "small-islandness'" are responsible for the uncompetitive nature of domestic agricultural production, it is safe to assume that such factors have contributed significantly to this, as discussed below.

II.2 Issues relating to remoteness and the effects of natural disasters

Remoteness

Barbados and many CARICOM countries have relatively easy access to transportation both by air and sea. Therefore, whilst remoteness has not been a major challenge to Barbados, the relative distance from major markets has proven problematic. In many cases, the exported volumes are relatively small, requiring the purchase of space on commercial passenger lines. Such space, due to excess demand, is often expensive when compared to dedicated freight carriers. Freight rates are in the range of US$ 0.86 per kg to New York (depending on passenger load) to US$ 1.35 for 500 kg and over. The regional carrier, British West Indies Airways (BWIA), offers the most competitive rates. Small export volumes, due to limited availability of key resources, notably land, and from high costs of inputs, such as agricultural chemicals, are made even more uncompetitive by higher than average transport costs. The small volumes exported offer little or no scope for bargaining to reduce the costs of air and sea transport. In the case of sugar exports to the United Kingdom, dedicated maritime transportation is available, but the relatively long distance involved has caused Barbados and other ACP sugar exporting States in the past to express concern about availability of appropriately sized vessels and the cost of transport in general.

Natural disasters

Although Barbados has not recently suffered from severe natural disasters, such as hurricanes, floods and other disasters, the possibility of such an event is a clear and ever-present threat to its agricultural sector. For example, the passage of tropical storm "Lili" in September 2002, with winds of a mere 60 kilometres per hour, resulted in estimated damages of BDS$ 525,000 (approximately US$ 262,500) to the agricultural sector alone. It can be almost guaranteed that in the event of a severe natural disaster, the agricultural sector in Barbados will suffer significant damage.

The lack of severe disasters in recent years has also resulted in a limited and outdated disaster recovery plan for the agricultural sector. This is coupled with the fact that, in general, Caribbean governments do not have a history of providing recovery payments to the agricultural sector in the case of natural disasters such as floods and hurricanes. The focus in many cases has been on rebuilding infrastructure such as bridges and houses, and the restoration of services such as water and electricity. The costs of natural disasters for selected countries in the Caribbean region over the 10-year period, 1991–2000, as illustrated in table 4, includes primarily costs for the rebuilding and restoration of key social services. Agricultural damage, except in subregions with specific disaster insurance (such as the banana industry in the Windward Islands), usually has to be borne by the farming community itself. In addition, the table shows that in some cases, although disaster occurred, costs were borne internally, and thus no figure for damage was included. Therefore, it can be reasonably concluded that the reported damage costs in table 4 are significantly lower than the actual damage resulting from severe natural disasters in selected Caribbean countries.

II.3 Policy measures to address the challenges arising from smallness

The Government of Barbados (GoB) has initiated policies to address some of the inherent disadvantages facing farmers in Barbados. However, the Government's ability to implement measures to adequately address the factors contributing to the uncompetitive nature of domestic agricultural products is constrained by limited financial resources, demands from other sectors and commitments under international agreements such as those connected with the WTO.

The key thrust of the GoB and the Ministry of Agriculture and Rural Development (MARD), as articulated in the *Strategic Plan for the Agricultural Sector, 2001 – 2010*, has been to enhance competitiveness through a focus on non-price factors such as product quality and niche marketing. Consequently, emphasis has been placed on value-added and signature products such as Barbados Blackbelly (BBB) Sheep and West Indian Sea Island cotton (WISIC). There is also a greater emphasis on research and development into new varieties and appropriate, cost-effective technologies as well as promotion of a farm management and agribusiness approach to farming.

In addition, firms and agribusiness enterprises are being encouraged to adopt measures and implement systems that facilitate trade such as Hazard Analysis Critical Control Point (HACCP), and procedures based on the International Standards Organization (e.g. ISO 9002), particularly where exports are concerned. Efforts are also being made to develop and enact revised legislation relating to sanitary and phytosanitary (SPS) measures.

Besides the overall focus on non-price competitiveness factors, several initiatives have been undertaken which seek to address some of the constraints related to being an island. Key amongst such initiatives is the finalization of a Land Use Policy, and its strict enforcement, aimed at preventing the further movement of land out of agriculture. The Land for the Landless Programme, an initiative which seeks to provide land to those landless farmers engaged in commercial agricultural production, aims to address some of the constraints to increasing the competitiveness of domestically produced products.

With respect to water as a resource, the provision of agricultural water through the Integrated Rural Development Programme has contributed significantly to the development of the agricultural sector, primarily in the rural communities in which the scheme operates. The Government is considering initiatives such as the creation of dams in the Scotland District which receives a significant proportion of the island's rainfall, greater harvesting and storage of water, promotion of the use of tertiary treated water from sewage systems for irrigation purposes, particularly for borderline uses such as for golf courses. Small farmers have also been educated on the use of water saving systems such as drip irrigation, micro-sprinkles and mulches. Incentives in the form of rebates are also provided to promote the use of such devices.

In November 2000, the GoB established an Agricultural Development Fund (ADF) which will provide grants and loans to the farming community. Such funding will assist in improving the technology used by farmers thereby helping to increase cost competitiveness. For example, poultry farmers will be able to access this Fund for the installation of wind tunnel systems, which will improve profitability by reducing bird mortality. The ADF is complemented by the Rural Enterprise Fund, administered by the Rural Development Commission (RDC).

A revamped and improved Agricultural Incentives Programme, administered by the MARD, provides rebates for key agricultural products and duty free access to inputs such as seeds, chemicals and key machinery. For example, a rebate on land taxes for agricultural lands (up to a maximum of 50 per cent) is also available to the sector.

The Incentives Regime seeks to promote the development of value-added and high-end products, such as West Indian Sea Island cotton and BBB Sheep. Another focus is the development of stronger cooperatives and farmers' organizations, which will be better able to undertake investments and make bulk purchases to reduce costs as well as bargain for better prices from distributors.

Government policy measures have also provided an enabling trade environment, designed to stimulate and safeguard the production of sensitive commodities. As such, prior to implementing its WTO commitments, the policy of a restrictive licensing regime on certain sensitive commodities was enforced. The granting of licences for the importation of sensitive commodities depended, to a large extent, on available domestic production. During the Uruguay Round negotiations, Barbados accordingly identified relatively high bound rates for sensitive agricultural commodities, and reserved the right to impose additional duties under the Special Safeguard Provision of the WTO Agreement on Agriculture.

Technical support continues to be administered to the farming community by organizations such as the BADMC and the extension division of the Ministry of Agriculture. In addition, farmers in Barbados can benefit from research undertaken at the regional level through institutions such as the Caribbean Agricultural Research and Development Institute (CARDI) and the University of the West Indies (UWI). Regional institutions such as Caribbean Export and the Caribbean Development Bank (CDB) have also played key roles in promoting the export of value-added products.

International and regional organizations such as the FAO and the Inter-American Institute for Cooperation on Agriculture (IICA) also provide considerable assistance to the agricultural sector in the region, including Barbados. FAO assistance includes that relating to assessing the agricultural potential of the Scotland District, the programme for eradication of the Tropical Bont Tick, fisheries development and projects related to enhancing food security. The IICA cooperation programme for Barbados includes projects relating to organic farming, agro-tourism linkages, and the development and promotion of signature Barbados products such as Barbados Blackbelly Sheep. The IICA is also involved in distance learning programmes, including farm management and agribusiness and e-commerce, formulated to enhance the skills of farmers and farm managers. Technical support is also negotiated through bilateral agreements between CARICOM and countries such as Chile, Mexico and Cuba, among others. However, to date, full advantage has not been taken of such bilateral technical cooperation initiatives.

III. MAJOR PRODUCTS OF INTEREST TO AGRICULTURAL DEVELOPMENT IN BARBADOS

III.1 Introduction: The agricultural sector

The performance of the agricultural sector, particularly recently, has been influenced by significant changes in the external trade and economic environment, which in turn affects domestic economic conditions and policy flexibility. The contribution of the agricultural sector to gross domestic product (GDP) has been declining over the past 10 years (table 5). In 2000, the agricultural sector contributed BDS$ 190 million, or 4.4 per cent of nominal GDP, with non-sugar agriculture accounting for BDS$ 126.8 million, or approximately 3 per cent of GDP. This, however, does not fully reflect the important role the sector plays, as it does not capture the linkages that agriculture has with other sectors such as tourism, and its consequent effects not only on GDP, but also on employment and food security.

The sector continues to be plagued by adverse weather conditions, labour shortages and relatively low labour productivity, decreased acreage under cultivation, declining yields, larceny and the high cost of inputs. Despite the declining trend in agricultural employment, partially attributable to higher wages in competing activities, such as the construction boom over the past eight years, the agricultural sector, nonetheless, employed over 4,700 persons, or 3.7 per cent of the labour force in 2000. The sector has also had to compete with other sectors for funding from commercial banks and from the central Government within its annual budget.

The Government of Barbados recognizes that as a SIDSs with limited land and other resources, total self-sufficiency in food production is unattainable, and that Barbados will always depend on regional and international markets for a significant proportion of its food supplies. Nonetheless, the attainment of a desired level of domestic production is considered an indispensable component of food security, in addition to its capacity to import food. The need to ensure an acceptable level of food security at the national and household levels, based on an optimal combination of domestic production and imports, has therefore served as a major policy objective guiding the development of the agricultural sector in Barbados. The increasing trade imbalance with respect to food and the further entrenchment of Barbados' status as a NFIDC is of concern to the Government.

Global events in late 2001 provided concrete demonstration of the vital need for countries to ensure some level of food security through enhanced domestic production capability. Immediately after the events of 11 September 2001, the issue of food availability assumed particular importance in Barbados. Although financial resources to purchase food were available, given the uncertainty in the external environment and the disruption in the transportation system, some supermarkets recorded low or non-existent stocks during the weeks subsequent to 11 September. These events, in addition to generating much needed debate and discussions on Barbados' food security, also resulted in the development of a comprehensive, updated food security plan for the country.

It is therefore not surprising that legitimate non-trade concerns (NTCs) such as food security have increasingly become integral elements of the overall economic development strategy of Barbados. Given the highly open nature of the economy, its heavy dependence on its natural resources to attract visitors, and the linkage between agriculture and tourism, Barbados has identified a number of non-trade factors, which influence policy and necessitate the maintenance of an agricultural sector. Food and nutrition security, rural development, poverty alleviation and environmental protection, including the preservation of biodiversity, are key non-trade concerns. An excellent example of this linkage between agriculture and other sectors can be found in the sugar industry. Sugar cane cultivation contributes in large measure to the aesthetic appeal of the rural landscape and to the preservation of the environment, with obvious implications for tourism. In addition, the long tradition and rich history of the sugar plantation system has given rise to heritage-based tourism activities as well as to socio-cultural linkages to the extent that the main cultural festival on the social calendar is the "Crop-Over Festival" based on the sugar crop.

As a SIDS, and highly susceptible to external trade and economic shocks, efforts have also been made to achieve balanced economic growth and development through some degree of diversification of the economic base. As such, agriculture has been identified as one of the sectors that will provide for such diversity and balance.

III.2 Major products for the domestic market

Given the importance of non-trade concerns such as food security, farm income, rural development and rural employment, among others, several products have been identified as sensitive within the agricultural sector in Barbados. The Government has therefore pursued trade and economic policies tailored to provide support of a special nature to these products with a view to stimulating domestic production. In terms of the domestic market, products such as poultry, eggs, milk, pork, tomatoes, cabbages, sweet peppers, lettuce, okras, carrots, cucumbers, melons, onions and sweet potatoes have been identified as highly sensitive, while others such as beef, mutton/lamb and yams are of strategic importance and benefit from targeted policies.

Data limitations have proved to be a major challenge to the Ministry of Agriculture in the formulation and execution of policy. Whilst a number of commodities have been identified as important for food security, farm income, rural development and employment, in some cases statistical data to support this assertion are lacking. As a consequence, although Barbados considers the production of key fruits such

as bananas, plantains, mangoes, guavas, cherries and papayas, as well as herbs such as thyme and parsley, to be integral to the development of the agricultural sector, data limitations preclude analysis of these products. Thus the collection and analysis of statistical data relating to agricultural production in Barbados needs to be strengthened. Accordingly technical assistance has been sought from the FAO for updating the methodology for the collection and analysis of agricultural statistics, as well as for the computerization of such statistics to enable easier access and data manipulation.

(a) Product identification and analysis

The key domestic products identified in the previous section are analysed under five major categories: livestock and dairy, vegetables, root crops, fruits, and herbs and spices. Individual data on the products of the first three categories are included in tables 6 to 8. Within the fruit category, production data for most of the period is available only for watermelons, but is insufficient for all the other fruits identified. Domestic production is increasing for the emerging category of herbs and spices, but there is currently insufficient production and price information about it. As such, production data on individual herbs and spices do not form part of these appendices. It should also be noted that Barbados did not implement its tariff only regime until April 2000, and therefore any change in domestic production cannot be explicitly linked to increasing liberalization within the WTO framework.

The GoB, as a trade policy measure to safeguard sensitive commodities, has applied the maximum allowable bound rates to imports of key, sensitive commodities from extraregional sources. The exceptions to this general policy are products destined for infant use, and certain products, such as chicken and turkey wings, which the GoB sought to provide as low-priced sources of poultry protein affordable to low-income households. Other exceptions are inputs for the manufacturing sector. Products not tariffied can attract up to the maximum ceiling binding of 100 per cent, but the applied rate for most of these products is the CARICOM Common External Tariff (CET) rate of 40 per cent. All products sourced from the CARICOM region — whether sensitive commodities such as tomatoes, or less sensitive commodities such as yams — enter Barbados free of duty.

Commodity development in Barbados benefits from the provision of general domestic support, in keeping with Barbados' commitments to the WTO. During the Uruguay Round negotiations preceding the establishment of the WTO, Barbados did not have trade-distorting domestic support, and therefore included a zero figure for its total Aggregate Measurement of Support (AMS) in its Schedule of Commitments. The domestic support provided to the agricultural sector in Barbados is therefore in conformity with the provisions of Annex 2, Article 6.2 and 6.4 of the WTO Agreement on Agriculture.

The following are included in Barbados' domestic support calculations and notifications to the WTO: the research and development budget of the MARD, the expenditure under the Agricultural Incentives Scheme for items such as spray cans, irrigation grants and pasture development, and the MARD expenditure on extension services. Expenditure on the Agricultural Incentives, for example, totalled BDS$ 237,626 for the period April 1998–March 1999 (the Government financial year). There are also a few product-specific input subsidies such as the rebate on the purchase of a tunnel ventilation system by poultry producers and the cane replanting incentive provided to sugar cane producers, which, whilst specific, does not constitute a significant proportion of the total value of these industries.

Livestock and dairy products (table 6)

For products such as poultry (excluding offal and poultry under tariff head 0207.30, which face a rate of 40 per cent, and turkey wings which are subject to a rate of 110 per cent), eggs, fresh milk and pork, the applied rates are the bound rates. Importation of these products from extraregional sources currently face bound/applied rates of 201 per cent, 147 per cent and 155 per cent respectively. The domestic poultry, eggs and fresh milk industries have traditionally satisfied a significant proportion of the domestic consumption of these products. However, increasing liberalization, even with bound rates at these levels, has resulted in increased imports and, given a relatively unchanged demand base, declining

domestic production. All three products (poultry, eggs and fresh milk) recorded declining average production for the period 1996–2000, compared to the period 1991–1995. In 2000, the year of liberalization, eggs and milk recorded slightly increased production, but output of poultry declined marginally.

Domestic pork production satisfies relatively less of the overall consumption (domestic and manufacturing) of pork, but meets the demand of a significant proportion of households and individuals. Compared to the period 1991–1995, average domestic production of pork increased in 1996–2000, from 1.9 million kg to 2.5 million kg. Production however declined from 2.4 million kg in 1999 to about 2 million kg in 2000.

Beef and lamb, were not tariffied and thus a maximum of only 100 per cent could be applied to imports of these commodities from extraregional sources. In 1999, in response to the adverse effects on the domestic industries of the relatively low tariffs, the rates on imports of lamb and beef were raised from 0 per cent and 30 per cent respectively, both to 40 per cent, which is the current rate applied to imports of these products from extraregional sources. Domestic production of beef, except for partial recovery in 2000, has been on the decline. Domestic production of mutton, with the exception of record production in 1996, has recorded fairly constant domestic production, averaging approximately 53,000 kgs over the 10-year period.

Given the threat to domestic industries and the importance of these industries to food security, Barbados obtained the approval, in 2001, of the Council for Trade and Economic Development (COTED) for a derogation of the CET rate for these products. This has given it the policy flexibility to increase these rates to 100 per cent. A significant proportion of beef and lamb for domestic consumption is, however, imported. Due to this and to the administrative difficulties associated with applying different rates to different tariff lines, to date there has been no resort to the option to increase these rates to the maximum of 100 per cent.

Vegetables *(table 7)*

Similar to livestock and dairy, for all sensitive vegetable products the maximum bound rates are also the applied rates. The current bound/applied rates for vegetables range from 120 per cent for products such as cabbages, lettuce, carrots and cucumbers, to 175 per cent for products such as sweet peppers and okras, and 218 per cent for tomatoes. Vegetable production has generally increased over the period, with products exhibiting mixed changes due to a variety of factors; thus they show no clear growth or declining trends. Carrots, tomatoes, cucumbers, lettuce and okras comprise the most significant proportion of total domestic vegetable production. Sweet peppers and melon, although produced on a smaller scale, are nonetheless important to food security and to efforts at diversification of non-sugar agriculture.

Root crops *(table 8)*

In the case of root crops, only sweet potatoes and onions have been tariffied, and therefore have an applied rate that is equivalent to the bound rate (175 per cent and 236 per cent respectively). For all other root crops such as yams and cassava, the applicable rate for extraregional imports is 40 per cent and the ceiling binding is 100 per cent.

Major sources of carbohydrates, sweet potatoes and yams are the most widely produced root crops, with high local demand for the locally grown varieties of sweet potatoes. Domestic production of root crops, except for the period 1995–1997, has generally been on the decline. Sweet potatoes, in particular, have recorded widely fluctuating production from one year to the next. Onions have been a particularly important domestic crop, increasing in production over the period, with record production in 1995 and some even being exported. Average production during the period 1991–1995 (786.7 thousand kgs) was higher than during the 1996–2000 period (528.5 thousand kgs).

Fruits

Although little data on domestic fruit production is available, this category is important for maintaining a diversified food basket of sensitive products. With the notable exception of melons, currently subject to a rate of 161 per cent, most fruits imported into Barbados face a rate of 40 per cent, which may partly account for the general decline in domestic production in this category.

Herbs and spices

In the case of herbs and spices, only shallots face tariffs, with an applied rate that is equivalent to the bound rate. For all other herbs and spices such as thyme, marjoram and the like, the applicable rate for extraregional imports is 40 per cent and the ceiling binding is 100 per cent. This emerging category, of importance to domestic production, provides relatively good yields and has important linkages to the agro-processing industries. Most of the fresh herbs consumed locally have traditionally been sourced from domestic production.

(b) Policy objectives and tools for the agricultural sector

The constraints associated with "small-islandness" identified in Section II and the economic and business climate in Barbados militate against the price competitiveness of primary agricultural production. Barbados, like many SIDSs, with the advent of the multilateral trading process within the framework of the WTO, has had to find new and innovative ways of responding to the challenges posed by increasing trade liberalization and the erosion of preferential markets. Such challenges include making agriculture viable and attractive for investment in the national economy and developing a strong agribusiness and marketing focus.

Given the traditional predominance of mono-crop culture in Barbados, and indeed in many SIDSs, agricultural producers would not achieve international competitiveness in production, processing and marketing systems without carefully directed State support. Ongoing research and development on both crops and livestock is conducted by the Ministry of Agriculture and Rural Development and the results are shared with the farming community.

The GoB has also provided the impetus for private-sector-driven initiatives, such as the "Buy Local" campaign that started in the manufacturing sector, and which seeks to engender consumer awareness of and loyalty for local products. Similarly, the creation of a logo easily identifying locally produced agricultural products is a marketing measure that is fully supported by the Ministry of Agriculture. This is complemented by regulatory efforts for the mandatory labelling of all livestock products to allow consumers to easily differentiate the imported from the domestically produced product.

In August 2001, the Prime Minister of Barbados announced a new policy aimed at expanding the domestic market for agricultural commodities. In outlining this policy in the *Economic and Financial Policies of Government,*[5] it was stated that the Government would lead the way by increasing the consumption of locally produced agricultural products in schools and other Government institutions. The policy provided that at least 60 per cent of the requirements for beef, lamb, poultry, fish, vegetables, root crops and herbs and spices should be sourced locally.

Barbados has traditionally used trade policy to assist in the development of sensitive commodities, which, judging by the production figures over the last 10 years, has met with considerable success. The non-sugar agricultural subsector currently contributes more to GDP than sugar. Prior to the implementation of Barbados' WTO commitments in April 2000, the importation of sensitive agricultural commodities was limited using a non-automatic licensing system, which restricted the importation of

[5] Financial Statement on the Economic and Financial Policies of Government, presented by the Rt. Hon. Owen Arthur, Prime Minister and Minister of Economic Affairs, Barbados, 8 August 2001.

sensitive products primarily to periods of shortages. Under the current liberalized regime, trade policy, through the application of the maximum allowable bound rates and recourse to the SSG, is used to safeguard sensitive domestic production.

In November 2001, the GoB introduced a National Emergency Economic and Financial Programme as a temporary measure to safeguard domestic food security, provide conducive conditions for the recovery and revitalization of the key subsector critical to Barbados' food security basket, and to maintain a satisfactory level of economic activity to ensure Barbados' continued ability to finance the necessary levels of imports. This measure had its genesis at a Special Consultation on the economy, involving both private and public sector personnel, which resulted in a 90-day emergency package to cushion Barbados from the uncertainty of events following 11 September 2001. This programme is no longer in effect.

The Agricultural Incentives Scheme (AIS) complements trade policy supportive of domestic production. This scheme has been designed to lower costs and stimulate production. It provides for incentives and rebates to agricultural producers in a number of areas, from land preparation and cultivation to post-harvest and farm management. Since the AIS had not been used to maximum effect by the farming community, it was revitalized in 2001 to include new incentives, greater advertising of the available incentives, improved administration of the scheme and assignment of an officer to oversee its implementation and management.

The aforementioned policies and programmes are further complemented by increased emphasis on intersectoral linkages by the MARD. In this regard, the MARD has been forming strategic partnerships with ministries, such as the Ministry of Tourism to increase the percentage of domestically produced foods being utilized in the hotel and restaurant industries. This collaborative effort between the Ministries of Agriculture and Tourism, known as the Linkages Project, has seen completion of Phase One, namely an assessment of the supply capability of domestic producers; Phase Two, which involves assessment of demand in the hospitality sector, is scheduled to be implemented shortly. Other initiatives with respect to the tourism sector include the promotional cook-off designed by the Barbados Agricultural Development and Marketing Corporation (BADMC) to heighten awareness and use of BBB lamb in hotels and restaurants. The BADMC also aims to launch a recipe book of BBB lamb dishes to further promote its use by chefs and cooks. The farming community in Barbados comprises mainly an ageing population. To heighten awareness about the agricultural sector and ensure its survival, the MARD has launched initiatives involving youth and youth participation in agriculture. These include programmes at the Barbados Community College and the Samuel Jackman Prescod Polytechnic, as well as support to youth groups such as the 4-H Foundation.

(c) The impact of recent market liberalization and related factors on the domestic market

Barbados implemented its WTO-compliant tariff only regime in April 2000 and, as such, there is insufficient time series data to provide pre- and post-implementation statistical analysis. Recent market liberalization has negatively affected domestic production in a number of key industries; the experience of industries such as poultry, and the sharp decline in the production of some commodities such as carrots and cabbages is instructive. It is also noteworthy that whilst the distributive sector increased its volume of imports, in many cases sourcing imports at very low prices, such savings were generally not passed on to the consumer. Informal surveys have not revealed a fall in agricultural food prices and, since the advent of trade liberalization, the retail price index (RPI) for food has not shown any noticeable decline. Thus while the ratio of imports to domestic production has increased since 2000, placing domestic production, farm income and food security at risk, the major beneficiary has been the distributive sector at the expense of both the farming community and consumers.

Poultry imports for the period 1991–1999 averaged 1,737 tonnes. In 2000, the year in which Barbados liberalized its trade regime, imports of poultry amounted to 2,676 tonnes. For the month of June 2000,

they were more than double the average for the same month in 1999 and 1998. At that time, imported poultry was sold at a slightly lower price than that of local poultry. The industry has blamed increasing imports of poultry as the major cause of the reduction in the labour force and worker hours, and excess of stock to unprecedented levels. It was only because of key policy interventions by the GoB that the damaging effects on the domestic poultry industry were averted.

Liberalization has also negatively affected the pork industry. Prior to the opening up of the market in April 2000, domestic output received preference in the manufacturing process for pork products, with at least 50 per cent of the required pork input being sourced domestically. Domestic producers have lost this market segment since April 2000 when this informal arrangement ceased. However, faced with increased imports and a declining market share, domestic producers have responded with innovative marketing tools that seek to differentiate the imported product from the local product. Essentially, the marketing campaign seeks to raise awareness of the quality of the local product, highlighting this characteristic rather than price. This campaign has been so successful that currently domestic supply is insufficient to meet local demand.

Liberalization has also had a negative impact on domestic vegetable production. Domestic production of cabbage and carrots fell from 1,015.2 tonnes and 1,734.6 tonnes in 1999, to 780.8 tonnes and 1,025.3 tonnes respectively in 2000. Preliminary estimates indicate that production in 2002 has further declined. Similarly production of tomatoes, cucumbers, sweet potatoes, yams and onions has also recorded declines.

Barbados reserved the right to utilize the SSG under Article 5 of the AoA to safeguard sensitive domestic production. However, analysis by the Ministry of Agriculture, and experience since the enactment of legislation to give effect to the Special Safeguard provision, have shown that, in its current form, this provision does not provide adequate coverage for domestically produced goods in SIDSs. The additional duties calculated under this measure do not adequately address the problem of low-cost products from countries that spend exorbitant amounts in domestic support and export subsidies to their farmers.

Barbados' food trade performance has been similar to that of many other developing countries during the 1990s. It has experienced a widening gap between imports and exports and the further entrenchment of its status as a NFIDC during this period. Barbados' food trade imbalance grew from BDS$ 144.1 million in 1991 to BDS$ 364.2 million in 2000. Population statistics reveal that over this period, the resident population increased by only 6,000, from 262,000 in 1991 to 268,000 in 2000. With the exception of 1992, 1996 and 1997, Barbados' trade imbalance in food has exceeded BDS$100 million every year (table 9). Between 1999 and 2000, food imports increased from BDS$ 278.1 million to BDS$ 478.6 million, while exports experienced a further decline, from BDS$ 118.5 million to BDS$ 114.4 million. Food exports as a percentage of total exports declined by 0.5 per cent and food imports as a percentage of total imports increased by 8.2 per cent. The food imbalance in 2000 (BDS$ 364.2 million) was only surpassed by the imbalance of BDS$ 399.8 million recorded in 1993.

The last 10 years have also witnessed a structural change in the composition of agricultural and food imports and exports. For example, while the average value of food imports over the period 1997–1999 increased by BDS$ 65.2 million over the 1995 figure of BDS$ 226.2 million, it is interesting that the total volume of food imports declined. The average volume of food imports for 1997–1999 was 143.3 million kg, compared to 184.4 million kg in 1995. Imports of cereals and cereal preparations (SITC head 04) significantly declined in volume (from 94.2 million kg in 1995 to an average of 31.3 million kg in 1997–1999), but recorded increased import value from BDS$ 43.5 million in 1995 to an average of BDS$ 55 million in 1997–1999. Thus, in general, Barbados has been importing ***less*** food in terms of volume but ***more expensive*** food products overall. This anomaly is explained by the fact that as the Barbadian population has become increasingly affluent, and as the middle class in Barbados has expanded, there has been a shift in food tastes, which is reflected in the demand for higher priced and better quality foods. The influence of advertising has also resulted in greater demand for certain brands of products, particularly those originating from North America.

In addition, while the United States, Canada and the EU (primarily the United Kingdom) continue to be the main source of food imports, CARICOM states are gaining an increasing market share in the Barbadian market, in part stimulated by duty-free access as a result of the CARICOM Treaty and the prospects of higher prices in the Barbadian market. Barbados' exports have also shifted away from primary products to more processed and semi-processed products. Apart from the sugar exports to the EU, CARICOM is becoming an increasingly important market for Barbadian exports of processed products such as sausages and fish, as traditional importers such as the United States are imposing greater non-tariff barriers.

(d) The impact of agricultural support programmes in exporting countries on the domestic market

Measures, whether export subsidies or domestic support, which engender unfair competition in SIDSs markets, negatively affect domestic production in the SIDSs. Insofar as such schemes are applied to products of interest to Barbados, making the export from these countries artificially competitive in comparison to the domestically produced alternative, the demand for, and consequently domestic production of certain products is negatively affected. In many cases, the volumes, although not excessive to the exporting country, constitute a significant proportion of domestic consumption in the SIDSs, thereby affecting domestic production and leading to doubts about its continued viability.

Export support programmes

The majority of products that benefit from major export subsidies, such as course grains, are not produced by Barbados, and hence domestic production of sensitive commodities is not directly affected. In fact such subsidies benefit Barbados, as a NFIDC by reducing the cost of these products and hence the total food bill. Due to the lack of detailed information on the general and product-specific application of export credits and export insurance/guarantee schemes, it is difficult to assess the impact such schemes have on domestic production. It is likely, however, that export credits, insurance and guarantee schemes, when considered in tandem with domestic support programmes in developed countries, could place producers and exporters in these countries in an advantageous position vis-à-vis producers in developing countries, and in particular SIDSs.

Domestic support programmes

Domestic support programmes can adversely affect domestic production in SIDSs, since such programmes may stimulate and artificially maintain production, thereby creating excess capacity, which facilitates export, usually to DCs. In addition, domestic support programmes that provide massive support to farmers in developed countries can maintain prices at artificially low levels. Such low-cost products, when entering the markets of SIDSs, wreak havoc on domestic production which, in addition to the inherent disadvantages of SIDSs, mentioned earlier, does not benefit from excessive amounts of domestic support.

III.3 Major products for the export market

Sugar remains the predominant agricultural export crop in terms of both volume and value. Apart from the export of sugar under preferential arrangements, Barbados' experience with exports over the period 1991–2000, though involving a wide range of products, has been somewhat disappointing. Those products which had a minimum average export volume of 10,000 kg over the 10-year period included sweet potatoes, breadfruit, hot peppers, okras, yam, avocado, cut flowers and foliage, coconuts (not shelled), golden apples, paw paw and sour sop. In general, the commodities with the greatest volumes earned the greatest export revenues. However, cut flowers and foliage recorded the fourth highest average export value over the period, but in terms of volume this category was the seventh highest (table 10a and b).

Barbados is currently exploring the market potential for non-traditional exports, with emphasis on value-added and higher priced (niche market) products such as herbs and spices, and for signature products such as BBB sheep, Barbados Cherry and West Indian Sea Island Cotton. Such a plan could result, for example, in the export of semi-processed and processed West Indian Sea Island Cotton (WISIC) products, rather than lint. Although comprehensive statistical data is not available for some of these non-traditional and emerging products, and they have accordingly not been individually analysed in this study, the continued viability and existence of an agricultural sector in Barbados will depend on a greater emphasis on such products.

In addition to concentrating on niche markets, trade data shows that Barbados has, within the last five years, experienced growth in the export of agro-processed products such as sausages, margarine, luncheon meat and juices. In 1998, for example, exports of canned sausages earned over US$ 2 million, which is much higher than the export earnings from any single primary agricultural commodity (with the exception of sugar) in any year during the period 1991–2000. Thus, although prominence is given in the present study to primary agricultural products, any progress and competitive advantage Barbados has made, or develops, in both primary and agro-processed products should be fully exploited.

Barbados is also analysing the market potential for products such as hot peppers, sweet potatoes, yam and cut flowers and foliage, which have demonstrated export viability but have seen a significant decline in export volumes and values over the past five years. Technical assistance is needed for a review of the country's export programme and for identifying the factors that have led to its decline over the past 10 years.

(a) Product identification and analysis

This sub-section is divided into sugar and those products within the non-sugar sub-sector for which Barbados has recorded the greatest export values over the period.

Sugar

Sugar is a bulk commodity exported by a single exporter (the BAMC) to the EU under preferential trading arrangements. Although sugar can be traded on the world market, the comparative prices render the EU the most lucrative prospect for exports of bulk sugar from Barbados. The prospects and challenges for sugar traded under the ACP/EU preferential scheme are addressed in the section on preferences.

Sugar as a commodity does not benefit from relatively high bound rates, as the applied rate for sugar imported from extraregional sources is currently 40 per cent, and sugar exports do not benefit from export subsidies. However, sugar cane producers do benefit from some domestic support measures such as the cane replanting incentive, which is designed to promote the planting of canes that provide better yields and higher sucrose content. Payments under this scheme averaged BDS$ 1.25 million per annum for the period 1994/95 to 2000/01, with no payments being made under this scheme during the financial year 1999/00. In addition, sugar cane producers have benefited from deficiency payments (made within the 10 per cent *de minimis* limit) for the 1999/00 and 2000/01 crops amounting to BDS$ 3.5 million and BDS$ 3.68 million respectively. These payments were necessary due to the falling exchange rate resulting in lower prices for the producers. For example, the prices paid to sugar cane farmers dropped by 16.5 per cent, from BDS$ 82.77 per tonne in 1998 to BDS$ 69.13 per tonne in 2001.

Sugar exports over the period have been mixed, with a high of 65.7 thousand tonnes in 1991 and a low of 38.5 thousand tonnes in 1995 (table 11). Sugar's declining contribution to the national economy has been partially attributed to the increasing divergence between its average export price and the cost of domestic production. Export earnings from this commodity have, with the exception of 1996 and 1997, been on the decline. The declining value of the euro vis-à-vis the US dollar, since its introduction in January 1999, has exacerbated the situation; in 2000 the value per tonne of exports was the lowest for the period.

Non-sugar agriculture

As the production and profitability of sugar has declined, there has been an increased interest and export drive for other products that offer greater scope to exporters and farmers. In particular, the four products for which Barbados recorded the greatest export values over the period were breadfruit, hot peppers, sweet potatoes and cut flowers and foliage. In addition, cotton, which has been exported in the past, features prominently in Barbados' focus on niche market products, and is part of the strategy for the revitalization of its export programme.

There are a few key exporters of commodities within the non-sugar agriculture sector, primarily exporting to the markets of the United Kingdom and Canada. Although individual commodities exported under this category may be small in relation to some other countries and even to the sugar industry, as an aggregate such exports, apart from benefiting exporters, are an important source of revenue and income stability to farmers.

Whilst the export of commodities, excluding sugar, during the period 1991–1995, could be considered small relative to that of other countries, over the period 1996– 2000, Barbados' exports of agricultural commodities drastically declined, particularly in 1999 and 2000. For example, exports of hot peppers recorded a high of 714,916 kg in 1994, but fell to 5,574 kg in 2000. Similarly drastic declines were recorded in exports of sweet potatoes, breadfruit and cut flowers and foliage (table 12).

(b) Policy objectives and tools to enhance exports and build export capacity

The desire to enhance exports and build export capacity is intrinsically linked to the need to maintain an agricultural sector in Barbados for the purposes of economic diversification, food security and environmental considerations. Barbados has adopted a holistic approach to the development and promotion of products for export that includes elements aimed at production, marketing and export promotion. To assist in food production and manufacturing, the GoB has provided tax concessions and implemented incentives schemes and rebates through various ministries including the Ministry of Agriculture and Rural Development, the Ministry of Commerce, Consumer Affairs and Business Development and the Ministry of Industry and International Business.

With respect to export facilitation, the GoB has provided agricultural exporters and exporters of food products with various incentives, including export credit schemes. In the past, facilities such as an export revolving fund and the services of an export marketing company, the Barbados Marketing Corporation, were available to exporters of agricultural produce. Assistance with the preparation of export documentation, package design and other trade facilitation services were also provided through the former Barbados Export Promotion Corporation (BEPC), later subsumed into the Barbados Investment and Development Corporation (BIDC). The Government has also sought to involve the various missions and embassies in market development activities and product promotion drives.

Production

At the production level, incentives and rebates through the Agricultural Incentives Programme have been introduced to increase production, lower costs and improve quality. For example, support is provided for the establishment of on-farm storage and post-harvesting facilities such as chill rooms. To enhance the production of value- added and niche-market products, incentives have been introduced for such initiatives as organic farming. Coupled with incentives for items such as approved farm management computer programs and rebates on the adoption of new technologies (such as greenhouses and hydroponics systems), it is envisioned that overall production costs will be reduced and the production of items for which there is a growing demand, and for which price is not the primary consideration, will be stimulated. Farmers are also being educated about sanitary and phytosanitary (SPS) measures,

hazard analysis critical control points (HACCP), and other standards which have an impact on the quality of produce and thus on its export performance.

Marketing and export promotion

Within the Agricultural Incentives Framework, incentives have been specifically targeted at exporters. A rebate of 30 per cent, up to a maximum of BDS$ 10,000 has been introduced to defray the cost of international transport and freight for exporters of fresh produce. Exporters can also benefit from a technical assistance fund of BDS$ 250,000 to assist producers and marketers in the conduct of feasibility studies, access new technologies and implement quality assurance schemes related to the export of fresh agricultural produce.

The most recent initiative targeted to assist exporters was announced within the framework of the annual budget presented by the Prime Minister and Minister of Finance on 23 October 2002, in which the establishment of an Export Development Fund of BDS$ 500,000 was announced. It is envisaged that this Fund will serve as an export credit facility to facilitate the timely payment of farmers by exporters. This has been a key issue negatively affecting the performance of the export programme for fresh agricultural produce.

The Ministry of Agriculture and Rural Development has also sought assistance from international agencies such as the FAO and IICA for conducting assessments and studies to identify the products with the greatest potential, and possible markets. Assistance is also being sought for enhancing Barbados' regulatory systems with respect to conduct and certification regarding risk analyses, minimum residue limits, Hazard Analysis and Critical Control Points (HACCP) and International Standards Organization requirements to ensure that SPS standards are met and maintained.

The role of the Government at this juncture is important for creating a climate conducive to investment and trade, with particular emphasis on value-added and niche-market products. The achievement of this objective requires key action steps, including:

(1) The conduct of basic research and developmental work, where feasible, in joint partnership with the private sector, to support agricultural producers; joint partnerships and technical assistance from organizations such as FAO and IICA in these areas should also be pursued.

(2) The provision of incentives and tax concessions to attract investment in agricultural and food manufacturing activities.

(3) The development of export and trade facilitation services such as revolving funds and credit guarantee schemes. This idea was presented as part of the key findings/ recommendations of the Nurse Study,[6] which highlighted the need for such facilities aimed at providing exporters with short-term capital to pay farmers for produce so as to rebuild confidence in the export promotion programme.

(4) The development of standards, legislation and regulations to guide production and manufacturing norms and address emerging concerns from increased trade liberalization.

(5) The development of financial and technical assistance instruments that support investment in technologies, and which facilitate the attainment of international standards.

(6) Lobby the international donor community to provide much needed technical and financial assistance, in particular to small and medium-sized firms in their efforts to build brand recognition and implement product differentiation strategies.

[6] *Review of the Export Promotion for Agricultural Commodities in Barbados*, May 2002, prepared by consultant James Nurse, in conformity with the guidelines under FAO Project TCP/BAR/0168.

(7) The development of a structured programme to promote organic production and the production of other environmentally preferable products, including facilitation of the certification of domestic producers and development of the local market for organic products.

(8) Make effective representation to the main trading partners to ensure that non-tariff barriers do not adversely affect efforts to access markets, and participate in multilateral and other forums to ensure that SPS and technical barriers to trade (TBT) are not used as non-tariff barriers to exports from developing countries.

(c) The role and importance of preferential market access

As mentioned earlier, the principal agricultural export of Barbados, sugar, has benefited for many years from preferential access to the EU market. As such, trade preferences have provided the basis upon which the agricultural sector in Barbados, and many SIDSs, has developed. The revenues, which accrued from the export of sugar were used to fund a range of critical public sector investment projects that have collectively provided a foundation for social and economic development in Barbados. Despite the declining fortunes of the sugar industry in Barbados, preferential market access arrangements continue to be extremely important and relevant. There is no doubt that in the absence of these trade preferences, given the state of the world market for sugar, the sugar industry would have collapsed years ago, with serious consequences for the agricultural sector and the Barbados economy as a whole. As a result, Barbados, along with other CARICOM members, attaches great importance to the maintenance of these preferential arrangements and their accommodation within the multilateral trading system.

Despite the positive contribution of trade preferences to the sustained development of many SDEs and SIDSs like Barbados, these arrangements have been subject to severe pressure and challenges in recent decades. The EU's sugar regime provides the framework under which sugar exports from the ACP States enter the EU market in specified volumes and at guaranteed prices. Reform of the EU's sugar regime could have negative effects on the current market access conditions offered to the ACP sugar producers such as Barbados. The possible changes include reform of the EU's Common Agricultural Policy (CAP), adjustments associated with EU enlargement, the Everything-but-Arms Agreement and the need for the EU to meet its obligations under WTO agreements. The recent request by Brazil and Australia for consultations with the EU concerning WTO compatibility of the EU's sugar regime is instructive in this regard. These factors, individually and combined, could result in changes in the structure of the EU's sugar regime to the detriment of ACP suppliers. In the final analysis, even if a guarantee of access is maintained for traditional suppliers, there could be significant downward pressure on the price paid to ACP suppliers. It is a matter of major concern for Barbados, one of the highest cost producers of cane sugar in the world, since there are serious implications concerning the level of government support that would be required to maintain the industry.

In addition to preferential access under current agreements such as the ACP/EU Sugar Protocol, preferential access needs to be granted for key products of importance to SIDSs. The erosion of traditional preferences necessitates that new and accommodating measures be instituted to avoid SIDSs being marginalized in the multilateral trading process. Such marginalization would negatively affect foreign exchange earnings and hamper attempts to diversify the economic base, making the economy more susceptible to changes in the external environment.

(d) Market access opportunities arising from liberalization

It was postulated that liberalization within the framework of the WTO would bring benefits to all countries involved in the process, and in particular to developing countries such as Barbados. In practice however, these countries have not been able to take advantage of available market access opportunities for a number of reasons.

The reduction in tariffs, including tariff peaks and tariff escalation, particularly in developed countries, and the implementation of more transparent trade practices should have improved market access opportunities for developing countries like Barbados. However, it should be noted that, despite the fact that Barbados is a beneficiary of preferential tariffs (at a preferential rate of 0 per cent in many cases) for a number of agricultural commodities under arrangements such as the ACP/EU Trade Arrangements, the Caribbean Basin Initiative (CBI) and CARICOM/Canada Trade and Economic Cooperation Agreement (CARIBCAN), very few gains in terms of non-traditional agricultural exports have been realized. This relatively poor performance demonstrates that there are other factors, apart from low tariffs (supply side problems, limited export capacity, non-tariff barriers and domestic support policies), that must be addressed before SIDSs like Barbados can participate meaningfully in global trade. In fact, tariff reductions, particularly by developed countries, will erode the margin of preference currently enjoyed by countries like Barbados and result in more competitive markets. However, where tariff escalation exists in developed countries, there may be some market access opportunities provided for value-added products exported by countries like Barbados. A joint UNCTAD/WTO study[7] revealed that for products of particular interest to developing countries, such as processed products, tariffs were often levied at some of the highest rates.

The emergence of new forms of non-tariff barriers, such as TBT and SPS measures, have limited the capacity of SIDSs to reap any tangible benefits from the multilateral trading process. For Barbados, these have proved to be the greatest hindrance to increased market access and any material benefits from WTO trade liberalization.

Market access opportunities have also been adversely affected by the level of domestic support provided to domestic producers in the target markets. The overall reduction in the levels of domestic support should have benefited Barbados. However, the practice of shifting support from non-allowable categories into "green box" measures — without the requisite discipline needed in this category — has resulted in overall levels of support increasing, rather than remaining constant or decreasing, as postulated in the multilateral trading process. This has negated the growth potential of SIDSs' exports into traditional and non-traditional markets.

The prospects for increasing exports to developed countries as a result of trade liberalization are not as encouraging as they may appear to be. The non-traditional markets of other developing countries may actually offer better opportunities for SIDSs like Barbados provided that logistical difficulties (e.g. sea and air transportation links, limited business contacts and established linkages) are overcome. However as a high-cost producer, Barbados will have to develop products that can compete on the basis of non-price competitive factors. Value-added processing offers greater scope for the development of such products and, as a consequence, technical and financial support needs to be mobilized to assist the small firms that operate in Barbados to reposition themselves to participate in the global marketplace.

IV. OPTIMAL MODALITIES FOR SUSTAINED AGRICULTURAL DEVELOPMENT IN BARBADOS

IV.1 Introduction

The preceding sections of this report provided the background against which modalities could be considered and developed to address the main concerns and challenges facing sustainable agricultural and rural development in Barbados. This section therefore seeks to identify those optimal modalities for Barbados in relation to the market access, domestic support and export competition components of the Agreement on Agriculture (AoA) within the context of the ongoing negotiations. In this connection, the

[7] UNCTAD/WTO, The post-Uruguay Round tariff environment for developing country exports: Tariff peaks and tariff escalation. Joint Study, UNCTAD doc. no: TD/B/COM.1/14/Rev-1 UNCTAD, January 2000.

initial modalities proposed by WTO members during 2001–2002, as compiled by UNCTAD, were reviewed and evaluated in terms of how these interact with country-specific concerns and products of interest listed in Section Two.

It is generally accepted that developing countries will require special and differential treatment (S&DT) if their development concerns are to be adequately addressed in the current negotiating process. Unfortunately, however, experience has shown that acceptance of the need for S&DT has not been accompanied by the development and implementation of a package of S&DT provisions that responds in real terms to the circumstances of all developing countries, and, in particular, to the peculiar circumstances of the most vulnerable developing countries, including SIDSs like Barbados. In the absence of a clear recognition of the diversity that exists among developing countries, and with a continuation of the "one size fits all approach", it is unlikely that any modalities emerging from the current negotiations will go far enough to address the concerns of the smallest and most vulnerable economies, including SIDSs.

The peculiar circumstances, inherent structural weaknesses and constraints which severely limit the capacity of SIDSs like Barbados to participate and benefit from the multilateral liberalization process must be at the core of, and should therefore form the basis for, the development of optimal modalities for continuation of the reform process in trade in agricultural products.

In the case of Barbados, the modalities must address the fact that the country is highly dependent on food imports and is becoming even more so as imports continue to displace domestic production, which is characterized by high production costs and a general lack of competitiveness. As a consequence, **food security** is a major issue that should be addressed in the current negotiations, particularly for SIDSs like Barbados.

The modalities also need to recognize the **multifunctional role of agriculture**, and in particular sugar cane production, in generating foreign exchange earnings and economic activity, fostering rural development and rural employment, preserving the environment and rural landscape and promoting beneficial socio-cultural linkages. **Preferential market access**, which has been critical to the survival of the sugar industry, will continue to be essential for the sustained development of the agricultural sector. The modalities should also recognize the limited capacity of the Government of Barbados to finance large domestic support programmes, given the size and level of development of the economy. As a consequence, **border measures will be the principal tools/instruments** for safeguarding and promoting domestic production.

The modalities should facilitate the participation of Barbados in global trade by addressing supply-side constraints and providing support in **building export capacity and international competitiveness**. Technical and financial assistance will be as important as any trade instrument in this regard. S&DT should therefore include, as a major element, the provision of technical and financial assistance to disadvantaged countries, including SIDSs like Barbados, beyond the levels of assistance currently provided by specialized institutions and the donor community.

It is against this background that Barbados has sought to participate in the ongoing negotiations to influence the outcome in such a way that the emerging modalities are responsive to its concerns as a SIDSs. In this connection, Barbados, as a member of the Caribbean Community (CARICOM) has co-sponsored a number of proposals during the first and second phases of the current negotiations, which address market access, domestic support — "green box" subsidies, export competition, non-trade concerns, S&DT, trade preferences, SSG measures and food aid.

In addition Barbados co-sponsored a note on non-trade concerns (G/AG/NG/W/36) as well as a proposal by SIDSs (G/AG/NG/W/97 Corr.1). These proposals identify, in a general sense, the kinds of modalities that Barbados would welcome in the final outcome.

IV.2 Optimal modalities with respect to market access

While the modalities in all three areas (market access, domestic support and export competition) are considered to be of great importance to Barbados, those in the area of market access have special significance, and are particularly important given the circumstances and challenges which confront this small island. The final outcome of the negotiations in the area of market access are expected to determine in large measure how the agricultural sector in Barbados will perform in the medium to long term.

Modalities in the area of market access must be considered from two broad perspectives. First, the modalities that would focus on market access commitments applicable to other WTO members, and in particular to developed countries. These modalities will considerably influence the conditions under which exports from Barbados will enter the markets of other WTO members. There are three issues that require mention in this context: (i) the need for significant technical and financial assistance to address supply-side constraints and build export capacity and competitiveness; (ii) the need for reforms outside the AoA which will address the use of SPS measures and technical barriers to trade as non-tariff barriers; and (iii) the future of preferential trading arrangements within the context of trade liberalization.

Secondly, there are the modalities that would apply to Barbados, other SIDSs and SDEs within the context of S&DT, and which would determine the conditions under which exports from other members enter the domestic market of Barbados as imports. There is already significant pressure on the domestic market from recent market liberalization, which points to the need for greater flexibility with respect to the border measures utilized by SIDSs like Barbados.

(a) Tariffs

In terms of commitments to be made by Barbados, the approach to tariff reductions should be at the core of the market access modalities, given recent experience in market liberalization and the adverse impact on achieving food security objectives. There are a number of proposals that address the concerns of Barbados in relation to the possible negative impacts of further tariff reductions.

Exemptions relating to product coverage

The non-paper by Cuba, the Dominican Republic and other like-minded countries on the "Development Box", the CARICOM negotiating proposals on Special and Differential Treatment and Non-Trade Concerns, and similar proposals by other members such as Turkey are particularly relevant in this regard.

The non-paper on the "Development Box" calls for basic food security crops to be exempt from reduction and other commitments using a positive list approach.

CARICOM, in its proposal on non-trade concerns, suggests that small developing economies should be allowed to maintain appropriate levels of tariff bindings as a S&DT provision for food and nutrition sensitive agricultural products through their exemption from further tariff commitments. This negative list approach proposed by CARICOM is similar to that proposed by Turkey and others. Appropriate tariff levels in this context refer to tariff levels that are effective in safeguarding domestic production of key sensitive commodities by significantly dampening the demand for imported competing products. These tariff levels would vary from product to product depending on the relative differential between domestic and c.i.f prices.

Given the food security status of Barbados, with its extremely high import dependency, there are a number of sensitive agricultural products that will require measures such as exemption from reduction commitments. These products include poultry meat, eggs, pork, milk and food crops such as onions, tomatoes, cabbage, carrots and melons, among others. Such action would be justified on the grounds of the apparent inadequacy of current tariff levels and the adverse impact further liberalization would

have on food security. This approach is also justified given the very low levels of domestic support currently provided to the production of food crops and livestock products in Barbados and the limited capacity of the Government to finance large domestic support programmes. It also makes border measures such as tariffs even more relevant and important.

Eligibility for such exemption would have to be based on agreed upon criteria, with particular emphasis on the contribution of the product(s) to the food security basket. Eligibility should also be linked to the use of total domestic support which is below prescribed levels (e.g. below the *de minimis* level). Moreover, other criteria might need to be developed for the identification of eligible products.

Renegotiating zero or low bindings

A number of proposals also call for zero or low tariff bindings to be renegotiated at appropriate levels, particularly with regard to products of vital importance to food security. This issue of renegotiation of tariff bindings would not be applicable to Barbados, since most of the sensitive agricultural products were subject to the process of tariffication which resulted in relatively high bound rates. The issue would, however, be relevant for other CARICOM members who entered very low bindings during the Uruguay Round.

Tariff reduction

With respect to commitments to be made by other WTO members, and particularly by developed countries, the objective should be to improve market access opportunities for products of export interest to SIDSs like Barbados. It should be noted that Barbados currently benefits from preferential access to the United States, Canadian and European markets under the CBI, CARIBCAN and EU-ACP Trade Relationship, which means that its agricultural exports already benefit from relatively low tariffs and, in some cases, no tariffs at all. In this regard the perceived benefits associated with tariff reductions may not be as significant for Barbados as for other developing countries which do not benefit from these preferential schemes. Addressing tariff escalation may therefore provide greater benefits to the extent that it improves market access opportunities for value-added products.

A number of modalities have been proposed for tariff reduction including the harmonizing formula approach, a cocktail approach, the UR approach, the "staging" approach, a sectoral approach, a non-formula flexible approach and the approach advanced by CARICOM countries, including Barbados, which seeks to link tariff cuts to cuts in agricultural support measures.

Developed countries should adopt the modality that has the greatest impact on tariff peaks and tariff escalation and provides improved market access for products of export interest to DCs, SDEs and SIDSs. This may involve the adoption of one of the aforementioned approaches or a combination of the approaches identified for tariff reduction in developed countries; it should be the subject of detailed analysis to be undertaken on behalf of SDEs and SIDSs. Available information suggests that the harmonizing formula approach, or some modification of the same, would be the most effective for addressing tariff peaks and tariff escalation.

In the case of sugar, for which ACP SIDSs like Barbados benefit from trade preferences, special consideration is required in terms of the tariff reduction approach to be adopted by preference-giving developed countries.

The tariff reduction modality to be adopted by SIDSs and SDEs like Barbados should be developed as an S&D measure characterized by:

- An approach that offers SIDSs and SDEs the necessary space to maintain effective tariff bindings on sensitive products (The UR approach may be more appropriate

for sensitive products than the harmonizing formula approach, which would have a greater impact on tariff peaks and undermine efforts by SIDSs like Barbados to safeguard sensitive products.).

- A tariff reduction rate which is significantly lower (at least 50 per cent lower) than that applicable to developed countries.
- A minimum level of tariff cut per tariff line which is lower than that required of developed countries (a level of 5 per cent would provide some flexibility to countries like Barbados to maintain tariffs for sensitive products which may not qualify for the above-mentioned proposed exemption from reduction commitments. Such flexibility would be even more critical where product exemptions are not realized).
- A longer implementation period (10 years or more) for SIDSs to reduce tariffs.
- In the event that exemption from reduction commitments is not obtained, SIDSs like Barbados should be granted flexibility in tariff reduction commitments that allow for minimal reductions in tariff levels for sensitive products.

(b) Special safeguard measures

Experience has shown that even with a standstill in terms of tariff bindings, countries like Barbados will find it difficult to compete with imports of selected products, given the dynamic nature of international markets. Consequently, special safeguards will be an essential policy tool for the attainment of food security and rural development objectives.

CARICOM, in its market access submission G/AG/NG/W/100, proposed the establishment of a mechanism similar to the current SSG to facilitate the adjustment of small developing economies, including SIDSs. The mechanism should take the form of a S&DT provision for developing countries, and its application should be confined to a restricted list of eligible products deemed important to the food and nutrition security status of SDEs, including SIDSs. It should be noted that other members have tabled proposals which identify the need for some form of special safeguard provision.

Barbados is one of 38 WTO members that have recourse to the current Special Safeguard Provision under Article 5 of the AoA, and only recently (in July 2002) implemented the measure to address import surges that would occur as a direct result of low import prices. While limited time series data precludes an in-depth analysis of the impact of this measure, it can be generally concluded that the SSG has dampened the demand for some agricultural imports while being ineffective in respect of other products.

While Barbados would fully support a special safeguard that addresses surges in import volumes above a certain threshold and declining import prices below a predetermined reference price, that is, a safeguard structured along the lines of the current SSG, it should be noted that there is the need for some adjustment. For example, Barbados chose to utilize the SSG on the basis of the price trigger, since the volume-based trigger would only be invoked at what were considered to be relatively high volumes of imports of sensitive commodities in relation to total domestic consumption. Furthermore, even when the volume-based safeguard was triggered, the additional duty was limited to one third of the applicable duty, which, in some instances, was inadequate to reduce import levels. Having selected the price-based safeguard, experience has shown some deficiencies in this mechanism as well.

The effectiveness of the price-based safeguard is too heavily skewed towards products that have relatively high absolute reference prices as against products with low absolute reference prices. The amount of additional duty that can be applied is determined in large measure by absolute differences between the reference and the c.i.f. prices of shipments as against relative differences. As a consequence, once a product has a low reference price, the absolute difference between the reference and the c.i.f. price of the shipment will be low in absolute terms and the corresponding additional duty will also be low (e.g.

onions). This situation occurs despite the fact that the percentage difference between the two prices may be significant, and even higher than percentage difference that exists for a product with high absolute prices. In addition, even where the trigger is relatively high in absolute terms, the SSG has proven to be ineffective where c.i.f. prices are particularly low (e.g. chicken leg quarters, a residual product). An adjustment in the mechanism would be necessary to remove this deficiency and ensure that the SSG is as effective as possible in fully offsetting the price advantage of imports and thus safeguarding domestic production.

The Special Safeguard Mechanism for developing countries could have the following elements:

- DCs, including SIDSs, would designate eligible products and list these in their schedule of commitments (Products which benefit from non-exempt domestic support measures would be excluded);
- The greatest flexibility to use the special safeguard should be accorded to countries applying the lowest levels of domestic support and export competition measures;
- It can be triggered when the import quantity during the year exceeds the reference level (X per cent e.g. 110 per cent) of the average import level over the previous (x e.g. 3) years, or where the c.i.f. import price of the shipment falls below the reference level equal to the average domestic market price of the product in the previous (z e.g. 3) years;
- The SSM would take the form of a quantitative restriction in terms of a quota or an additional duty which completely offsets the fall in prices;
- The duration would be for one year with a right to extend;
- Immediate notification to the Committee on Agriculture of the WTO.

Given the experience with implementation of the current SSG, the SSM should be not be administratively burdensome, and should be relatively simple for developing countries to implement.

(c) Tariff Quotas

Barbados has commitments in relation to tariff rate quotas (TRQs) for those products which were tariffied during the Uruguay Round. Many countries, both developed and developing, have been calling for tighter administration of the tariff quotas and for expansion in the quotas and cuts in in-quota rates.

The approach to be adopted for tariff quotas should mirror that for tariff cuts. For food security sensitive products, Barbados should be exempt from further commitments with respect to minimum access. In the event that exemption is not accepted, expansion of tariff quotas should be kept to a minimum for sensitive products, taking into account the potential impact on domestic production and food security. In-quota tariffs for sensitive products should be accorded a standstill, or face minimal reductions, in keeping with the movement of bound rates for sensitive commodities.

Where developed countries have tariff quota commitments, particularly for products of export interest to SIDSs like Barbados, these countries should be required to improve transparency in the administration of tariff quotas, expand quota volumes and reduce in-quota tariffs with a view to improving market access opportunities. In the case of preference-giving countries, special considerations and flexibility will be required so as not to undermine existing preferential marketing arrangements which benefit ACP SIDSs like Barbados. The use of TRQs in maintaining existing preferential market access is addressed in the following section, which looks at trade preferences in a more substantive manner.

(d) Trade preferences

The main agricultural export of Barbados, sugar, benefits from access to the EU market through trade preferences. Consequently, Barbados, along with other CARICOM members, attaches great importance to the maintenance of these preferential arrangements and their accommodation within the multilateral trading arrangements.

CARICOM, in its market access submission G/AG/NG/W/100, proposed that WTO members examine options aimed at rendering the market access concessions offered to developing countries through trade preferences stable, transparent and predictable. A more substantive submission was made to the February 2002 meeting of the Committee on Agriculture (CoA) in which CARICOM called for:

- Trade preferences to be accepted as a legitimate instrument to assist the development of small developing economies;
- Existing preferential arrangements to be exempted from challenge under Article XXIII of the GATT on nullification and impairment;
- Producers in SDEs to be compensated for erosion of preferential prices; and
- Development of instruments which facilitate diversification.

In addition, proposals were submitted by Mauritius and a group of SIDSs, which call for the protection of current market access conditions for SIDSs and single commodity producers. In this regard, it was proposed that any review of TRQ administration should not have a negative impact on the terms and conditions of current market access and that non-reciprocal tariff rates to developing countries should be improved and bound during the reform process.

The TRQ mechanism is one way of making preferential market access fully bound under the WTO's AoA. In this regard, the modality could consist of the following elements:

- A minimum percentage of the total annual volume of each TRQ should be reserved for imports from countries which are small-scale exporters of the product, at an in-quota rate of 0 per cent;
- All TRQs allocated to small-scale exporters that are unused after six months shall become available to other exporters on a most-favoured- nation (MFN) basis
- A "small-scale exporter" is defined as a country who's export share of the product concerned in the world market is less than X per cent; and
- A list of products of export interests to small-scale interests shall be drawn up and will form the basis for members to open TRQ for small-scale exporters; the volume of such products shall be determined as X per cent of its domestic consumption.

Barbados fully supports any proposal which seeks to preserve and, if possible, enhance the benefits arising from trade preferences. However, if trade preferences are to be reformed as part of the current process, consideration should be given to adequate transition periods, provision of compensation for losses incurred by SDEs, including SIDSs, and the provision of technical and financial assistance to support diversification.

(e) Other market access considerations

As indicated earlier, SIDSs like Barbados, with inherent structural weaknesses, will not be in a position

to benefit from the liberalization of agricultural trade in the absence of some market access considerations which fall outside those that deal with tariff reduction, tariff escalation, tariff quotas and the like.

First, there is the need for substantial technical and financial assistance to address supply-side constraints, build export capacity and exploit available market access opportunities in both traditional and non-traditional markets. This need is clearly demonstrated by the fact that even with significant tariff preferences in the past, including tariff free access, Barbados has made little progress in penetrating traditional markets in North America and Europe with non-traditional agricultural products. Furthermore, Barbados has actually experienced declines in non-traditional agricultural exports to its traditional markets, with the CARICOM market emerging as a major market for exports.

The S&D provisions emerging from the current negotiations must be so structured that they recognize the need for technical and financial assistance to assist small firms in SIDSs like Barbados to develop their unique products for niche markets through the adoption of innovative production and marketing initiatives. Penetrating competitive markets with new products will require the building up of a brand image and aggressive marketing, with obvious consequences for resource requirements. Technical and financial assistance should therefore become a legally binding commitment within the S&D provisions arising from the negotiations.

However, even where small firms in SIDSs like Barbados have empowered themselves to compete in the export market, they often meet obstacles in the form of SPS and TBT requirements, which have in some cases emerged as new forms of non-tariff barriers. There are two dimensions to this issue. First, there is a need for technical and financial assistance to SIDSs, for both their private and public sectors, to enable exports to meet legitimate SPS and TBT requirements. Secondly, the WTO's SPS and TBT Committees need to give serious consideration to obviating the use of these measures as non-tariff barriers. While consideration of SPS and TBT falls outside the scope of the current negotiations, they are undoubtedly major factors which affect market access. This is in fact a real weakness in the approach to trade liberalization in agricultural products, since the current reform process does not in itself address some of the major concerns of SIDSs.

IV.3 Optimal modalities with respect to domestic support

Barbados and other CARICOM countries have developed proposals that identify optimal modalities with respect to domestic support. Some other WTO members have advanced similar proposals, which in essence seek to tighten up on the use of measures that can be classified as exempt from reduction commitments, particularly in the case of developed countries, while offering developing countries some additional flexibility.

Barbados currently uses a combination of input and investment subsidies in the form of a Farm Incentive Scheme administered by the Ministry of Agriculture; it is based on the provision of rebates on input and operating costs (e.g. irrigation facilities and land preparation). In addition, an Agricultural Development Fund (ADF) offers concessionary loans and grant funds for agricultural development activities. Special financial support is also provided to sugar in the form of significant general services support and, in recent times, the provision of deficiency payments.

In terms of domestic support, Barbados like many other developing countries, did not enter a figure for Aggregate Measurement of Support (AMS) in its Schedule of Commitments; it is therefore restricted to the use of Annex 2 measures and measures that conform with the provisions of Articles 6.2 and 6.4 of the AoA.

Traditionally, the Government has provided domestic support to agriculture in the form of input subsidies and investment subsidies, and through the provision of technical assistance which is provided within the framework of paragraph 2 of Annex 2. In this regard, particular emphasis was placed on: (1) research and development; (2) training and extension services; (3) marketing information and related

services; (4) pest and disease control; and (5) the provision of infrastructure and other forms of technical assistance. Another feature of the incentives regime is up-front, duty-free concessions on a range of inputs, including machinery, equipment, chemicals and other supplies.

Incentives were provided mainly through input subsidies of a non-product-specific nature; these took the form of rebates on inputs such as spray cans, irrigation equipment, land preparation and fencing of pastures. In addition, a limited number of product-specific incentives were targeted at sugar cane production. Non-product-specific investment subsidies were also provided though concessionary loan financing provided initially through the State-owned Barbados National Bank (BNB), but more recently through the Rural Enterprise Fund and the Agricultural Development Fund, administered by the Rural Development Commission and the Enterprise Growth Fund respectively.

In recent years, with the advent of trade liberalization and the reduction in protective border measures, domestic support has become a more important policy tool for supporting agricultural production. In this regard, the Government has sought to expand the incentives scheme to provide for more targeted support to specific sub-sectors or commodities. Product-specific domestic support has become more relevant, and measures such as rebates on wind tunnel ventilation systems for poultry houses, price support for cotton, and rebates and investments in retooling the dairy sector have been introduced.

However the use of product-specific input and investment subsidies is constrained by the *de minimis* provision, which limits the scope of such support measures for stimulating the production of key sensitive commodities. Consequently, there is a need to provide flexibility to developing countries like Barbados by expanding Article 6.2 and revisiting the 10 per cent *de minimis* limit for SIDSs and SDEs.

(a) "Green box" or exempt measures

There has been an overall increase in the level of domestic support provided to agriculture, which has been achieved in part through a shift from the "amber and "blue boxes" to the "green box". This shift in support to the "green box" has given rise to both trade and production distortions, which have largely favoured the developed countries that provide this support. This situation has placed producers in SIDSs like Barbados, which have limited resources to allocate to domestic support programmes, at a disadvantage vis-à-vis the producers in developed countries who benefit from significant domestic support. As a result, producers in SIDSs like Barbados have a limited capacity to compete in the markets of the developed countries and at the same time face increased competition in their domestic market from imports that benefit from domestic support.

Barbados would therefore fully support the position advanced by CARICOM, Canada, the Cairns Group and various developing countries that calls for the tightening of the "green box" criteria through a review of these criteria to ensure that only non-trade-distorting measures are included. As such, there should be two categories of domestic support measures — exempt and non-exempt measures — with strict criteria used to classify those measures. In this regard, payments used by developed countries under Annex 2, paragraphs 5–7 of the AoA should be excluded from the "green box" or exempt category.

Developing countries, including SIDSs like Barbados, should, however, be given increased flexibility in relation to domestic support measures as an S&D provision. In this regard, CARICOM has proposed a continuation of the category of "exempt measures" as established in Annex 2 of the AoA for developing and small developing economies, including SIDSs. In addition, development assistance, including investment and input subsidies provided under Article 6.2 of the AoA, should be expanded to include measures used by DCs, SDEs and SIDSs to meet their food security, rural development, poverty alleviation and agricultural diversification objectives, and these should be incorporated into the "green box" or exempt category.

Article 6.2 should therefore be expanded to include the following additional measures:

- Support to encourage agricultural processing;
- Investment and input subsidies of a product-specific nature;
- Support to all farmers in SDEs and SIDSs who participate in productive activities that contribute significantly to the attainment of key development objectives, thus removing the limitation of such support to low-income, resource-poor farmers or to small-scale household farmers; and
- Subsidies for agricultural marketing costs, including internal transport, post-harvest, storage and product quality improvement, both generally and for specific products.

In addition, the following measures used by DCs, SDEs and SIDSs should be included in the "green box" or exempt category:

- Government assistance to the agricultural sector to address the adverse effects of sudden changes in exchange rates on the price of main agricultural exports;
- Measures employed in structural transformation of the agricultural sector in order to move away from a reliance on preferential markets; and
- Domestic support measures to assist in the revitalization of rural areas in general, or to assist specific groups or sub-groups of producers within rural areas.

This flexibility would assist Barbados in repositioning the agricultural sector with a view to achieving food security, rural development and other development objectives. More specifically, it would provide a framework for the Government to expand and diversify its farm incentive scheme so as to provide a wider range of more targeted product-specific and non-product specific input and investment subsidies. It would also enable selective price support arrangements of both a general and product-specific nature to offset the high cost of domestic production, thereby assisting in the sustained production of key commodities for food security and rural development purposes.

In addition, recent experience in the sugar industry in relation to exchange rate movements, which adversely affected the returns to the industry, justifies the call for inclusion in the "green box" of government assistance to offset such losses. The Government of Barbados provided deficiency payments to sugar cane farmers (who experienced a 17 per cent decline in prices from 1998 to 2001) to compensate for falling prices associated with adverse exchange rate movements for the 1999, 2000 and 2001 crops, but it was constrained by the 10 per cent *de minimis* provision. It should be noted that other product-specific input subsidies (e.g. the Cane Replanting Incentive Scheme) would also be subject to *de minimis* limits.

It is expected that the Government will have to devote considerable resources to support the transformation and adjustment of the agricultural sector away from its reliance on preferential markets. This could include significant investments for retooling the sugar industry, including factory rationalization to diversify products and markets, and developing non-sugar food and export crops as well as livestock activities by providing attractive incentives to support diversification. Such incentives could include price support, input and investment subsidies and on-farm investments in irrigation, marketing, and post-harvest export and processing infrastructure.

Development of agricultural and related activities in special development areas and rural districts such as the Scotland District will require major investments on both public and private sector owned and controlled land. The fragility of the soils in the Scotland District requires that the Government invest in land conservation projects to stabilize the land there and thus make it suitable for selected economic activities, including agriculture. A special package of incentives will be required to encourage private

landowners to engage in commercial agriculture and to support efforts of the Soil Conservation Unit (SCU) to reforest unstable and vulnerable lands. Given the nature of the land in this area, incentives will have to be targeted towards specific activities such as fruit growing, sheep farming and reforestation. Thus product-specific and general input and investment subsidies will be critical.

(b) *De minimis* provisions

With respect to the 10 per cent *de minimis* level prescribed for developing countries, Barbados has only experienced one case where this was a limiting factor — when deficiency payment for sugar became necessary as a result of the declining returns to the industry due to adverse exchange rate movements. This 10 per cent *de minimis* limit could, however, also prove to be problematic for other commodities that may be promoted for food security, rural development and agricultural diversification reasons. For example, the Government is seeking to develop cotton as an export crop that could support the objective of diversification away from a reliance on preferential markets. Price support and other incentives will be necessary, such as incentives for harvesting, given the high cost and limited availability of labour in Barbados. Deficiency payments and market price supports may also be critical for the development of food-security-sensitive products. Ideally, domestic support to agriculture in SIDSs like Barbados should not be restricted to a *de minimis* level, and if restricted the level should be set at least 20 per cent.

Furthermore, to supplement the existing product-specific *de minimis*, a reallocation of the *de minimis* from non-product-specific domestic support to additional product-specific domestic support could be envisaged for products that are essential for food security and rural development (staple crops, traditional crops and livestock).

With respect to cuts in the Aggregate Measurement of Support (AMS), the objective should be to significantly reduce the level of trade- and production-distorting support to agriculture, thereby reducing some of the imbalance which exists between DCs, SDEs and SIDSs on the one hand, and developed countries on the other. However, in developing modalities for AMS cuts and redefining the "green box", consideration will have to be given to providing flexibility to preference-giving countries as a means of making preferential arrangements that benefit SIDSs more stable and predictable.

IV.4 Optimal modalities with respect to export competition

Barbados co-sponsored a negotiating proposal with other CARICOM countries on Domestic Support and Export Competition during the second phase of the current negotiations. This proposal addressed both export subsidies and other forms of export competition, namely export credits, export credit guarantees or insurance programmes, and food aid. In general, the proposal, which is consistent with those submitted by other members, calls for prohibition, elimination and significant reduction in export subsidies and the establishment of disciplines in relation to export credits, insurance and guarantees.

(a) Export subsidies

The elimination or significant reduction of export subsidies may offer significant benefits to some DCs, SDEs and SIDSs in the form of improved market opportunities and prices for commodities subject to such subsidies. However, it would appear that, in the short term, Barbados does not stand to benefit significantly from reform in this area. The main products that benefit from export subsidies are not produced domestically, but imported into Barbados. In addition, the products that Barbados has identified for export development do not benefit much from export subsidies, but more from domestic support and export credit, guarantee and insurance schemes. Nevertheless, Barbados supports the elimination of export subsidies where such subsidies adversely affect the food production systems of DCs, SDEs and SIDSs, and result in depressed domestic prices.

There are two considerations in relation to export subsidies that are of particular concern to Barbados and other DCs, SDEs and SIDSs, particularly those which are NFIDCs and or beneficiaries of preferential arrangements that are tied to export subsidy programmes. As a NFIDC with a growing food import bill and heavy dependence on food imports to meet domestic consumption, Barbados is fully aware of the possible negative effects resulting from the elimination of export subsidies on food prices and the food import bill. It has therefore been calling for the implementation of meaningful provisions to give effect to the Marrakesh Decision on the Impact of the Reform Process on Least Developed Countries (LDCs) and NFIDCs. Once again, this justifies the call for modalities to address the provision of technical and financial assistance for improving productivity and efficiency in domestic food production and marketing.

Barbados, as an exporter of sugar under preferential arrangements, is also concerned about the impact that elimination or substantial reduction of export subsidies will have on preferential arrangements. Thus the modalities in respect of export subsidies must be so structured that preference-giving countries which offer access to the smallest and most vulnerable economies such as SIDSs should be given flexibility to undertake reforms in a manner that does not undermine those preferential arrangements.

In terms of S&DT provisions, there is a need for the provisions of Article 9.4 to be extended indefinitely for SDEs and SIDSs, and expanded to cover all activities undertaken to promote and market the exports of these countries. Such expansion should include price-risk management schemes and export credit/ insurance schemes. Barbados has already put in place an incentive relating to freight costs incurred to offset the high costs and limited availability of airfreight out of Barbados to North America and Europe, as well as an export credit facility in the form of an Export Development Fund. Additional incentives to stimulate exports could be developed within this context for non-traditional exports of fresh and processed agricultural products to diversify the production and export base and offset some of the foreign exchange losses resulting from the difficulties being experienced by the sugar industry.

(b) Export credits, guarantees and insurance schemes

There is a need for disciplines to be brought to these forms of export competition, which can include subsidy elements and also place exporters benefiting from such schemes in an advantageous position in the marketplace. Additional information on the use of these measures is needed so that their real impact can be assessed, and appropriate modalities developed in this regard. As an S&DT provision, Article 9.4 should be expanded to allow SIDSs like Barbados to use these measures while restricting their use by developed countries.

Blank page

Page blanche

Table 1. Summary of annual rainfall (millimetres) , 1991 - 2000

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	Average
January	270.6	729.7	846.3	908.1	590.9	541.8	611.0	629.6	729.1	1,299.9	715.7
February	299.2	1,075.9	455.7	506.2	445.0	276.6	336.9	90.1	349.7	826.3	466.2
March	500.5	224.6	852.2	251.2	956.5	495.4	354.3	262.9	1,119.6	578.6	559.6
April	1,584.0	452.1	330.2	134.8	899.6	1,282.9	123.2	530.5	750.6	595.1	668.3
May	223.3	1,829.3	1,221.4	315.8	206.1	928.3	188.7	964.5	164.6	505.5	654.8
June	502.7	2,321.0	986.8	497.4	1,370.4	1,206.2	1,136.4	1,629.4	877.7	557.1	1,108.5
July	1,092.3	1,299.1	1,561.6	891.9	1,743.8	2,442.2	1,524.7	1,053.6	2,280.6	832.1	1,472.2
August	1,045.0	2,451.9	1,007.4	1,802.3	4,047.7	1,218.2	1,867.0	1,678.3	1,929.1	1,399.0	1,844.6
September	1,629.1	2,103.2	2,357.1	3,966.3	1,843.0	2,584.2	1,753.9	2,769.7	1,960.7	1,987.4	2,295.5
October	1,246.3	501.6	2,055.0	2,407.1	2,303.8	2,821.9	1,179.7	3,052.0	2,373.2	1,762.3	1,970.3
November	5,644.1	2,578.4	1,455.0	1,284.8	813.0	780.1	1,177.8	985.5	1,878.7	3,447.8	2,004.5
December	223.3	1,085.7	393.2	1,205.7	759.1	1,076.6	479.0	3,123.3	2,257.6	1,421.0	1,202.5
Monthly average	1,188.4	1,387.7	1,126.8	1,181.0	1,331.6	1,304.5	894.4	1,397.5	1,389.3	1,267.7	1,246.9
Total annual	14,260.4	16,652.5	13,521.9	14,171.6	15,978.9	15,654.4	10,732.6	16,769.4	16,671.2	15,212.1	14,962.5
Annual mean per parish	1,296.4	1,513.9	1,229.3	1,288.3	1,452.6	1,423.1	975.7	1,524.5	1,515.6	1,382.9	1,360.2

Source: Barbados Meteorological Department

Table 2. Comparative analysis of prices for selected vegetables, root crops and fruit [1]

Tariff No.	Description	C.i.f. price (BDS$ per pound)	Current duty (%)	Price per kg	Price with 20% margin [2]	Price per kg of local product (BDS$)	Diff. (per kg)[4]
0702.00	Tomatoes, Fr., or Ch. [3]	0.58	218	4.06	4.87	4.57	0.30
0703.101	Onions, Fr., or Ch.	0.40	236	2.96	3.55	2.11	1.44
0703.102	Shallots, Fr., or Ch.	3.20	120	15.48	18.58	10.93	7.65
0704.901	Cabbages, Fr., or Ch.	0.34	120	1.64	1.97	4.18	(2.21)
0704.101	Cauliflower, Fr., or Ch.	1.54	120	7.46	8.95	6.10	2.85
0705.1	Lettuce, Fr., or Ch.	0.80	120	3.88	4.66	1.00	3.66
0706.101	Carrots, Fr., or Ch.	0.48	120	2.32	2.78	5.09	(2.31)
0706.901	Beets, Fr., or Ch.	0.64	120	3.10	3.72	3.80	(0.08)
0707.001	Cucumber, Fr., or Ch.	0.86	120	4.16	4.99	1.92	3.07
0709.902	Okras, Fr., or Ch.	0.60	175	3.64	4.37	2.67	1.70
0709.601	Sweet Pepper	1.28	175	7.74	9.29	4.72	4.57
0714.2	Sweet Potatoes Fr., or Ch.	0.30	175	1.82	2.18	2.43	(0.25)
0807.10	Melons (including watermelon)	0.36	161	2.06	2.47	2.63	(0.16)

Notes: (1) All prices are quoted in Barbados dollars (BDS$).

(2) A profit margin of 20% has been used as an informed estimate of the general mark up for agricultural products added by the local distributive sector. This allows a more equitable comparison of the final price of the imported product vis-à-vis the local product, which would also include a return on investment.

(3) Fr. or Ch. = Fresh or chilled

(4) Numbers in brackets indicate instances where average wholesale prices for local products exceed average wholesale prices for imported products, with a 20% profit margin.

Table 3. Comparative analysis of prices for selected livestock and dairy products[1]

Commodity	Cost per lb	C.i.f. per lb.	Current duty 201%	Current duty 40%	Duty paid per kg	W/Sale price, 20% margin included (BDS$ per kg) [2]	Price per kg of local product	Price Diff [4] (BDS$ per kg)
Poultry:								
Boneless skinless breast	2.76	3.02	4.58		20.16	24.19	17.74	6.45
Tenderloins	3.06	3.30	4.97		21.87	26.24	17.74	8.50
Leg quarters, bulk	0.30	0.56	0.84		3.70	4.44	6.50	(2.06)
Leg quarters 4 x 10lb bags	0.38	0.62	0.93		4.10	4.92	6.50	(1.58)
Legs	0.48	0.72	1.08		4.76	5.71	6.50	(0.79)
Wings	1.14	1.40	2.11		9.28	11.14	4.28	6.86
Boneless skinless thighs	1.06	1.30	1.96		8.62	10.34	10.10	0.24
Breast quarters	1.24	1.48	2.23		9.82	11.78	7.09	4.69
Drum sticks	0.70	0.94	1.41		6.20	7.44	10.10	(2.66)
Thighs	0.38	0.62	0.93		4.10	4.92	5.50	(0.58)
Backs and necks	0.22	0.46		0.32	1.40	1.68	1.76	(0.08)
Livers	1.16	1.40		0.98	4.32	5.18	3.00	2.18
Gizzards	0.86	1.10		0.77	3.38	4.06	3.00	1.06
Whole chicken	1.18	1.42	2.14		9.42	11.30	6.02	5.28
Turkey wings [4]	0.90	1.14		0.97	4.26	5.11	4.92	0.19
Fresh eggs[4]	1.12	1.36	1.68		7.40	8.88	7.06	1.82
Pork and pork products:								
Fresh pork - carcass	1.26	1.50	2.26		9.94	11.93	8.47	3.46
Legs wings	0.90	1.14	1.72		7.56	9.07	9.00	0.07
Leg hams	3.02	3.26	4.91		21.60	25.92	21.08	4.84
Picnic hams	3.02	3.26	4.91		21.60	25.92	18.39	7.53
Bacon	2.08	2.32	3.49		15.36	18.43	24.75	(6.32)
Dairy:								
Pasteurized milk (litre) [4]	1.58	2.08	2.57		5.14	6.17	3.02	3.15
Evaporated milk (litre) [4]	3.18	3.68	4.54		9.08	10.90	4.42	6.48

Notes: (1) All prices are quoted in Barbados dollars (BDS$).

(2) A profit margin of 20% has been used as an informed estimate of the general mark up for agricultural products added by the local distributive sector. This allows more equitable comparison of the final price of the imported product vis-à-vis the local product, which would also include a return on investment.

(3) Numbers in brackets indicate instances where average wholesale prices for local products exceed average wholesale prices for imported products

(4) Tariff rates currently applicable for the following products: eggs @147%, dairy @155% (quoted in litres), and turkey wings @70%

Table 4. Natural disasters affecting selected Caribbean countries, 1991 - 2000

Year	Disaster type	Total damage costs (US$ '000)	Total no. of persons affected	Countries affected
1991	Flood	30 000	551 340	Jamaica
1992	Hurricane	250 000	1 700	Bahamas
1992	Flood	-	200	St. Vincent and the Grenadines
1993	Flood	11 000	4 372	Jamaica
1993	Tropical Storm	57	n.a.	Trinidad and Tobago
1993	Flood	70	10	Trinidad and Tobago
1994	Tropical Storm	101 968	750	St. Lucia, Jamaica
1995	Hurricane	200 928	73 503	Antigua and Barbuda, Dominica, St Kitts & Nevis, Barbados
1996	Flood	-	200	Trinidad and Tobago
1996	Tropical Storm	3 000	800	Jamaica
1996	Landslide	-	175	St. Lucia
1997	Volcano	-	200	Trinidad and Tobago
1998	Hurricane	-	12 025	St. Kitts & Nevis, Antigua and Barbuda
1999	Hurricane		9 197	Bahamas, Antigua and Barbuda, St. Kitts & Nevis, Grenada, Anguilla, St. Lucia, St. Vincent and the Grenadines
2000	Drought	6 000	n.a.	Jamaica
2000	Hurricane	-	n.a.	Antigua and Barbuda, Belize
2000	Flood	-	n.a.	Jamaica
2001	Hurricane	268 330	375	Dominica, Jamaica, Bahamas

Note: Lists those Caribbean countries affected which could be classified as SIDSs

Table 5. Key indices of the agricultural sector

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Contribution to GDP (Current prices, (BDS$ million)										
Sugar	54.6	51.1	46.8	49.6	50.6	64.1	69	56.5	56	63.2
Non-sugar	107.3	101.7	114.7	100	147.6	160.9	122	96.3	146.3	126.8
Total agriculture	161.9	152.8	161.5	149.6	198.2	225	191	152.8	202.3	190
Total GDP (BDS$ million)	2 892.5	2 708.7	2 791.2	2 920.7	3 147.5	3 377.4	3 610.4	3 903.7	4 137.9	4 309
Share of total GDP (%):										
Sugar (%)	1.9	1.9	1.7	1.7	1.6	1.9	1.9	1.4	1.4	1.5
Non-sugar (%)	3.7	3.8	4.1	3.4	4.7	4.8	3.4	2.5	3.5	2.9
Total agriculture (%)	5.6	5.6	5.8	5.1	6.3	6.7	5.3	3.9	4.9	4.4
Employment (%)	5.7	6.5	5.7	5.3	4.6	5.7	5.3	4.3	4.3	3.9
Commercial Bank Credit (%)	2.5	2.6	2.4	2.5	2.4	2.6	2.1	2.0	1.9	2.5

Source: ***Barbados Economic and Social Report*, 2001**

Table 6.

Poultry				
Year	Production ('000 kg)	Annual growth rate (%)	Ratio of imports to domestic production (%)	Main source(s) of imports
1991	10 072.4	-	18.97	USA, UK, Canada
1992	8 825.3	-12.38	25.21	USA, UK, Canada
1993	8 739.6	-0.97	25.66	USA, UK, Canada
1994	10 151.9	16.16	13.13	USA, UK, Canada
1995	11 176.3	10.09	14.05	USA, UK, Canada
Average	**9 793.1**	**3.22**	**19.41**	
1996	12 622.4	12.94	7.15	USA, UK
1997	11 710.2	-7.23	12.35	USA, UK, Canada
1998	11 737.5	0.23	19.65	USA, UK, Canada
1999	12 296.9	4.77	17.18	UK, USA
2000	12 188.5	-0.88	22.35	USA, Canada
Average	**12 111.1**	**1.97**	**15.74**	

Pork				
Year	Production ('000 kg)	Annual Growth Rate (%)	Ratio of imports to domestic production (%)	Main source(s) of imports
1991	1 871.4	-	31.81	Canada, USA
1992	2 018.4	7.86	19.77	Canada, USA
1993	1 890.4	-6.34	31.30	Canada, USA
1994	1 688.1	-10.70	44.20	Canada, USA
1995	1 928.3	14.23	44.91	Canada, USA
Average	**1 879.32**	**1.26**	**34.40**	
1996	2 619.4	35.84	24.23	Canada, USA
1997	2 795.4	6.72	10.38	Canada, USA
1998	2 735.3	-2.15	38.88	Canada, USA
1999	2 356.4	-13.85	40.68	Canada, USA
2000	1 922	-18.43	54.69	Canada, USA
Average	**2 485.7**	**1.62**	**33.77**	

Table 6 (contd.)

Milk				
Year	Production ('000 kg)	Annual growth rate (%)	Ratio of imports to domestic production (%)	Main source(s) of imports
1991	14 252.9	-	0.01	USA
1992	8 656.3	-39.27	0.01	UK
1993	7 668.1	-11.42	0.06	UK, USA
1994	7 296.9	-4.84	0.08	UK, USA, Bulgaria
1995	7 869.4	7.85	0.16	UK
Average	**9 148.7**	**-11.92**	**0.07**	
1996	8 350.8	6.12	29.35	Trinidad & Tobago, UK
1997	8 531.4	2.16	2.94	Trinidad & Tobago, UK
1998	9 100.0	6.66	0.83	Trinidad & Tobago, UK
1999	7 630.5	-16.15	0.00	-
2000	7 929.7	3.92	0.00	-
Average	**8 308.5**	**0.54**	**6.62**	
Import figures used above are for fresh milk only. However, Barbados has imported in excess of 1.2 million kgs of milk annually for the period 1991–2000, comprising, for e.g. milk powder, with and without added sugar and condensed milk. Significant importation of these products also occurred in 1999 and 2000.				

Eggs				
Year	Production ('000 kg)	Annual growth rate (%)	Ratio of imports to domestic production (%)	Main source(s) of imports
1991	1 390.9	-	0.00	-
1992	1 267.9	-8.84	0.00	-
1993	1 247.8	-1.59	0.00	-
1994	1 322.3	5.97	2.77	Guyana
1995	1065	-19.46	1.41	Guyana
Average	**1 258.8**	**-5.98**	**0.84**	
1996	1 275.9	19.80	0.10	Canada, USA
1997	792.1	-37.92	0.12	USA
1998	972.4	22.76	6.30	USA
1999	1 309.9	34.71	0.00	USA
2000	1 607.6	22.73	0.00	USA
Average	**1 191.6**	**12.42**	**1.30**	

Table 6 (contd.)

Mutton				
Year	Production ('000 kg)	Annual growth rate (%)	Ratio of imports to domestic production (%)	Main source(s) of imports
1991	37.6	-	12 072.2	Australia, New Zealand
1992	38.1	1.3	7 364.0	Australia, New Zealand, USA
1993	49.8	30.7	4 559.8	Australia, New Zealand, USA
1994	55.3	11.0	4 104.1	ew Zealand, Australia
1995	66.6	20.4	3 001.1	ew Zealand, Australia
Average	**49.48**	**15.9**	**6 220.2**	
1996	91.1	36.8	1 992.5	ew Zealand, Australia, USA
1997	48.6	-46.7	4 700.1	ew Zealand, Australia, USA
1998	51.1	5.1	4 253.1	ew Zealand, Australia
1999	45.6	-10.8	4 355.1	ew Zealand, Australia
2000	45.7	0.2	4 126.2	ew Zealand, Australia, Canada
Average	**56.42**	**-3.1**	**3 885.4**	

Beef				
Year	Production ('000 kg)	Annual growth rate (%)	Ratio of imports to domestic production (%)	Main source(s) of imports
1991	904.8	-	139.26	Ireland, New Zealand, USA
1992	986.4	9.02	116.22	Ireland, New Zealand, USA
1993	861.8	-12.63	115.72	Ireland, New Zealand, USA
1994	866.4	0.53	142.79	UK, Ireland, USA, New .Zealand
1995	861.8	-0.53	137.29	New Zealand, Ireland, UK, USA
Average	**896.24**	**-0.90**	**130.26**	
1996	867.7	0.68	124.83	N. Zealand, USA, Australia
1997	661.1	-23.81	256.52	Australia, New Zealand, USA, UK
1998	562.5	-14.91	364.07	Australia, New Zealand, USA
1999	590.2	4.92	278.41	New Zealand, USA, Australia
2000	751.7	27.36	192.01	N. Zealand, USA, Australia
Average	**686.64**	**-1.15**	**243.17**	

Table 7.

Sweet Peppers					
Year	Production		Annual Growth Rate (%)	Ratio of imports to domestic production	Main source(s) of imports
	Quantity ('000 kg)	Value (BDS$ '000)			
1991	63.0	282.24	-	0.03	USA (100%)
1992	72.0	316.80	14.3	0.01	USA (100%)
1993	227.3	831.92	215.7	0.01	USA (100%)
1994	84.1	336.40	-63.0	0.05	USA (92%)
1995	213.3	1 175.28	153.6	0.15	USA (99%)
Average	**131.9**	**588.5**	**80.2**	**0.05**	
1996	770.5	3 582.83	261.2	0.08	USA (93.1%)
1997	279.1	1 540.63	-63.8	0.39	USA (97.1%)
1998	323.6	1 766.86	15.9	0.90	USA (97.7%)
1999	214.2	1 169.53	-33.8	1.43	USA (96.2%)
2000	254.1	1534.76	18.6	1.40	USA (98%)
Average	**368.3**	**1 918.9**	**39.64**	**0.84**	
Current bound/applied rate:			175%		
Bound rate in 2004:			160%		

Lettuce				
Year	Quantity '000 units	Annual Growth Rate (%)	Ratio of imports to domestic production	Main source(s) of imports
1991	n.a.	-	n.a.	USA (99.97%)
1992	n.a.	-	n.a.	USA (63.9%), Cuba (36.1%)
1993	389.8	-	0.42	USA (100%)
1994	712.1	82.68	0.31	USA (100%)
1995	1,686.4	136.82	0.14	USA (99.98%)
Average	**929.4**	**109.75**	**0.29**	
1996	1,552.0	-7.97	0.18	USA (99.99%)
1997	444.3	-71.37	0.91	USA (99.6%)
1998	209.1	-52.94	3.57	USA (99.9%)
1999	551.0	163.51	0.90	USA (99.2%)
2000	832.2	51.03	0.66	USA (99.4%)
Average	**717.7**	**16.45**	**1.24**	
Current bound/applied rate:		120%		
Bound rate in 2004:		109%		

Table 7 (contd.)

Okras

Year	Production		Annual growth rate (%)	Ratio of imports to domestic production	Main source(s) of imports
	Quantity ('000 kg)	Value (BDS$'000)			
1991	384.4	961.00	-	0.00	no imports
1992	270.0	650.70	-29.8	0.00	USA (100%)
1993	851.1	2,085.20	215.2	0.00	no imports
1994	300.4	781.04	-64.7	0.03	Canada (100%)
1995	496.5	1,300.83	65.3	0.00	USA (100%)
Average	**460.5**	**1,155.8**	**47**	**0.01**	
1996	1 106.5	3,098.20	122.9	0.00	Guy. (100%)
1997	805.2	2,157.94	-27.2	0.00	USA (90.5%)
1998	320.5	1,015.99	-60.2	0.00	Dom. (100%)
1999	341.0	1,080.97	6.4	0.01	Guy. (87.9%), Do. (12.1%)
2000	566.8	1,830.76	66.2	0.00	no imports
Average	**628.0**	**1,836.8**	**22**	**0.00**	

Current bound/applied rate:	175%	Guy. = Guyana
Bound rate in 2004:	160%	Dom. = Dominica

Melons

Year	Production		Annual growth rate (%)	Ratio of imports to domestic production	Main source(s) of imports
	Quantity ('000 kg)	Value (BDS$'000)			
1991	123.2	358.5	-	0.02	Ant. (99.8%), USA (0.2%)
1992	78.4	228.1	-36.4	0.00	no imports
1993	119.8	328.3	52.8	0.00	no imports
1994	104.9	279.0	-12.4	0.00	T&T (46%), St. Vincent (54%)
1995	380.9	1,017.0	263.1	0.00	USA (58.6%), Guy. (71.8%)
Average	**161.4**	**442.2**	**66.78**	**0.01**	
1996	566.8	1,445.3	48.8	0.11	USA (25.7%), Guy. (71.8%)
1997	222.6	589.9	-60.7	0.28	USA (55.9%), Guy. (30.7%)
1998	142.7	342.5	-35.9	0.51	USA (73.4%), Dom. (24.1%)
1999	184.2	442.1	29.1	0.72	USA (41.3%), Guy. (38.4%)
2000	217.4	667.4	18.0	1.44	USA (63.9%), T&T (28.2%)
Average	**266.7**	**697.4**	**-0.14**	**0.61**	

Current bound/applied rate:	161	Ant. = Antigua
Bound rate in 2004:	147	Dom. = Dominica
		Guy. = Guyana
		T&T = Trinidad and Tobago

Table 7 (contd.)

Carrots					
Year	Production		Annual growth rate (%)	Ratio of imports to domestic production	Main source(s) of imports
	Quantity ('000 kg)	Value (BDS$ '000)			
1991	1 547.7	8 481.40	-	0.00	USA (100%)
1992	1 051.9	3 534.38	-32.0	0.00	no imports
1993	1 046.5	3 872.05	-0.5	0.00	Canada (100%)
1994	330.0	1 679.70	-68.5	0.00	USA (100%)
1995	1 172.1	6 317.62	255.2	0.04	USA (100%)
Average	**1 029.6**	**4 777.00**	**38.54**	**0.01**	
1996	1 719.1	8 217.30	46.7	0.02	USA (100%)
1997	781.7	4 432.24	-54.5	0.20	USA (98.7%)
1998	553.4	3 276.13	-29.2	0.54	USA (99.3%)
1999	1 734.6	10 268.83	213.4	0.08	USA (96.5%)
2000	1 025.3	4 654.86	-40.9	0.29	USA (93.8%)
Average	**1 162.8**	**6 169.90**	**27.10**	**0.23**	
Current bound/applied rate:			120%		
Bound rate in 2004:			109%		

Cucumbers					
Year	Production		Annual growth rate (%)	Ratio of imports to domestic production	Main source(s) of imports
	Quantity ('000 kg)	Value (BDS$'000)			
1991	503.7	1 027.55		0.00	Guy.(100%)
1992	489.1	738.54	-2.9	0.00	no imports
1993	675.3	1 215.54	38.1	0.00	no imports
1994	367.1	686.48	-45.6	0.00	no imports
1995	1 344.3	2 675.16	266.2	0.00	USA (100%)
Average	**675.9**	**1 268.7**	**63.93**	**0.00**	
1996	1,174.3	2 266.40	-12.6	0.00	Guy. (59%), St. Lucia (34.2%)
1997	478.1	917.95	-59.3	0.00	Guy. (84.6%)
1998	565.8	1 216.47	18.3	0.00	USA (70.1%), Dom.(26.4%)
1999	991.3	2 131.30	75.2	0.01	Guy. (50%), USA(25.8%), T&T (18.6%)
2000	699.7	1 406.40	-29.4	0.02	USA (51.1%), T&T (38.1%)
Average	**781.8**	**1 587.70**	**- 0.0**	**0.01**	
Current bound/applied rate:			120%		Dom. = Dominica
Bound rate in 2004:			109%		Guy. = Guyana
					T&T = Trinidad & Tobago

Table 7 (contd.)

Tomatoes					
Year	Production		Annual growth rate (%)	Ratio of imports to domestic production	Main source(s) of imports
	Quantity ('000 kg)	Value (BDS$'000)			
1991	427.8	1 082.33	-	0.01	USA (100%)
1992	440.2	1 593.52	2.90	0.00	USA (100%)
1993	483.0	1 733.97	9.72	0.00	USA (100%)
1994	565.2	2 181.67	17.02	0.03	USA (95.9%), T&T (4.1%)
1995	1 066.0	4 722.38	88.61	0.06	USA (100%)
Average	**596.44**	**2 262.78**	**29.56**	**0.02**	
1996	1 107.1	4 572.32	3.86	0.09	USA (97.5%)
1997	720.1	3 492.49	-34.96	0.26	USA (100%)
1998	418.8	2 311.78	-41.84	1.12	USA (98.9%)
1999	901.5	4 976.28	115.26	0.48	USA (84.2%), T&T (15%)
2000	653.5	2 659.75	-27.51	0.46	USA (89.2%), T&T (10.2%)
Average	**760.2**	**3 602.52**	**2.96**	**0.48**	
Current bound/applied rate:			218%		
Bound rate in 2004:			199%		

Cabbages					
Year	Production		Annual growth rate (%)	Ratio of imports to domestic production	Main source(s) of imports
	Quantity ('000 kg)	Value (BDS$'000)			
1991	495.6	2 235.16	-	0.00	no imports
1992	436.6	1 357.83	-11.9	0.00	no imports
1993	746.9	2 815.81	71.1	0.00	USA (100%)
1994	514.1	2 097.53	-31.2	0.03	USA (78%), T&T (22%)
1995	1 632.6	7 248.74	217.6	0.02	USA (98.8%), Guyana (1.2%)
Average	**765.2**	**3 151.00**	**61.39**	**0.01**	
1996	1 341.2	5 391.62	-17.8	0.03	USA (86.3%)
1997	637.6	3 188.00	-52.5	0.13	USA (95.3%)
1998	442.0	2 316.08	-30.7	0.44	USA (99.5%)
1999	1 015.2	5 319.65	129.7	0.17	USA (28.1%), T&T(24.9%), Dom.(12.6%)
2000	780.8	3 185.66	-23.1	0.42	USA (82.7%), T&T (8.5%)
Average	**843.4**	**3 880.2**	**1.12**	**0.24**	
Current bound/applied rate:			120%		Dom. = Dominica
Bound rate in 2004:			109%		T&T = Trinidad & Tobago

Table 8.

Sweet potatoes					
Year	Production Quantity ('000 kg)	Production Value (BDS$'000)	Annual growth rate (%)	Ratio of imports to domestic production	Main source(s) of imports
1991	1 932.0	5 486.9	-	0.01	St Vincent (99.98%)
1992	2 419.2	2 104.7	25.22	0.00	no imports
1993	2 251.2	5 267.8	-6.94	0.00	no imports
1994	1 253.6	3 284.4	-44.31	0.00	Canada (100%)
1995	5 166.5	11 108.0	312.13	0.00	no imports
Average	**2 604.50**	**5 450.4**	**71.52**	**0.00**	
1996	5 060.2	12 701.1	-2.06	0.04	St. Vincent (99.4%)
1997	2 553.2	8 195.8	-49.54	0.00	no imports
1998	740.6	2 621.7	-70.99	0.00	St. Vincent (100%)
1999	2 709.8	9 592.7	265.89	0.01	St. Vincent (98.4%)
2000	735.0	1 918.4	-72.88	0.00	St. Vincent (100%)
Average	**2 359.8**	**7 005.9**	**14.08**	**0.01**	
Current rate of duty:			175%		
Final bound rate (2004):			160%		

Onions					
	Year	Production Quantity ('000 kg)	Annual growth rate (%)	Ratio of imports to domestic production	Main source(s) of imports
	1991	726.4	-	1.95	Netherlands (84%), Can. (9.3%)
	1992	744.6	2.51	1.55	Netherlands (85.1%), UK (9.1%)
	1993	555.9	-25.34	3.30	Netherlands (85.3%), UK (8.5%)
	1994	726.4	30.67	1.96	Netherlands (78.6%), USA (19.6%)
	1995	1 180.4	62.50	1.02	Netherlands (80.%), USA (8.1%)
	Average	**786.7**	**17.58**	**1.96**	
	1996	912.5	-22.70	1.08	Netherlands (80.9%), Can. (12.8%)
	1997	480.0	-47.40	2.98	Netherlands (58%), UK (34.5%)
	1998	421.3	-12.23	2.66	Netherlands (19.5%), UK (70.1%)
	1999	687.1	63.09	1.56	N. Lands(59.4%), UK (36.5%)
	2000	141.8	-79.36	10.51	Netherlands (82.2%), UK (9.2%)
	Average	**528.5**	**-19.72**	**3.8**	
					Can. = Canada
Current rate of duty:			236%		
Final bound rate (2004):			216%		

Table 8 (contd.)

Yams					
Year	Production Quantity ('000 kg)	Production Value (BDS$'000)	Annual growth rate (%)	Ratio of imports to domestic production	Main source(s) of imports
1991	1 989	4 873.05	-	0.02	St. Vincent (100%)
1992	1 566	4 212.54	-21.27	0.02	St. Vincent (100%)
1993	1 926.9	4 643.83	23.05	0.02	St. Vincent (100%)
1994	1 173.3	3 003.65	-39.11	0.01	St. Vincent (99.85%)
1995	2 567.7	6 753.05	118.84	0.01	St. Vincent (100%)
Average	**1 844.6**	**4 697.22**	**20.38**	**0.02**	
1996	1 442.7	3 808.73	-43.81	0.00	Guy. (97.19%)
1997	1 319.4	3 562.38	-8.55	0.00	Dom. (100%)
1998	653.4	1 783.78	-50.48	0.03	Dom. (63.3%), St. Vincent (36.7%)
1999	2 205.0		237.47	0.01	Dom. (92.5%)
2000	306.0	902.70	-86.12	0.07	St. Vincent (75.2%), Dom. (14.5%)
Average	**1 185.3**	**2 514.40**	**9.70**	**0.02**	
Current rate of duty:		40%			Dom.= Dominica Guy. = Guyana

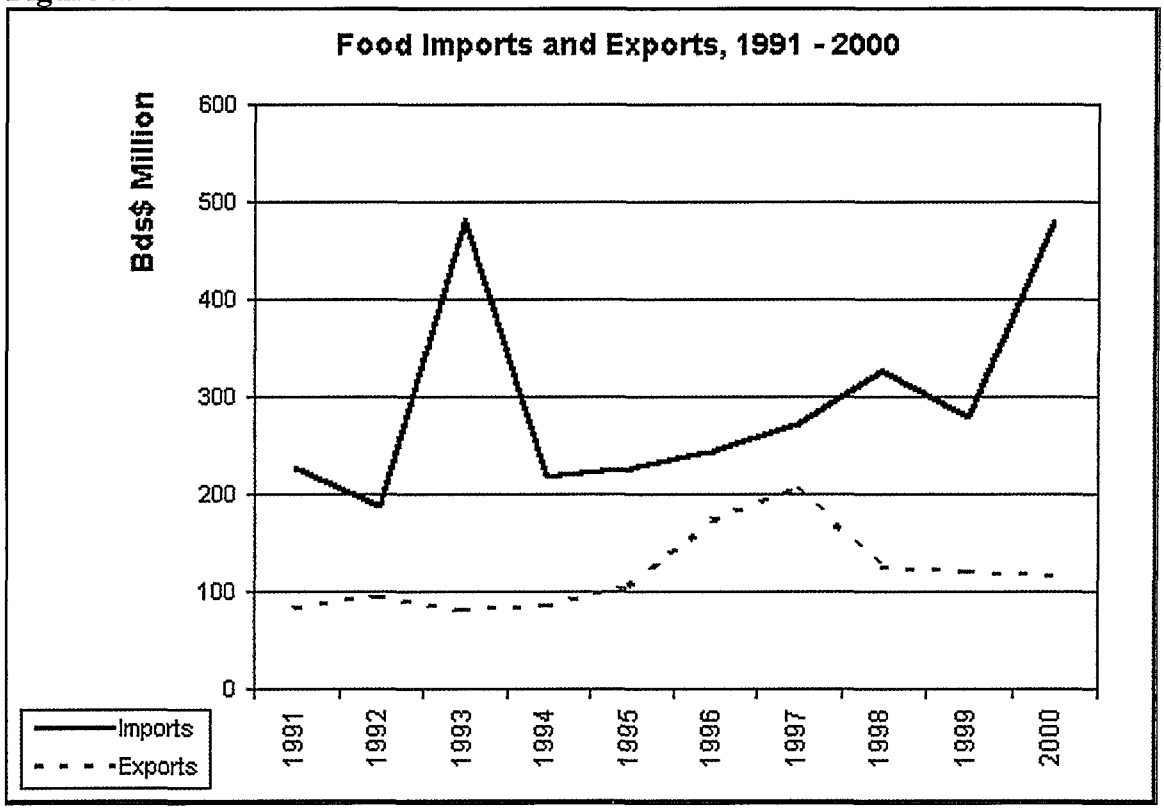
Cassava					
	Year	Production Quantity ('000 kg)	Annual growth rate (%)	Ratio of imports to domestic production	Main source(s) of imports
	1991	1 242.2	-	0.00	St. Vincent (100%)
	1992	2430	95.62	0.00	no imports
	1993	693	-71.48	0.00	no imports
	1994	410.5	-40.76	0.00	no imports
	1995	817.2	99.07	0.00	no imports
	Average	**1 118.58**	**20.61**	**0.00**	
	1996	496.8	-39.21	0.00	T&T (84.7%)
	1997	324.9	-34.60	0.00	T&T (65.5%), USA (34.5%)
	1998	194.4	-40.17	0.02	T&T (78.9%), USA (21.1%)
	1999	329.4	69.44	0.01	T&T (67.4%)
	2000	489.5	48.60	0.01	T&T (90.8%)
	Average	**367**	**0.81**	**0.01**	
Current rate of duty:		40%			T&T = Trinidad & Tobago

Table 9.

Food imports and exports, 1991 - 2000					
Year	Food imports (BDS$ million)	Food imports as % of total imports	Food exports (BDS$ million)	Food exports as % of total exports	Trade balance/ imbalance (BDS$ million)
1991	226.1	16.2	82.0	19.8	(144.1)
1992	185.9	17.7	96.4	25.3	(89.5)
1993	479.8	41.6	80.0	21.3	(399.8)
1994	216.8	17.6	84.9	23.2	(131.9)
1995	226.2	15.7	107.1	23.1	(119.1)
1996	243.1	14.6	174.0	31.0	(69.1)
1997	271.0	13.6	207.2	36.6	(63.8)
1998	325.1	15.9	123.7	24.4	(201.4)
1999	278.1	12.5	118.5	22.5	(159.6)
2000	478.6	20.7	114.4	21.0	(364.2)

(1) Food trade is classified in accordance with the accepted CARICOM definition, which includes all trade under SITC heading 00 to 09 inclusive in data pertaining to food estimates.

Figure 1.



Source: ***Barbados Economic and Social Report***

Table 10a. Exports of selected agricultural commodities (kg), 1991 – 2000

Commodity	1991	1992	1993	1994	1995	1991 - 1995 Average	1996	1997	1998	1999	2000	1996 - 2000 Average
Hot peppers	74,663	185,536	360,737	714,916	284,886	324,148	215,670	178,948	148,887	51,400	5,574	120,096
Eggplants	-	3,028	637	2,058	476	1,240	89	2,060	15,596	5	457	3,641
Melon s			454	10,191	2,101	4,249	4,057	-	1,360	-	-	1,083
Okra	5,781	50,721	76,006	85,254	82,109	59,974	110,487	85,304	48,884	2,051	972	49,540
Pumpkins	-	600	1,687	10,650	975	2,782	-	3,480	3,300	60	110	1,390
Sweet peppers	1,589	2,207	8,134	1,404	2,204	3,108	562	1,860	3,554	140	64	1,236
Sweet potatoes	235,117	605,465	251,759	300,214	780,276	434,566	518,934	401,436	279,122	66,703	13,896	256,018
Yams	75,703	30,841	24,089	62,433	73,805	53,374	130,115	21,338	34,214	18,469	6,773	42,182
Avocados	1,776	12,785	73,691	59,803	21,514	33,914	33,607	51,977	101,142	5,569	948	38,649
Breadfruit	135,649	177,472	279,117	301,807	520,133	282,836	587,294	439,852	284,816	144,078	73,331	305,874
Coconuts (not shelled)	1,314	15,591	40,876	38,430	62,048	31,652	53,427	15,069	6,119	11,706	-	17,264
Golden Apples	10,853	36,708	32,816	12,082	13,797	21,251	16,956	15,895	54,216	3,129	1,948	18,429
Mangoes	4,522	5,675	9,946	40,253	1,356	12,350	24,152	9,791	-	1,426	-	7,074
Paw Paw	45	213	222	43,878	26,402	14,152	54,039	17,130	807	-	-	14,395
Sour sops	1,139	8,310	13,323	17,569	15,564	11,181	12,956	14,069	18,594	141	-	9,152
Cut Flowers & Foliage	41,234	40,174	41,823	29,999	29,115	36,469	38,927	36,105	28,937	21,681	21,056	29,341
						1,327,245						**915,364**

Table 10b. Exports of selected agricultural commodities (BDS$), 1991 - 2000												
Commodity	**1991**	**1992**	**1993**	**1994**	**1995**	**1991 - 1995 Average**	**1996**	**1997**	**1998**	**1999**	**2000**	**1996 - 2000 Average**
Hot peppers	182,580	517,513	651 516	653 467	521 128	212 838	419 869	352,580	224 505	54 691	12 547	212 838
Eggplants	-	19,782	1 029	4 778	1 234	4 477	143	2,500	18 875	10	856	4 477
Melons			863	20 669	3 593	3 716	9 581	-	9 000	-	-	3 716
Okra	10,436	69,188	130 093	135 650	136 382	97 92	218 742	182,518	79 035	3 455	1 710	97 092
Pumpkins	-	600	1 687	10 650	975	1 390	-	3,480	3 300	60	110	1 390
Sweet peppers	4,390	5,896	22 452	1 582	4 272	1 632	684	3,401	3 625	240	212	1 632
Sweet potatoes	426,799	1,024,882	381,113	444 826	1 164 464	414 132	936 339	577,173	419 494	114 905	22 749	414 132
Yams	126,820	66,589	29 879	84 746	107 499	66 473	176 966	35,196	70 356	32 498	17 348	66 473
Avocados	4,646	97,164	160 453	96 285	47 345	58 928	75 417	82,346	124 915	10 350	1 610	58 928
Breadfruit	231,785	327,551	444 497	432 639	711 887	386 924	766 932	598,051	335 767	142 050	91 819	386 924
Coconuts (not shelled)	1,001	10,091	20 785	17 152	29 567	9 959	16 431	9,734	5 928	17 700	-	9 959
Golden Apples	25,893	84,575	67 747	21 548	28 399	29 920	30 731	25 564	84 923	5 350	3 030	29 920
Mangoes	12,045	12,279	21 741	90 077	2 696	15 153	51 281	20 962	-	3 520	-	15 153
Paw Paw	65	539	563	82 821	34 818	9 998	26 700	22 290	1 000	-	-	9 998
Sour sops	2,604	17,809	29 191	30 887	77 760	16 407	34 916	24 338	22 544	235	-	16 407
Cut Flowers & Foliage	242,805	301,885	278 247	186 770	172 786	129 268	206 662	136 437	117 807	92 650	92 782	129 268
						1 458 305						**1 458 305**

Table 11. Exports of sugar for the period 1991 – 2000

Year	Exports		Average annual growth (%)	% share in total agri. production	% share in agri. exports **	% share in total exports	Major destination(s)	Unit export price (US$ per tonne)	World price (US$ per tonne)
	Qty. (tonnes)	Value (US$)							
1991	65.7	31.1	-	45.1%	62.6%	15.0%	Exported to the United Kingdom under preferential market access - ACP/EU Sugar Protocol	591	198
1992	54	33.4	7.2%	41.2%	56.6%	17.5%		638	200
1993	48.5	28.4	-14.8%	38.6%	51.0%	15.2%		625	205
1994	51.9	29.8	4.8%	41.8%	54.3%	16.2%		591	238
1995	38.5	26.3	-11.8%	31.0%	42.1%	11.3%		681	242
1996	59.1	36.6	39.2%	40.6%	36.5%	13.0%		656	248
1997	64.6	36.5	-0.1%	44.7%	39.1%	12.9%		624	279
1998	48	28.3	-22.5%	38.2%	37.8%	11.2%		606	188
1999	53.2	28.6	1.1%	38.8%	39.9%	10.8%		566	138
2000	58.4	27.1	-5.4%	40.7%	39.2%	9.9%		496	188(P)

** - For present purposes, agricultural exports have been classified as exports including sugar, molasses, rum, lard and margarine and other food and beverages, as identified in the Barbados Economic and Social Report, 2001

Table 12.

Sweet potatoes							
Year	Export		Average annual growth (%)	% share in agri. Exports	% share in total exports	Major destination(s)	Unit export price (US$ per kg)
	Qty (kg)	Value (US$)					
1991	235 117	213 400	-	0.43	0.10	Canada (50.2%), UK (49.7%)	0.91
1992	605 465	512 441	140.13	0.87	0.27	UK (53.2%), Canada (44.4%)	0.85
1993	251 759	190 557	-62.81	0.34	0.10	UK (60.6%), Canada (35.9%)	0.76
1994	300 214	222 413	16.72	0.41	0.12	UK (62.9%), Canada (19.2%)	0.74
1995	780 276	582 232	161.78	0.93	0.25	Canada (49%), UK (45%)	0.75
1996	518 934	468 170	-19.59	0.47	0.17	UK (52.4%), Canada (43.2%)	0.90
1997	401 436	288 587	-38.36	0.31	0.10	UK (57.1%), Canada (41.5%)	0.72
1998	279 122	209 747	-27.32	0.28	0.08	Canada (65.9%), UK (30.3%)	0.75
1999	66 703	57 453	-72.61	0.08	0.02	Canada (76.9%), UK (20.6%)	0.86
2000	13 896	11 375	-80.20	0.02	0.00	Canada (70.1%), N.Antilles (22.4%)	0.82

Breadfruit							
Year	Export		Average annual growth (%)	% share in agri. Exports	% share in total exports	Major destination(s)	Unit export price (US$ per kg)
	Qty. (kgs)	Value (US$)					
1991	135 649	115 893	-	0.23	0.06	UK(76.4%), Can.(21.4%), US(10.7%)	0.85
1992	177 472	163 776	41.32	0.28	0.09	UK (69.3%), Canada (29.3%)	0.92
1993	279 117	222 249	35.70	0.40	0.12	UK (72.7%), Canada (25.3%)	0.80
1994	301 807	216 320	-2.67	0.40	0.12	UK (74%), Canada (24.8%)	0.72
1995	520 133	355 944	64.55	0.57	0.15	UK (59.3%), Canada (39.9%)	0.68
1996	587 294	383 466	7.73	0.38	0.14	UK (68.5%), Canada (31.2%)	0.65
1997	439 852	299 026	-22.02	0.32	0.11	UK (62%), Canada (33.5%)	0.68
1998	284 816	167 884	-43.86	0.22	0.07	Canada (53.8%), UK (45.2%)	0.59
1999	144 078	71 025	-57.69	0.10	0.03	UK (68.3%), Canada (31.7%)	0.49
2000	73 331	45 910	-35.36	0.07	0.02	UK (55.6%), Canada (44.4%)	0.63

Table 12 (contd.)

Hot Peppers							
Year	Export		Average annual growth	% share in agri. Exports	% share in total exports	Major destination(s)	Unit export price (US$ / kg)
	Qty (kg)	Value (US$)					
1991	74 663	91 290	-	0.18	0.04	UK (54.3%), Canada (38.3%)	1.22
1992	185 536	258 757	183.44	0.44	0.14	UK (59.8%), Canada (29.9%)	1.39
1993	360 737	325 758	25.89	0.59	0.17	UK (65.3%), Canada (20.9%), Netherlands (10.9%)	0.90
1994	714 916	326 734	0.30	0.60	0.18	UK (52.7%), Netherlands (28.1%), Canada (16.3%)	0.46
1995	284 886	260 564	-20.25	0.16	0.11	UK (51.1%), Canada (40.5%)	0.91
1996	215 670	209 935	-19.43	0.21	0.07	UK (53.6%), Canada (45.7%)	0.97
1997	178 948	176 290	-16.03	0.19	0.06	UK (56.9%), Canada (42.3%)	0.99
1998	148 887	112 253	-36.33	0.15	0.04	UK (34.7%), Canada (33.1%), USA (28.5%)	0.75
1999	51 400	27 346	-75.64	0.04	0.01	USA (75.9%), Canada (24.1%)	0.53
2000	5 574	6 274	-77.06	0.01	0.00	Canada (100%)	1.13

Cut flowers and foliage							
Year	Export		Average annual growth (%)	% share in agri. Exports	% share in total exports	Major destination(s)	Unit export price (US$/kg)
	Qty (kg)	Value (US$)					
1991	41 234	121 403	-	0.24	0.06	Canada (37.1%), Germany (28.1%), Finland (15.2%)	2.94
1992	40 174	150 943	24.33	0.26	0.08	Germany (36.1%), Canada (31.1%), Finland (23.9%)	3.76
1993	41 823	139 124	-7.83	0.25	0.07	Germany (30.5%), Finland (30.4%), Canada (29.4%)	3.33
1994	29 999	93 385	-32.88	0.17	0.05	Canada (33%), Finland (38.6%)	3.11
1995	29 115	86 393	-7.49	0.14	0.04	Canada (46.5%), Finland (31.4%)	2.97
1996	38 927	103 331	19.61	0.10	0.04	Canada (45.2%), Finland (33.7%)	2.65
1997	36 105	68 219	-33.98	0.07	0.02	Canada (51%), Finland (28.6%)	1.89
1998	28 937	58 904	-13.65	0.08	0.02	Canada (69.7%), Finland (28.6%)	2.04
1999	21 681	46 325	-21.35	0.06	0.02	Canada (91.2%), Germany (4.5%)	2.14
2000	21 056	46 391	0.14	0.07	0.02	Canada (98.3%), Finland (1.7%)	2.20

CASE STUDY

THE WINDWARD ISLANDS

BY
GARY MELVILLE*

* Agricultural Economics and Agribusiness Management.

Blank page

Page blanche

TABLE OF CONTENTS

Blank page

Page blanche

I. "SMALL ISLANDNESS" AND AGRICULTURAL PRODUCTION AND TRADE

As small economies, the Windward Islands face difficulties in integrating into a liberalized world agricultural trading system and in receiving equitable benefits from it. These difficulties are compounded by other inherent geographic and climatic factors peculiar to small island developing States (SIDSs).

I.1 Resource constraints and agricultural production and trade

The Windward Islands are comprised of the four independent States of Grenada, St. Vincent and the Grenadines, St. Lucia and Dominica. These countries occupy a total area of approximately 2,100 square kilometers and range in size from Grenada (344 sq. km) to Dominica (751 sq. km) (annex II, table 1). Their relatively small land base is exacerbated by steep topography that further limits the utility of available land. The 1996 agricultural census of St. Lucia estimated that roughly 20 per cent of the land base is used for agriculture. This compares with 21 per cent in Grenada, 23 per cent in St. Vincent and the Grenadines and 16 per cent in the relatively more mountainous Dominica. Generally, small farmers are located in steeper and more marginal lands with little access to water (FAO, 2000). Competing land-use demands such as for housing, industry and tourism in flat and gently sloping areas is a further constraint to agriculture.

The average farm size in the Windward Islands is quite small, with a majority of holdings less than 1 hectare in size. The 1996 agricultural census for St. Lucia showed that more than 65 per cent of total agricultural holdings were less than 2 hectares in size (annex II, table 2), and this pattern is similar for the other islands. Small farm size prevents the attainment of economies of scale in production. Land scarcity causes negative environmental practices in farming. Cultivation on steep slopes results in soil degradation, and affects the fragile coastal and marine resources important for tourism and fishing.

The total population of the Windward Islands is approximately 437,000 persons, with population densities ranging from 100 persons/sq. km in Dominica to 293-persons/sq. km in Grenada. The small population size of the individual countries provides a limited domestic market with demands for a diverse range of commodities. As a consequence, there are no possibilities for large-scale crop production for domestic consumption. The population size is also a constraint to efficiency of operations of administrative entities and to availability of a wide enough skill pool to deal with implementation of the myriad agreements under the World Trade Organization (WTO), the Free Trade Area of the Americas (FTAA), the Caribbean Community (CARICOM) and other trade agreements. Availability of adequate trade and production data for these economies is one such manifestation of the lack of institutional capacity, and has affected the analysis carried out in this case study.

Dependence on a single export commodity

In St. Lucia, St. Vincent and the Grenadines and Dominica, banana production for export has dominated the agricultural landscape. It is estimated that banana production occupies 27 per cent of all agricultural land in the Windward Islands. Of the total land used for agricultural purposes in St. Lucia in 2000, 45 per cent was taken up by banana cultivation and 42 per cent by coconut. Other production includes root vegetables and tree crops for domestic consumption and, to a lesser extent, export markets.

The four Windward Islands have been engaged in banana production for export since 1953. Bananas replaced sugar as their main export crop, with production exported to the United Kingdom under preferential arrangements. Banana production served as the vehicle for transformation of the rural sector, by enabling poor rural households to enter a productive sector and earn regular and reliable incomes. Banana production in the Windward Islands continues to be closely linked to rural development and the rural economy as it provides opportunities for employment, small business development and investment in education and housing.

I.2 Areas of potential opportunities

Tourism is a very important sector in the Windward Islands, especially in St. Lucia and Grenada. The all-inclusive hotels and cruise ship arrivals represent the largest and fastest growing segments of the tourism sector. Both segments offer quality vacations at reasonable prices through the use of sophisticated marketing and integrated supply systems (Bryan, 2001). Opportunities for local producers to supply products to this sector have been constrained by product costs due to a lack of economies of scale. The prevalence of small enterprises in the agricultural sector has also resulted in a lack of individual capacity to penetrate markets and sustain and increase market share in terms of consistency of supplies.

There are ongoing efforts between governments, farmers and hoteliers to increase the supply of local produce to the tourism industry. However, the hotel and cruise ship sector have developed more cost advantageous supply relationships with suppliers in the United States. Scale of operations has served as an additional deterrent in the case of payments: while large local importers can cope with long delays (of up to 3 to 4 months) by the hotels in settling payments, small producers of vegetables, fruits and eggs are less able to do so.

Opportunities for utilization of the wider markets of the Organization of Eastern Caribbean States (OECS) and CARICOM are limited by a lack of adequate and appropriate commercial shipping options, high transport costs and small-scale transactions between individual territories (ECLAC, 2001). Nevertheless, the countries of the Windward Islands have good diversification and income potential in agro-processing. Dominica has done very well in the vegetable oil sector in terms of the manufacture of soaps and soap products; these account for 15 per cent of its total export revenue. And in all four islands, processing of fruits, hot peppers and herbs has become a very important cottage industry and medium-scale venture.

I.3 Price competitiveness of agricultural exports

With a small land base, many small-sized farms, low levels of technology use and low levels of investment, producers in the Windward Island are unable to achieve economies of scale and are high-cost producers, which negatively affects the price competitiveness of exports. Comparative studies of banana exporters have shown that the Windward Islands, are higher cost producers than most of their competitors. A study by the Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD) in 1993 showed that costs per box of fruit in the Windward Islands were 2 to 3 times higher than those of selected Latin American producers (table 1). Another study by the Inter-Amercan Institute for Cooperation in Agriculture (IICA) (table 2) showed a similar situation. The latter study also showed that scale was directly related to costs, with smaller farms being significantly less competitive. More recent estimates place the costs of Latin American fruit at between US$ 168 and US$ 240 per tonne compared to as much as US$ 520 per tonne for Windward Island fruit produced by small holdings.[1]

The difference in costs is explained by a number of factors. The vertical integration of the large banana producing companies in Latin America and larger scale of production allow the attainment of economies of scale that are unattainable by the Windward Islands. Cheaper labour costs, mechanization, better soils, cheaper material costs, and what some refer to as an externalization of social and environmental costs give these companies a significant competitive advantage over small Windward Island producers located on more difficult terrain, who face higher labour and material costs. Windward Island production accounts for less than 2 per cent of total world trade, and it has limited ability to influence prices compared to the dominant Latin American companies.[2] WIBDECO, the company charged with marketing Windward Island fruit, has no control over production costs or supply quantities; in addition to the

[1] Costs on some farms may be as low as US$ 300/tonne. Recent initiatives in irrigation, drainage, germplasm and quality management, part of an overall banana revival strategy funded with assistance from the EU, are expected to improve competitiveness.

[2] In 2002, ASDA, the third largest supermarket chain in the United Kingdom, chose Del Monte as its global supplier of bananas, excluding all other suppliers through a low price bid. This has had the effect of driving down supermarket prices for the fruit in recent months.

negative effects of weather, farmers in the Windward Islands enter and exit the industry regularly depending on available prices.

The need for improvements in productivity and efficiency by Windward Island producers is recognized, and there are a range of ongoing projects and programmes attempting to achieve this. Even with improvements in productivity and efficiency, it is believed that the inherent circumstances of the Windward Islands will continue to place them at a price/cost disadvantage (IICA, 1998). For example, the inability to utilize machinery results in labour costs of 55–60 per cent of total production costs, with harvesting operations accounting for the greatest proportion of total labour costs as boxing and packaging requirements increase. Changes in productivity are expected to raise average productivity from 7 tonnes/acre to 12–15 tonnes/acre, resulting in a 20–30 per cent reduction in overall costs that will reduce, but not eliminate, the cost disadvantage. Preferential arrangements have enabled Windward Island bananas to enjoy prices above the world price (table 3). Despite this, high production costs mean that the operations of many smaller farms are not profitable.

Historically, the Windward Islands have not had a good record in terms of quality. However with the increased reliance on the supermarket trade and the instituting of strict quality practices, record keeping and packaging requirements, quality has improved significantly. With their long-standing market presence in the United Kingdom, there are perceived differences between Windward Island bananas and those of Latin America in terms of taste and size. The hope is that the Windward Island fruit will compete on the basis of these product differences. A structured and aggressive marketing campaign is required in order to exploit this advantage. However, it will need time for changes in productivity to increase the volume and stability of production.

Table 1: Relative cost of production of bananas (US$/lb)

Country	<2ha	2-3ha	5-10ha	10-20ha	>20 ha	Average
Dominica	16.4	14.2	11.5	11.4	11.5	12.6
Grenada	15.5	12	10.1	9.6	10.9	11
St. Lucia	14.6	12.5	10.5	9.8	10.5	11.3
St. Vincent & the Grenadines	12.8	12.7	10.7	11.1	11	11.4
Costa Rica						8.3
Ecuador						6.4
Colombia						9

Source: IICA, 1998

Table 2: Comparative costs of production of bananas

Country/economy	FAO Farm gate	CIRAD f.o.b
Ecuador	2.95	2.95
Costa Rica	3.25	3.25
Colombia	3.64	3.64
Honduras		
Côte d'Ivoire	3.40	8.53
Martinique	12.80	
St. Vincent & the Grenadines		8.39
Dominica		9.37

Source: CIRAD, 1993

Table 3: Banana prices (f.o.b) United Kingdom market (US$/ton)

Market	1998	1999	2000	2001
United Kingdom (Windward Islands)	297	310	284	260
United Kingdom (dollar area)*	191	209	233	216

* Proxy for world price
Source: FAO, 2001

I.4 Remoteness: transport and marketing

Topography and the physical environment have also affected trade in agricultural products. All trade is through sea or air shipment and the steep terrain entails high costs for infrastructural development in terms of roads and airports. Since the present airports in St. Vincent and the Grenadines and Dominica cannot accommodate large commercial airlines, this limits the export of fresh, highly perishable commodities.

It is estimated that 97 per cent of the trade in goods in the Windward Islands uses maritime vessels, the majority of which are foreign owned, and whose main business is bringing imports into the region. Because of the traditional relationship with Europe and the provision of preferences under the Lomé Agreement, the majority of agricultural exports are sent to the United Kingdom. The average distance between the Caribbean and Europe is less than that of some competitors, but lack of competitive shipping options (because of low trade volumes) results in high shipping costs (ECLAC, 2001). In general transport and insurance, as a percentage of import costs, are higher for these countries than the world average. Shipping and insurance costs range from 9 per cent in St. Vincent and the Grenadines to 11 per cent in St Lucia.

I.5 Vulnerability to natural disasters

The geographical location of the Windward Islands makes them vulnerable to hurricanes and tropical storms between the months of June and October, to drought in the early months of the year and to a continuous threat from volcanoes and earthquakes.[3] A prime example of that vulnerability is Dominica, which has been affected by at least four major storms in the 1990s and eight in the last 20 years. The combined effect of Hurricanes Luis and Marilyn resulted in the total loss of the island's banana crop in 1995 after it had experienced a 25 per cent crop loss from storms in 1994. St. Lucia experienced significant devastation from tropical storm Debbie in 1994, infrastructural damage from hurricane Lenny in 1999 and crop loss from tropical storm Lilly in 2002.

Hurricanes and tropical storms are a statistical certainty in these countries. Overall, the Windward Islands have been affected by a total of 28 tropical storms/hurricanes between 1979 and 2000. The frequent tropical storms and flooding result not only in direct crop/livestock loss, but also loss of valuable social infrastructure and a decline in overall economic performance. The cost of rebuilding after disaster diverts important resources from other sectors. Between 1994 and 1995, Dominica's rate of GDP growth declined from 7.75 per cent to 2.4 per cent, largely due to hurricane damage. St. Lucia also experienced a fall in GDP growth, from 2.4 per cent to 0.5 per cent in the year following Debbie. In September 2002, tropical storm Lilli caused significant damage to banana farms in St. Lucia and St. Vincent and the Grenadines. Initial assessments of this damage are in the area of 40–50 per cent of the total crop.

[3] Some estimates place many of the region's islands among the 15 most disaster-prone nations in the world, and the rates for property insurance are also among the highest in the world.

The Windward Islands are also highly vulnerability to volcanic eruptions and earthquakes. While this vulnerability is not unique to SIDSs, large economies can spread the costs of natural disasters over land area and sectors of the economy unaffected by the disaster. The small land spaces and limited production possibilities of the Windward Islands, on the other hand, means that there are often few, if any, areas and economic sectors unaffected by such disasters.

Drought is also a natural hazard facing production in the Windward Islands. While annual rainfall is adequate for production, storage and distribution are limiting factors. The existence of a distinct dry period between January/February and May/June has affected production during this period. A prolonged drought in 2001 saw an overall decline in banana production of 44 per cent over the previous year's value.

In the Windward Islands, bananas is the only commodity covered by an insurance scheme, WINCROP, established in 1983, which provides coverage against wind damage. Farmers pay regular premiums to the scheme, and in the event of damage affecting more than 30 per cent of the crop, the scheme pays compensation.[4] However, as production declines, the viability of that scheme is threatened. For other commodities, farmers have to rely largely on their own resources and whatever government assistance is available to resume production. The banana crop insurance scheme falls within the provisions of Annex II of the WTO Agreement on Agriculture, as it is run without government subsidy. For other commodities these provisions hardly apply, as governments lack the resources to provide direct support/ compensation to farmers, and the scale and value of production is insufficient to finance sustainable insurance schemes.

In summary, the unique challenge of small "islandness" makes the Windward Islands vulnerable to a host of external and internal factors, for which there is limited policy response. The extent of that vulnerability is exemplified by the present economic plight of Dominica. The effects of recurring hurricanes and storms in the late 1990s, the fall in banana prices and export revenue, and the lack of other significant production possibilities, has resulted in a serious balance-of-payments deficit and debt repayment problems that have left the country unable to meet its internal and external obligations. It has forced Dominica to seek assistance from the International Monetary Fund (IMF) and from regional countries and international donors.

Generally, the Windward Islands are aiming to achieve a more liberalized environment in which they can compete. However, developing an appropriate policy mix to achieve these aims is proving to be a challenge, as liberalization requires the reduction of tariffs and elimination of non-tariff barriers, which are the main tools used by governments for the protection of domestic production and revenue generation. The Windward Islands have pursued regional integration and liberalization at the subregional (OECS) and regional (CARICOM) levels as a means of broadening their individual narrow domestic markets. In addition, these countries are aspiring for membership of the hemispheric liberalization initiative, the North American Free Trade Area (NAFTA), and they are all members of the WTO.

The limited financial resources of individual governments and the private sector means that, in all cases, successful implementation of these policies requires bilateral and multilateral financial and technical support. The European Union (EU) has provided such support for revitalization of banana production and for agricultural diversification, while other international agencies such as the Food and Agriculture Organization of the United Nations (FAO) and the International Fund for Agricultural Development (IFAD) have provided support for food security and rural development initiatives, and the Canadian International Development Agency (CIDA) has supported trade policy development. Despite these efforts, given the peculiar disadvantages of these countries, time and additional resources are needed to achieve some level of comparable footing in multilateral liberalization.

[4] The WINCROP insurance scheme is run along commercial lines and embraces all four islands. Premium rates are determined by actuarial methods and reinsurance is arranged on the international market. WINCROP provides coverage for wind damage, the major natural threat facing banana production.

II. POLICY MEASURES IN THE AGRICULTURAL SECTOR

Agriculture is a key sector in all of the Windward Islands in terms of its contribution to overall GDP and economic growth, employment – in particular rural employment – and foreign exchange earnings. In 2000, its contribution to GDP ranged from 7.7 per cent in St. Lucia, and 9.2 per cent in Grenada to over 21 per cent in Dominica. Between 20 and 40 per cent of the labour force in these islands is involved in agriculture. However, in the past five years, agriculture has declined in terms of its contribution to the economy.

This case is best illustrated for St. Lucia, where, as shown in table 3 of annex II, agriculture accounted for 13-15 per cent of GDP during the 1980s and early part of the 1990s (Eastern Caribbean Central Bank (ECCB), 2000). As agriculture has declined, the role of the services sector has grown in importance, especially in the areas of tourism, construction, telecommunications and financial services.

In Dominica, where agriculture plays a greater role, its present economic difficulties are largely due to a 25 per cent decline in banana earnings in 2000, and to huge losses from natural disasters in the 1990s. The decline in banana production brought about by market uncertainty has led to increased cultivation of illegal crops, such as marijuana, in some islands. This has become a particular problem for law enforcement and security within the subregion and the hemisphere.

Many economist suggest that the services sector, including construction, tourism, banking, insurance and other service activities, in the Windward Island economies is not achieving the type of economic effect that resulted from high levels of agricultural production and export. As the factors of production in the agricultural sector are locally owned, profits are passed on for consumption, investment and savings in the same local economy. Between 1990 and 1994, banana revenues provided an average inflow of almost US$ 1 million into the economy of St. Lucia and slightly less for Dominica. In addition to employment benefits, the weekly cash flow pattern of this income allowed for the development of a variety of small and medium-sized businesses in retail, construction and services in the urban, and especially, the rural sector. It led to investment in housing, transportation and education and sustained many female-headed rural households. With the decline in banana revenues since then, related economic activity has declined in the rural areas.

A significant portion of the capital invested in the service sector (i.e. finance, communications and tourism) is a result of foreign investment. Approximately 70 per cent of the hotels in the region are foreign owned, and while tourism is now the major employer in St. Lucia and Grenada, the multiplier and distribution effects are less than those from agricultural earnings.

II. 1 Major products of interest to domestic agricultural development

Based on OECS and national commodity targets over the past decade, the following commodities are considered important to all the Windward Islands:

Basic foods: Poultry meat, eggs, small ruminants, pork, fruits (mangoes, citrus, avocadoes and minor exotics), vegetables (e.g. tomatoes, cabbage, cucumbers, sweet peppers, beans and lettuce)

Staples: Dasheen, yam, and sweet potato.

Processed foods: Coconut oil, processed fruit (e.g. jams, jellies and juices), pepper sauces and green seasonings.

The basic food items and staple crops are important mainly for food security. Food imports account for around 40 per cent of total food consumption in these islands. Statistics on the spread between consumption by the local populace and the tourism sector are not readily available. However, local importers estimate that 30–45 per cent of food sales are made to the hotel and restaurant sector (this

does not account for direct imports by the larger hotels). With declining export revenues, access of the local population to adequate food is threatened. Estimates of household poverty range from 18 per cent of households in St. Lucia to 30 per cent in Dominica. Without adequate income, households lack the means to purchase food, and they become increasingly dependent on domestic agriculture.

Basic food items and staples are also important in terms of agricultural diversification, as crop commodities such as dasheen, yams, hot peppers, mangoes and exotic fruits have regional and extraregional market potential. Development of sustainable commercial production and marketing systems for these crops is necessary to reduce dependence on bananas and improve the incomes of small and medium-sized farmers.

Poultry, herbs, hot peppers, small ruminants and sweet potatoes are among the commodities selected for a regional food security initiative. In addition to contributing to national food security, vegetables, eggs, chicken meat, fruits and cut flowers are products for which there is good demand in the developing tourism sector of these islands. The countries of the Windward Islands also have some potential for diversification and income from agro-processing.[5] However, this potential is limited, owing to the inability of small farmers to produce raw materials at a competitive price and to weak management of the small-scale agro-processing facilities (CARDI, 2000).

Agricultural policies

In each of the Windward Islands, agricultural policy has focused on key areas of export promotion, food security and agricultural diversification. The food security and export goals have been operational for many decades, while overdependence on a single export commodity, bananas, and concerns over the future of this commodity, have prompted the diversification goal since the late 1980s. The policy goals for agriculture in the Windward Islands have been pursued through a mix of national, regional and international policies.

As the islands are small, open economies, trade measures have been key policy tools for agricultural development. Overall, these measures include preferential access for exports to developed country markets and protection for domestic agriculture. Generally, agricultural policies in the Windward Islands incorporate the following elements:

(i) Protection for local production as a means of import substitution, foreign exchange savings and food security;

(ii) Agricultural diversification to reduce overdependence on a single/few exports;

(iii) Removal of barriers to trade at the subregional (OECS) and regional (CARICOM) levels to stimulate trade in the regional market; and

(iv) Tax concessions and subsidies to local farmers to stimulate increased local production and exports.

At the individual national level, the countries have all revised and drafted national agricultural policies/ strategies to address some of the SIDS-inherent constraints that affect agricultural production and trade. Key aspects of these policies include export promotion, agricultural diversification, food security, biodiversity and environmental concerns. Implementation of these policies is pursued through programmes and projects in key areas, including technology transfer (e.g. irrigation, germplasm and product quality), fiscal incentives, trade policy development, market development and entrepreneurial development.

[5] Dominica has done very well in the vegetable oil sector in terms of the manufacture of soaps and detergents. In St. Lucia, income from the sale of coconuts for processing has become very important for farmers, as banana production has fallen. Processing of fruits, hot peppers and herbs has become a very important cottage industry and medium-scale venture in all four islands. This is not only important for rural incomes and employment, but also as a market source for farm production.

(a) Specific policy measures

(i) Import-substitution policy

In terms of protection for domestic production, governments chose to use quantitative restrictions as a means of protection of local agricultural production. These measures were aimed at creating a balance between: i) protection for food security and overall import substitution; and ii) revenue generation and provision of food for the populace. Protection measures include non-automatic licensing, local-content requirements and import quotas. As an example, St. Lucia used a 20 per cent local requirement for issuance of import licences for poultry. This policy achieved some success in the late 1980s and early 1990s, when a farmers' marketing cooperative carried out the processing and marketing functions. The closure of this outlet resulted in difficulties, due to weaknesses in production and processing and the use of evasive measures by importers of poultry.

While these protective measures remain in effect, they are expected to be tariffied by the end of 2005. This is because, as non-price trade measures, they are in contravention of regional and multilateral trading arrangements. Dominica has already tariffied restrictions, allowed under the CARICOM Treaty, and has plans to dismantle its negative list, while St. Lucia and St. Vincent and the Grenadines both intend to convert non-automatic licences to tariffs.

Pigs, poultry, vegetables and food crops were the major beneficiaries of quantitative restrictions. These are key commodities for domestic food security; as limited land space does not allow any significant ruminant production, pig and poultry meat is the major protein that can be locally produced. These commodities face significant competition from United States production, especially chicken, as domestic support policies in that country result in low prices for legs and wings, which are readily imported into the Windwards. Average c.i.f prices for chicken parts imported into St. Lucia range from U$ 1.10 to US$ 1.20/kg, while local production costs average US$ 1.50.

(ii) Tax and other concessions

Individual governments grant concessions to farmers, including waivers on income tax payments for incomes below a set level and duty free concessions for farm vehicles and certain agricultural inputs. Fiscal imperatives have prevented the use of direct export subsidies as a means of promoting exports. Governments also provide technical assistance in the form of extension, research, testing and other services. The budget of the Ministry of Agriculture in St. Lucia is approximately US$ 20 million to be used for the various areas listed, the main ones being revival of banana production and an agricultural diversification strategy.

(iii) Product diversification programmes

The governments of the Windward Islands have revamped their diversification policy to include low interest credit, entrepreneurial development and marketing support. St. Lucia is establishing a diversification unit within the Ministry of Agriculture, and is collaborating with NGOs and commercial institutions to improve the flow and management of credit to farmers. A major aspect of this policy is the redirecting of the St. Lucia Marketing Board from a buying and selling operation to that of providing market intelligence and other facilitation support. Other aspects of the diversification strategy include infrastructure development in the form of feeder roads and marketing facilities, input supply, setting of grades and standards, and agro-processing of targeted commodities. In St. Lucia, this strategy is at its initial implementation stage and is being funded as part of the EU/STABEX Initiative. A drawback in the implementation of these initiatives is the difficulties technicians and administrators face in sorting out the complex rules of the new trade environment and developing policies that can realistically achieve their objectives.

(iv) Trade policy

All the Windward Islands are net food importers, and the negative food trade balance has been on the increase as agricultural export production has declined while imports continue to hold steady (table 4). St. Lucia's food import bill stood at US$ 71 million in 2000. Food imports make up 22 per cent of its total imports, with meat and cereals accounting for over 40 per cent of overall food imports. The main trading partners for food are the United States, the United Kingdom and CARICOM, especially Trinidad and Tobago and Barbados.

With the exception of phytosanitary considerations, OECS countries can trade freely with each other in agricultural goods. At the regional level, CARICOM countries have agreed a common external tariff (CET), and goods from other CARICOM States are allowed tariff-free access to the Windward Islands. The CET is applied to imports from third countries at rates of up to 35 per cent for industrial products, and 40 per cent for agricultural goods. Generally, the Windward Islands apply the 40 per cent CET on agricultural products. The schedule for implementation of the CET allowed for four phases and was to be completed by the end of 1998. Some members have complied fully, but others have not yet reached Phase IV due to fiscal problems. The Windward Islands' bound tariffs on most agricultural goods was 100 per cent under the Uruguay Round, with Grenada having exceptions for selected items.

The reduction of the CET has caused some implementation problems in Grenada, where import duties exceed WTO bound rates for 18 tariff lines, including some meats, some fresh vegetables, rice, soybean meal and oil, beer and wine which are bound between 0 and 35 per cent. In the case of St. Lucia, attempts were made to ensure that implementation of the final phases of the CET was revenue neutral, and a consumption tax was imposed ranging from 10–30 per cent on a list of goods, both imports and domestic. Imported goods also face a 3–4 per cent handling charge in all countries. As a consequence, a consumption tax regime has been applied to all imports and to local production of selected goods and services.

The findings of the WTO Trade Policy Review (2001), and a study by the Centre for Trade, Policy and Law at Carleton University (CTPL, 2002) indicate that the Governments of the Windward Islands are largely in compliance with their WTO commitments. While there are exceptions in terms of quantitative restrictions, as noted above, the Governments are fully cognizant of the need to convert quantitative restrictions to tariffs, as part of their Uruguay Round commitments, and are committed to the process. Nevertheless, limited capacity at the national level has delayed the process and outside assistance is being sought by St. Lucia and Dominica.

(b) Policy impacts

The efforts of domestic policies have resulted in improvement in the production of some import-substitution commodities. St. Lucia has become self-sufficient in egg production, and all the Windward Islands have made improvements in this commodity (see annex II, tables 6 and 7). Fish production has been on the increase for each of the past five years in all of the Windward Islands. Vegetable production has also shown increases, as has pig production. Chicken production continues to experience difficulties due to lack of scale in production and processing. Uncertainties about future arrangements for the protection of local producers has restricted investment, while imports of cheap, subsidized cuts — in particular, legs, wings and backs — from the United States make it difficult for local producers to compete.

In other sectors such as fruit production, past endeavours at import substitution and diversification achieved less-than-anticipated success for several reasons. These include the lack of a holistic approach, an inadequate focus on shipping and transport, the low involvement of industry partners and insufficient emphasis on commercial production and marketing. Already the Governments of the Windward Islands are attempting to remedy this in their recent policy approach to diversification.

The effect of the above measures on non-traditional exports is difficult to measure. Exports of non-traditional crops have followed a pattern of peaks and troughs over the years. The effects of drought, access to shipping, phytosanitary problems and high transport cost for air shipping of perishables have all played a role. Another factor that cannot be downplayed is the relative attractiveness of bananas in providing stable revenue and a well-established market compared to other commodities. Because of this, and even though there have been rapid changes over the past decade, farmers have perceived bananas as a less risky business.

(c) Non-trade policy concerns

As noted above, food security is a vital concern for all the Windward Islands due to poverty. Concerns over food sovereignty resulting from an overdependence on imports, furthers the case for pursuance of a food security strategy. The Governments of the Windward Islands, in collaboration with the FAO and CARICOM, are developing a regional Food Security Programme targeting the development of production and marketing of a group of select commodities for national and regional food security. These commodities include, hot peppers, small ruminants, poultry, sweet potatoes and herbs and spices.

Food security and agriculture are tightly linked to overall rural development in these countries. The potential of many farmers and farm workers to participate in areas such as financial services and information technology are limited by low levels of education. The largest employer in the service sector, tourism, also has limitations as an alternative source of benefits to rural communities. The events of 11 September 2001, and the resulting decline in visitor arrivals of up to 25 per cent in the ensuing months, are an indicator of the vulnerability of tourism to external shocks.

Hotels, which account for up to 75 per cent of the employment in tourism (Bryan, 2001) are located outside most of the main banana producing areas, and there is intense competition for the jobs available. Ecotourism activities provide the major employment opportunity for rural people in the tourism sector. While strategies are being developed in all the islands to enhance ecotourism, its potential development is closely tied to the cruise tourism sector, and employment opportunities are linked to site visits through tours.

In the foreseeable future, agriculture is the sector with the largest employment possibilities and multiplier potential for rural communities. In Dominica, it is estimated that there are three persons dependent on each person employed in bananas. Employment statistics for St. Lucia show that a number of rural communities experienced unemployment that was significantly higher than the national average of 17.5 per cent, and increases in rural unemployment and poverty are linked to the decline in banana exports (CDB, 1999).

Environmental concerns in small island developing countries are also linked to agricultural development, as is tourism development. As these countries are highly dependent on land and marine resources for current and future survival, the impacts of agricultural activities on the environment are key issues to be addressed. The main environmental issues in respect of agriculture in the Windward Islands include:

- Deforestation,
- Solid and liquid waste management,
- Unplanned development,
- Natural disasters, and
- Squatting.

In some islands, the legal framework with respect to the ownership and use of land affects efforts aimed at conservation and increasing sustainability. According to the 1996 census, 45.9 per cent of agricultural

lands are family owned, and since St. Lucia uses the Napoleonic Code, according to which all family members can lay claim to such lands, there is considerable fragmentation of holdings. This type of ownership in turn affects the level of investment on such lands.

(d) Impact of liberalization on the domestic market

Until the removal of quantitative restrictions on key commodities, including vegetables, the impact of liberalization on domestic agriculture is difficult to judge, as the only real changes in trade measures in agriculture since the inception of the WTO has been the implementation of the common external tariff.

II.2 Major products of export interest

The major exports of the Windward Islands are bananas, cocoa, nutmeg and other spices, root crops, fruits and hot peppers. The overall agricultural export mix of the Windward Islands is fairly restricted. Banana is the major export crop for Dominica, St. Lucia and St Vincent and the Grenadines and less important for Grenada. Cocoa is important for St. Lucia and Grenada and nutmeg is the most important export crop for Grenada. Cocoa and nutmeg are traded on the open market. Grenada is a large producer of both commodities and receives world prices for them. Arrowroot production, although declining, is still of importance to St. Vincent and the Grenadines, while exports of dasheen, yams, hot pepper, mangoes and breadfruit vary in importance for the different islands.

(a) Performance

Windward Island agricultural exports were highest immediately prior to the advent of multilateral trade liberalization, but have declined significantly since then. The performance of the three major Windward Island agricultural exports — bananas, nutmeg and cocoa — is shown in annex II, tables 8–10. During the period 1985–1995, bananas represented more than 75 per cent of the value of total agricultural crops, and 66–70 per cent of agriculture's contribution to GDP. However, in 2000, agriculture's contribution to GDP fell to 7.7 per cent and banana production was responsible for only 45 per cent of the value of agricultural activities in the economy of St. Lucia, for example. The growth rate of banana exports and revenues has been somewhat erratic in the Windward Island. Market uncertainty, a falling pound sterling in 1992 and falling producer prices forced 35–40 per cent of farmers to abandon the industry in the late 1990s, while droughts significantly reduced production in 2001 following increases brought about by higher prices in 2000.

Over the years, the agricultural sector has managed to earn 60–80 per cent of the country's total export revenue. Of this, 96 per cent was derived from the banana industry. In 1992, agricultural exports generated almost ECU 200 million. In 1990, the agricultural sector experienced a 33 per cent growth, the highest rate ever recorded. The performance of the sector continues to be influenced largely by the direction and level of revenues derived from the banana industry. Thus, a drop in the volume of banana exports by 33.4 metric tonnes after tropical storm Debbie in 1997 occasioned a 17 per cent contraction of the agricultural sector that year.

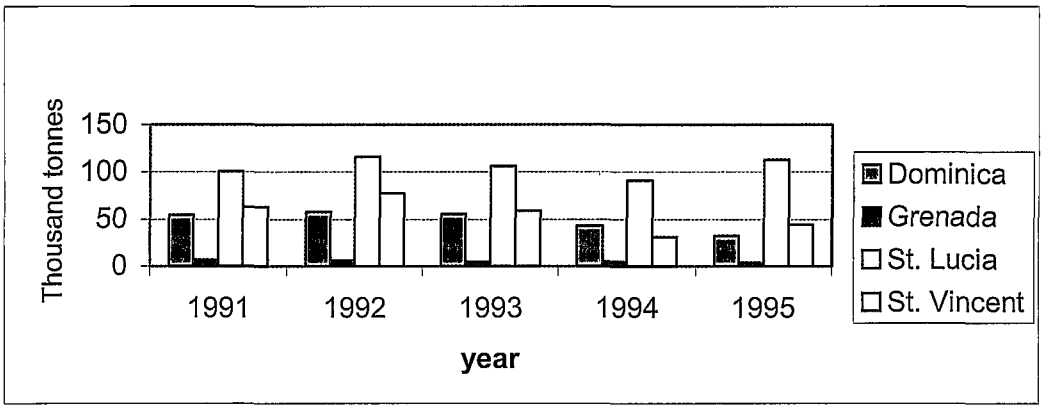
The driving force for the development of banana exports has been preferential access to the EU market under the Lomé Convention for exports from African Caribbean and Pacific (ACP) countries. While this arrangement has been applicable to a full range of agricultural products, the banana industry has benefited most from this opportunity and has dominated the agricultural landscape of the Windward Islands. In addition, the Caribbean Basin Initiative (CBI) with the United States has allowed for duty free imports of Caribbean products into that market. However, for other agricultural products, the Windward Islands have fallen short of expectations in exploiting these arrangements, due in part to the dominance of bananas and to irregular production of alternative crops.

From the 1980s to the mid-1990s, preferences and high prices in the United Kingdom market, combined with national government support in terms of tax concessions, support to farmer organizations and land distribution schemes resulted in significant export performance of Windward bananas. The price of bananas in the United Kingdom market was almost twice the world prices in the early 1990s, when exports were at their highest, and Windward Island producers benefited from a fully protected United Kingdom market. In 1993, the EU set tariff rate quotas (TRQs) for banana imports based on historical import levels; the Windward Islands were allotted a quota of 285,00 tonnes. However, problems related to weather, price and market uncertainty prevented the Islands from meeting this quota, and their present allocated quota is less than 70 per cent of this amount. The Latin American ("dollar") fruit were allotted a tariff quota of 2.5 million tonnes, with an inquota tariff of ECU 75/tonne and an out-of-quota tariff of ECU 850/tonne.

The Windward Islands export all their fruit to the United Kingdom market, but their advantage in this market has declined significantly over the past decade. As noted earlier, competition by large banana companies has led to periods of significant price decline. This, coupled with the fact that the Latin American bananas obtain a market premium of 20 per cent or more in the EU, has eroded the preferential margin of the ECU 75/tonne tariff for the Windward Island producers. As evident by the narrowing price gap shown in table 3, the advantage of the traditional ACP suppliers over their competitors mainly exists to the extent that non-ACP exporters pay duties on bananas that are exported above their allocated quota and that the ACP suppliers share economic rent from licensing arrangement.[6]

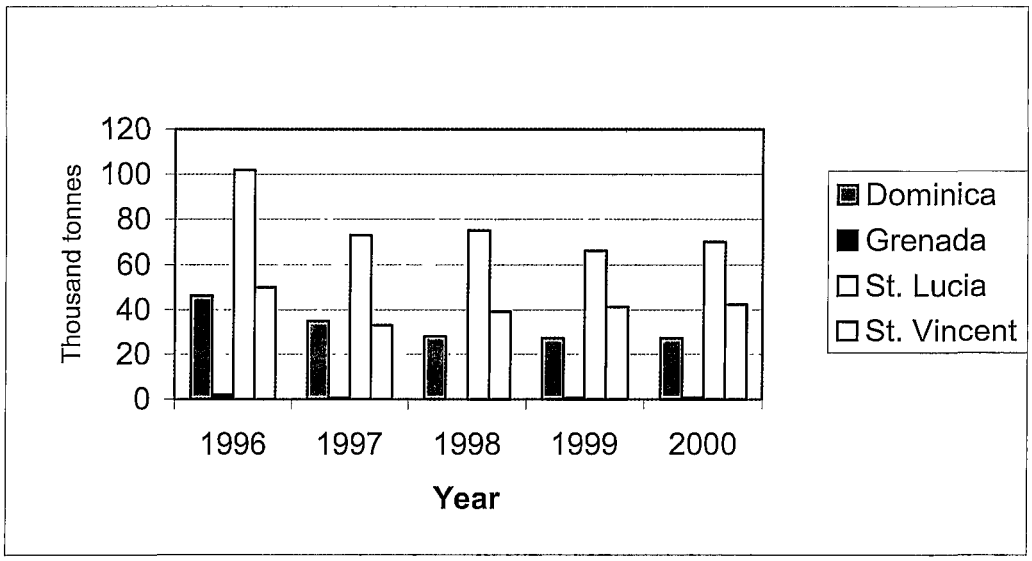
A new agreement signed in 2001, arising out of a WTO dispute settlement, provides for changes to the licensing system and an annual increase in TRQs, with the duties on out-of- quota imports declining by 25 per cent each year. Thus, while market access is guaranteed to the end of 2007, the challenge for Windward Island producers is to improve competitiveness to remain in the market until then, while lobbying for a new import regime that will compensate for some of their inherent disadvantages. Even if the ratio of Windward Island grower costs to those of Latin American producers could be reduced from approximately 200 per cent to 150 per cent (a 25 per cent reduction), there would still be a significant cost gap that would render them uncompetitive in an open market.

Figure 1. Windward Islands' banana exports to the United Kingdom, 1995–1996



[6] Licensing arrangement in the EU market allowed for economic rent through import certificates; traditional sellers of ACP fruit were issued 30 per cent of certificates for "dollar" fruit.

Figure 2: Windward Islands' banana exports to the United Kingdom, 1996–2000



(b) Policies for non-traditional exports

Policies for agricultural diversification are aimed at broadening the range of agricultural exports as well as increasing food security. These policies have been largely implemented through the selection of a range of target crops, and through a series of projects at the national and subregional levels aimed at improving the production and marketing of these commodities. Under projects such as the Agricultural Research and Extension Project (AREP),[7] the Tropical Produce Support Project (TROPRO), and the efforts of various ministries, the Caribbean Agricultural Research and Development Institute (CARDI) and the Agricultural Diversification Unit of the OECS, production technology has been developed and validated for a number of crops including *eddo, tannia*, sweet potato, ginger, pineapple, mango, avocado, hot pepper, plantain and dasheen. In addition, support has been provided through market information systems, exporter training and market development, including trial shipments of select produce. Ministries of agriculture have also provided extension support.

Additional support for agricultural diversification has included initiatives at improving product quality and overall competitiveness of non-traditional exports. These include training in good agricultural practices to improve production and post-harvest handling practices, and market support through provision of market information and direct export of root crops and fruit through State-owned marketing boards.[8]

New market initiatives being pursued for bananas include organic banana production and "fair trade bananas" which is largely a aimed at developing better price arrangement for bananas grown in ACP countries.

The success of the major diversification initiatives has been affected by disconnects in the research extension linkage and the development of commercial production and marketing systems (CARDI, 1996). Recent diversification strategies and agricultural policies in St. Lucia and Dominica are expected to provide a more integrated approach to agricultural development through the setting of reachable

[7] Funded by the United States Agency for International Development (USAID), AREP was a US$ 6 million project, which ran from 1991 to 1996, to develop improved production technologies for a range of diversification commodities including mangoes, plantains, hot peppers, breadfruit, ginger, eddoes, pineapples and passion fruit. The project also involved the strengthening of linkages between research and extension in technology transfer.

[8] Marketing Boards in the Windward Islands have been involved in the importation of select food commodities; they use their revenue to provide a purchasing and distribution outlet for farmers' produce. These Boards have generally run at a loss and their operations are being restructured to provide more facilitating services including intelligence, development and technical assistance.

targets and by instituting relevant support structures. The impact of these efforts on the production of non-traditional crops is difficult to separate from that of other domestic policies. Despite the emphasis placed on the service sector and agricultural diversification, St. Lucia has found it difficult to replace the loss of foreign exchange earnings resulting from the decline in banana production and exports since 1995 and their contribution to national income and employment. In addition to the effects on the service sector of the decline in the world economy, the low level of economic growth over the past few years is also a reflection of declines in banana prices, exports and revenue. The latter is largely a result of the uncertainties of the new multilateral trading environment.

III. OPTIMAL "MODALITIES" FOR AGRICULTURAL DEVELOPMENT

The modalities set out below are based on feedback from OECS countries in trade workshops, submissions to the WTO and interviews with government officials.

The negotiating objectives[9] of the Windward Islands in terms of trade liberalization are based on the benefits to be garnered from multilateral trade liberalization, and their inherent disadvantages that affect their ability to obtain these benefits. Continued preferential access
for traditional banana exports for at least a longer transitional period, to allow for modernization of agriculture and additional and/or new access for non-traditional agricultural exports is therefore a key issues. Tied in with the latter is the desire to secure market openings for products associated with new opportunities in trade-related areas such as investment, intellectual property rights and competition policy. To minimize the inherent disadvantages of size and capacity, the Windward Islands are also seeking non-reciprocity in any new trade obligations that arise and to keep down the costs of reciprocity in terms of product coverage, timing, sequencing and offsetting of revenue losses. These major objectives are part of the wider CARICOM strategy developed for global and hemispheric trade liberalization.

III.1 Market access

The critical areas of market access for the Windward Islands, in terms of the AoA and the ongoing negotiations, are in the areas of tariff binding reductions, tariff peaks and escalation, tariff rate quotas (TRQs), special agricultural safeguards (SAGs) and non-trade concerns. The latter issues have implications for key exports that traditionally benefited from preferences, as well as products targeted for food security and rural development.

(a) Tariff reductions

Lacking the fiscal resources to provide most types of domestic support, the Windward Islands have used CETs and quantitative restrictions as measures to safeguard domestic producers from declines in world prices, protect them from cheap imports and stimulate domestic production. Quantitative restrictions in the main are not allowable under the AoA, and rather than risk payment of compensation to affected exporters, the Governments have agreed to the elimination of these restrictions. Tariffs are thus the only mechanism that will be in place to safeguard domestic production. Without flexibility in the use of tariffs as a safeguard, domestic producers of vegetables, eggs, poultry, pigs and vegetable oils, in particular, will be at a significant disadvantage vis-à-vis their competitors in the United States who can benefit from various subsidies (even if reduced under current negotiations). These commodities are key elements of food security strategies in the Windward Islands. The converse is true for bananas, where erosion of tariff preferences places banana producers at a significant disadvantage.

[9] The negotiating objectives are based on the regional CARICOM position developed by member Governments and elucidated by the CARICOM Regional Negotiating Machinery (CRNM).

As a consequence of the above, the Windward Islands will benefit from some flexibility given to developing countries concerning the level of tariff bindings. For instance, maintaining the existing bindings (i.e. the Uruguay Round final bound rate) will be advantageous for important food security products including poultry, pigs, vegetables and food crops. The existing applied rates under the CARICOM external tariff of 25–40 per cent are too low for domestic production in the face of price decreases. An example is the 30 per cent difference in cost between imported and local chicken with the applied CET rate. This leaves local producers with a need for protection above the CET rate, particularly if real prices decline below present levels.

Due to the importance of tariff bindings to the Windward Islands, these countries will also benefit from reductions in tariff bindings for developing countries beyond 2004, which will be significantly less than those required for developed countries and not subject to greater percentage cuts for higher tariffs. In addition, with no fiscal resources to provide support (and therefore no significant benefits to be gained from reductions in agricultural support measures), modalities should allow the Windward Islands to retain tariffs as the main instrument for encouraging domestic production of key food security commodities and contributing to employment and development in rural areas.

(b) Tariff preferences

The importance of banana exports to the economies of the Windward Islands in terms of foreign exchange earnings, employment and overall economic growth (as seen in the declines in economic growth following their reduced production), and the inherent disadvantages in production that can be alleviated, but not totally addressed, by technological improvement requires some type of special and differential treatment if these countries are not to be further disadvantaged by liberalization. While the Cotonou Agreement between the ACP members and the EU provides market access until the end of 2007, and funds under the European Development Fund (EDF) to assist countries in making the transition to a new trading regime, it is likely that the inherent characteristics of SIDSs that place them, including the Windward Islands, at a disadvantage in banana exports will plague them in other economic endeavours as well.

Thus, modalities that provide secure market access and binding or targeted preferences for the Windward Islands and other SIDSs would be most appropriate. Even if Windward Island producers can improve marketing and productivity to produce at an average cost of US$ 260/tonne – US$ 320/tonne, the cost differential will be 20–40 per cent higher than Latin American costs, and a preferential tariff to alleviate this disadvantage would be burdensome and not likely to be politically viable in Europe. Thus tariff preferences must be tied to assistance to improve competitiveness as well as market-based options such as branding, organic production and fair trade fruit.

(c) Tariff rate quotas

Given their high dependence on banana exports, the Windward Islands would benefit if historical allocations were maintained in TRQs. In any case, Windward Island production makes up less than 2 per cent of world exports and less than 7 per cent of the EU market. As such, a quota based on historical exports would have little or no effect on the world or EU markets. For new commodities exported into developed country markets, since the level of production will also be too low to cause market distortions, the Windward Islands and other SIDSs should have equal access to TRQs.

However, recognizing that there may be new arrangements in TRQs as a result of the current negotiations, the OECS as a group has taken the position that the new AoA should explicitly recognize the need for full compensation (by developed countries) for the loss of preferences as a condition for developing countries agreeing to give up country-specific quotas, from which they have historically benefited.

Such compensation would reflect the losses incurred by the country's economy in terms of foreign exchange, employment and linkages to consumption and investment. At average production levels of 200,000 tonnes in the first half of the 1990s and 140,000 tonnes in the last half of that decade, this

represents direct annual revenue losses of US$ 65 million to US$ 85 million, and significantly higher losses when taking into account the multiplier effect of banana revenues in the Windward Islands. Minimizing such losses would require large and sustained investments in education, training and social and economic programmes over a suitable period of time. Already in catering for the estimated 4,000 farmers that have left the industry, the Government of St. Lucia, with assistance from the EU, has initiated a US$ 44 million programme of diversification and social revival. Should larger producers, who provide more employment, go this way, the costs would be much higher.

(d) Special safeguard measures

Given their few tradeable products and the lack of a diversified export revenue base, the Windward Islands cannot afford to risk payment of compensation to exporters disadvantaged by imposition of quantitative restrictions. Along with the development of relevant administrative systems and guidelines (such as trigger mechanisms), flexible tariff rates would give coverage to a wider range of products and provide for food security needs in terms of cheap imported food.

III.2 Domestic support

As mentioned earlier, while recognizing that there are provisions for domestic support of their agriculture, the Governments of the Windward Islands do not have the fiscal resources to provide such support. To the extent that domestic support measures in developed countries result in lower prices of key food imports not produced in the Windward Islands, it contributes to overall food security. However, in the case of poultry, vegetables and oils, this results in additional competition for domestic producers of such goods.

Consequently, for SIDs such as the Windward Islands, a "development/food security box" that would allow those lacking the budgetary capacity to meet any type of *de minimis* level to support domestic producers of key food security items would be most beneficial.

III.3 Export competition

The situation for export subsidies is similar to that for domestic support. As net food importing countries, the Windward Islands benefit from cheap, subsidized exports from developed countries, except, as noted above, where such products are in competition with domestic products. The modalities of export competition are not likely to have any significant impact on any of the targeted commodities in the Windward Islands. For purposes of negotiations, the fact that export subsidies for sugar in the EU can harm CARICOM producers in the absence of country-specific quotas may necessitate an overall regional position.

III.4 Conceptual framework for special & differential treatment

For the Windward Islands, special and differential treatment (S&DT) should be aimed primarily at maintaining some of the special treatment enjoyed in current and future regional and multilateral trade arrangements. Under the present arrangements, OECS countries like St. Lucia enjoy allowances that CARICOM makes for tariff suspensions and reductions, as well as national exceptions to the CET. Article 56 of the CARICOM Treaty allows these countries to apply quantitative restrictions on a number of products as a means of protecting infant industries. These restrictions affect a number of manufactured products, including beer and aerated beverages, curry and pasta. A number of safeguard measures are also applied under Article 29 of the CARICOM Treaty.

Special and differential treatment under the AoA may take the form of:

a) Longer periods for compliance with specific regulations;
b) Easier market access to major trading partners;
c) Exemption from certain obligations and lower levels of commitments; and
d) Recognition of the need to enhance food security through realistic options available (i.e. tariffs and safeguards).

Special and differential treatment for SIDSs may never take the form of that given to the LDCs, judging from the signals coming from negotiations within the FTAA and the direction the banana issue has taken over the past few years. While the path of S&DT in line with the LDCs can be pursued, the essence of any S&DT for SIDSs should focus on the time needed for adjustment and, more importantly, on managing vulnerability through technical assistance and flexible commitments. In this regard, technical and financial assistance to SIDSs would be critical.

BIBLIOGRAPHY

ACS (2001). Small economies of the greater Caribbean and preparedness for globalization. Discussion paper. Port of Spain, Trinidad, ACS.

Antoine P and Taylor T (1993). *Competitiveness Study*, Vols. 1 and 2. Roseau Dominica, OECS, Agricultural Diversification Unit.

Bryan A (2001). Caribbean tourism: Igniting the engines of sustainable growth. Paper, Florida, United States, North-South Centre, University of Miami.

CARDI (1996). *Annual report 1996.* St. Augustine, Trinidad, Caribbean Agricultural Research and Development Institute.

CARDI (2000). *Annual Report 2000.* St. Augustine, Trinidad, Caribbean Agricultural Research and Development Institute.

CARDI (2000). CARICOM hot pepper industry study. St. Augustine, Trinidad, Caribbean Agricultural Research and Development Institute.

Centre for Trade, Policy and Law (2002). Report on the status of implementation of the WTO Agreement on Agriculture in CARICOM States. Ottawa, Canada, Carleton University.

Central Statistical Department, Government of St. Lucia (2000). *National Income Statistics, 1992 –2000.* Castries, St. Lucia Government of St. Lucia.

CIRAD (1993). Special Bananas. CIRAD, Montpelier, France.

Darius R and Williams O (1998). Bananas, the WTO and adjustment initiatives in the ECCB area. Basseterre, St Kitts, Eastern Caribbean Central Bank (ECCB).

Eastern Caribbean Central Bank (ECCB) (2000). *Annual Report 1999-2000.* Basseterre, St Kitts, Eastern Caribbean Central Bank.

ECLAC (1999). *Selected Statistical Indicators of Caribbean Countries*, LC/CAR/G.593 Vol.XII, 1999. Santiago, Chile, Economic Commission for Latin America and the Caribbean.

ECLAC (2001). *Factors Affecting Maritime Shipping in LAC.* Report. Santiago, Chile, Economic Commission for Latin America and the Caribbean.

Food and Agriculture Organization (2001). *Special Programme for Food Security.* Rome, FAO.

Food and Agriculture Organization (2002). *Commodity Review.* Rome, FAO.

Food and Agriculture Organization (2001). Some issues relating to food security in the context of the WTO negotiations on agriculture. Discussion Paper No 1, prepared for the FAO Geneva Round Table on Food Security in the Context of the WTO Negotiations on Agriculture, Geneva, 20 July.

Food and Agriculture Organization (2001). Incorporating food security concerns in a revised Agreement on Agriculture. Discussion paper No. 2, prepared for the FAO Geneva Round Table on Food Security in the Context of the WTO Negotiations on agriculture, Geneva, 20 July.

IICA 1(1998). Towards a competitive banana industry in the Caribbean. Bridgetown, Barbados, IICA.

Ministry of Agriculture, Fisheries and Forestry (1996). *Agricultural Census Report, 1997.* Castries, St. Lucia, Government of St. Lucia.

Ministry of Agriculture, Fisheries and Forestry (2001). *Annual Statistical Digest, 1997-2000.* Castries, St. Lucia, Government of St. Lucia.

Ministry of Agriculture, Fisheries and Forestry (1999). *Banana Recovery Programme.* Castries, St. Lucia, Government of St. Lucia.

Ministry of Agriculture, Fisheries and Forestry (2000). Agricultural Diversification Strategy Paper. Castries, St. Lucia, Government of St. Lucia.

Ministry of Agriculture, Fisheries and Forestry (2001). *Draft Policy Framework for Agricultural Development in St. Lucia.* Castries, St. Lucia, Government of St. Lucia.

Nurse K and Sandiford W (1996). Windward Island Bananas; Challenges and Options under the Single European Market. FES, Kingston, Jamaica.

Shirotori M (2002). WTO negotiations on agriculture: Negotiations on new modalities. UNCTAD informal paper, Geneva, March.

Shirotori M (2002). WTO negotiations on agriculture: Assessment of non-ad valorem tariffs as a tariff barrier. UNCTAD informal paper, Geneva, March

World Trade Organization (2001). *Trade Policy Review of the OECS.* Geneva, WTO.

Blank page

Page blanche

ANNEX

Tables

Table A1. Area and population of the Windward Islands

Country	Area (km^2)	Population
Dominica	751	75 527
Grenada	345	101 100
St. Lucia	616	150 000
St. Vincent & the Grenadines	388	111 000
Total	**2 100**	**437 627**

Source: WTO, *OECS Trade Policy Review* (2001).

Table A2. Agricultural landholdings by size: St.Lucia

Size	No. of holdings	Area (ha)
Under 2 ha	9 172	5 476
2 to 4 ha	1 711	4 409
4 to 10 ha	700	3 794
10.1 to 20.1 ha	92	1 243
20.2 to 40.5 ha	22	638
40.5 to 80.9 ha	15	840
80.9 to 202.3 ha	16	2 125
202.3 ha and over	7	2 227

Source: Ministry of Agriculture, *Agricultural Census* (1996)

Table A3. Relative contribution of agriculture to national income (%): St. Lucia, 1993–2000

Sector	1993	1994	1995	1996	1997	1998	1999	2000
Agriculture, livestock, forestry & fishing	13.67	10.82	11.16	11.10	9.06	9.06	7.21	7.69
Bananas	9.15	6.56	7.52	7.07	4.78	4.89	3.53	3.46
Other crops	3.17	3.16	2.53	2.70	2.81	2.69	2.22	2.75
Livestock	0.62	0.64	0.60	0.79	0.88	0.96	0.70	0.81
Fishing	0.81	0.62	0.72	0.88	1.01	1.09	1.41	1.51
Forestry	0.30	0.28	0.25	0.22	0.21	0.19	0.17	0.15

Source: Central Statistical Department

Table A4. Food Trade: St. Lucia (in thousand US$), 1996–1999

Item	1996	1997	1998	1999
Total food imports	69 051.85	72 662.22	75 073.33	70 848.15
Meat	20 248.52	18 188.15	14 471.48	13 922.22
Cereals	8 857.407	8 565.18	10 425.93	10 045.93
Total food exports	54 007.78	35 982.59	39 895.19	91 152.00
Non-traditional food exports	3 315.3	2 502.13	2 218.90	835.19
Food trade balance	-15 044.1	-36 679.60	-35 178.10	20 303.85

Source: Central Statistical Department

Table A5. Major trade partners: St. Lucia (thousand US$), 1997– 2000

Country/region	1997	1998	1999	2000
CARICOM	71 073.33	71 795.19	76 643.70	77 204.44
Barbados	10 468.15	10 415.19	10 801.85	10 088.52
Jamaica	3 328.15	3397.04	3 290.74	2 727.41
Trinidad and Tobago	38 951.85	43 165.56	49 988.89	51 239.63
OECS	14 793.70	12 050.37	9407.037	9 079.63
United Kingdom	30 973.33	31 075.56	37178.52	30 161.48
United States	128 440.00	122 610.70	140 511.10	133 150.70
Total	332 355.60	335 220.70	354 553.30	355 058.10

Source: Central Statistical Department

Table A6: Poultry production in the Windward Islands, 1991–2000

Item	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Chicken imports (tonnes)										
	3 260	3000	3 139	2 309	1 994	2 819	2 292	2 100	1 900	2 200
	3 484	1 700	3 646	3 000	3 805	4 401	4 297	4 672	4 622	4 794
	6 778	6 783	6 942	8 168	7 697	7 679	6 903	7 645	8 371	8 406
	4 492	4 980	5 304	4 851	5 393	5 166	5 296	5 557	6 123	4 600
Chicken imports (US$'000)										
St. Lucia								9 427	8 343	7 627
Local production (tonnes)										
Dominica	230	250	270	300	300	310	315	340	340	340
Grenada	450	456	460	470	480	480	520	600	600	600
St. Lucia	600	600	600	612	624	624	660	720	645	595
St. Vincent & the Grenadines	400	410	415	420	425	425	425	425	425	425
Imports to local production										
Dominica	14.17	12	11.63	7.697	6.647	9.094	7.276	6.176	5.588	6.471
Grenada	7.742	3.728	7.926	6.383	7.927	9.169	8.263	7.787	7.703	7.99
St. Lucia	11.3	11.31	11.57	13.35	12.33	12.31	10.46	10.62	12.98	14.11
St. Vincent & the Grenadines	11.23	12.15	12.78	11.55	12.69	12.16	12.46	13.08	14.41	10.82
Eggs (St. Lucia)										
Local egg production ('000 doz)	466	592	605	791	819	743	802	826	931	918
Local egg production (US$ '000)	863	3 262	1 121	1 758	1 266	1 376	1 784	1 570	2 067	2 210
Egg imports (US$'000)	192.6	17.04	3.7	31.11	10.2	-	-	-	-	-
Egg imports ('000 doz)	38	9.7	7	1	18					
Ratio of imports to production	0.044	0.003	0.006	0.001	0.014					

Source: Ministry of Agriculture, *Statistical Digest* (various)

Table A7. Production of key food security crops: St. Lucia, 1991–2000

Item	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Local production (US$)										
Dasheen	204.1	226.3	278.9	293.3	406.3	450.4	376.7	433.3	506.7	725.2
Yams	347.4	408.5	466.3	466.7	437	723.7	660.7	634.1	550	728.1
Copra (processed for oil)	1713	1205	1828	1236	760	793	1167	676.7	772.2	878.9
Sweet Potatoes	206.3	241.9	305.2	285.6	520.4	459.3	395.6	366.7	451.5	766.3
Tomatoes	283	275.6	317	447.8	330.7	334.4	390.4	683.3	426.7	292.6
Cabbages	205.9	188.9	266.3	287	314.8	261.5	163.7	259.6	185.6	293
Cucumbers	127.8	146.7	154.4	184.8	167.4	171.1	170	208.9	217	285.9
Sweet Peppers	102.6	61.11	78.15	105.9	95.56	115.6	90.74	74.81	81.11	124.4
Pumpkins	118.5	123	145.2	174.1	150.7	167.8	149.3	155.6	208.1	318.1
Grapefruit	274.1	412.2	437.8	344.1	491.9	356.7	378.9	461.5	397.4	478.9
Lettuce	114.4	133.7	167.8	215.9	218.1	169.6	174.4	309.6	177	237
Mangoes	953.3	1146	925.9	1475	936.3	891.5	1022	684.4	921.1	743.3
Hot Peppers	94.07	108.1	71.48	163.7	243.3	245.6	188.5	193.3	324.1	308.1
Total production	7 373	7 143	7 889	8 708	7 727	7 954	7 931	8 989	8 069	9 664.0
Rate of growth (%)		-3.13	10.44	10.39	-11.3	2.938	-0.29	13.35	-10.2	19.77

Source: Ministry of Agriculture, *Statistical Digest* (various)

Table A8: Cocoa exports from the Windward Islands, 1991–2000

Item	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Exports (tonnes)										
Dominica	0	15	25	14	10	3	2	0	0	0
Grenada	1 614	1 348	1 568	1 255	1 425	1 593	1 330	1 106	961	1 479
St. Lucia	48	37	42	31	32	30	28	15	25	25
St. Vincent & the Grenadines										
Total	1 662	1 400	1 635	1 300	1 467	1626	1 360	1 121	986	1 504
Rate of growth (%)		-15.8	16.79	-20.5	12.85	10.84	-16.4	-17.6	-12	52.54
Exports (US$'000)										
Dominica	6	45	77	40	26	7	7	0	0	0
Grenada	3 059	2 588	3 104	2 942	3 312	2 586	1 869	2 064	1 409	2 250
St. Lucia	127	98	110	124	115	71	68	36	54	54
St. Vincent & the Grenadines										
Total	3 192	2 731	3 291	3 106	3 453	2 664	1 944	2 100	1 463	2 304

Source: FAO, *Commodity Review* (2002).

Table A9: Nutmeg exports from Grenada, 1991–2000

Item	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Exports (tonnes)	1674	1923	2411	2768	2179	2070	3011	2478	2862	2170
Rate of growth		14.87	25.38	14.81	-21.3	-5	45.46	-17.7	15.5	-24.2
Exports (US$'000)	4517	2808	3221	3052	3988	5165	8092	10285	16791	15570

Table A10: Banana Exports from the Windward Islands

Item	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Exports (tonnes)										
Dominica	54.6	58	55.5	42.8	32	46	35	28	27	27.16
Grenada	6.9	6.3	4.7	4.5	4	2	0.59	0.09	0.583	0.72
St. Lucia	100.6	116.1	106.6	91	113	102	73	75	66	70.2
St. Vincent & the Grenadines	62.9	77.4	58.7	30.9	44	50	33	39	41	42.4
Total	193	200	225.5	169.2	193	200	141.6	142.1	134.6	140.5
Total rate of growth		3.627	12.75	-25	14.07	3.627	-29.2	0.353	-5.28	4.382
Exports (US$'000)										
Dominica										
Grenada										
St. Lucia	54.22	68.44	51.07	42.85	47.44	46.59	31.83	33.96	32.22	30.46
St. Vincent & and the Grenadines										
Total										
UK Prices										

CASE STUDY

THE INDIAN OCEAN ISLANDS

BY
JEAN-MICHEL SALMON*

* Faculty of Law and Economics, University of Antilles and of Guyana.

Blank page

Page blanche

TABLE OF CONTENTS

FOREWORD

I would like to express my deep appreciation and thanks to all the people I met during my missions to Geneva and Mauritius (see annex I) for their valuable contributions in the preparation of this report. In particular, I wish to thank Ambassador J. Meetoo, Geo Govinden, Usha Dwarka-Canabady, J.-C. Montocchio, Dr Rajpati, Jean-Noël Humbert, Jean-Cyril Monty and M. Hardy, for their dedication, kindness and hospitality. A word for G. Vydelingum, principal statistician at the Central Statistical Office, Government of Mauritius, who was very helpful in providing all statistics requested. UNCTAD staff were very efficient, both in the practical and in the analytical aspects of the work, particularly M. Shirotori, O. Matringe, M. Arda, S. Laird and B. Graham. As always about issues relating to the Indian Ocean and SIDSs (but not only these), Ph. Hein was an immense source of ideas and energy. Last, but not least, I wish to thank the staff of the Indian Ocean Commission (IOC) secretariat, especially Erik Van Overstraeten, Raj Mohabeer and Soifiat Alfeine, who were extremely helpful and friendly, as always.

This report aims at providing an analysis of the main agricultural interests of Indian Ocean SIDSs and their perspective in the context of the ongoing agriculture negotiations at the World Trade Organization (WTO). However, due to constraints in obtaining data, the analysis focuses mainly on Mauritius; the Comoros and Seychelles are examined in less detail. This is indeed regrettable, as I have a deep feeling of friendliness towards the people from these smaller islands. I am grateful for the invaluable assistance provided by Mohamed Bacar Dossar, Marie Ange de Lespinois, Saïd Mdziani, Hamadi Idaroussi, and Antoine Marie Moustache so that these countries could finally be included in the study.

The exchange rates used throughout this report, unless otherwise stated, are the ones prevailing at the time of the field mission: 25 Mauritian rupees = 1 euro, and 30 Mauritian rupees = 1 US$; 1 Comorian franc (CF) = 0.00198 euros in 1999, and 5.5 Seychelles rupees (SR) = 1 US$.

I remain responsible for any mistakes or misinterpretation occurring in this analysis.

J.-M. Salmon

EXECUTIVE SUMMARY

The Indian Ocean country case study provides good examples of the special characteristics of SIDSs and their particular dependence on preferential trade arrangements and agreements. Seychelles, the Comoros and Mauritius are all small and remote economies. The combination of smallness and remoteness prevents them from successfully pursuing the two traditionally suggested development strategy (export-led growth or import-substitution). The former is hampered by high transport costs and the latter by diseconomies of scale. Besides, Mauritius also regularly suffers from natural disasters such as hurricanes and even more frequently droughts, which can severely damage local production.

The success story of Mauritius, which is the sole member of the World Trade Organization (WTO) among these three SIDSs, is often held up as a good example of the benefits of outward orientation. However, it owes much of its success to trade preferences, including the Sugar Protocol, which strongly contributed to its economic take-off and social development. The contribution of sugar to GDP in Mauritius has now diminished, but it still plays an important multifunctional role in, for example, soil preservation, rural development, income distribution and equity, and savings of energy imports. Without trade preferences the Mauritius story could well have been one of hardship. The same applies, to a lesser extent, to the Seychelles, where the main export revenues now come from canned tuna as a result of preferential treatment accorded by the European Union (EU).

Both countries are net food importing developing countries, that have tried to lessen their dependence on food imports by stimulating their agricultural sectors through various means. They have had some success with a few products (such as potatoes, onions and poultry in Mauritius, and a few fruits and vegetables and poultry in the Seychelles), owing largely to protectionist measures in the form of well targeted tariffs (which can be high, but, nevertheless, below bound ones in Mauritius), import licensing and seasonal bans, and State trading enterprise operations. They need to promote these elements of their agricultural trade policy in the WTO negotiations. SIDSs should be allowed some flexibility in terms of market access, an issue which appears to be more important for them than domestic support at this point in time (however, that could change in the long run, and, in fact, Mauritius joined other SIDSs to call for raising the *de minimis* limit).

Since SIDSs' export market shares and revenues could be considerably threatened by a faster and deeper reform process (e.g. erosion of tariff preferences and elimination of the sugar rent), they should favour modalities that slow down tariff reductions and reform of tariff rate quotas (TRQ), as well as reductions of export subsidies in developed countries. There is no evidence of damage to farmers in Mauritius and the Seychelles from OECD countries' massive support and subsidies for their agricultural sector. This argument applies equally to the Comoros, even if it faces a completely different challenge as a very poor LDC trying to implement an effective agricultural policy. Such a policy would require even more protection against potentially highly subsidized food imports. Finally, SIDSs should pursue additional objectives, such as requiring some special and differential treatment in WTO Agreements (e.g. the Agreement on Agriculture (AoA) and the Agreement on Subsidies and Countervailing Measures) and in their forthcoming negotiations for a free trade agreement with both neighbouring countries and the EU.

Blank page

Page blanche

I. CHARACTERISTICS OF THE INDIAN OCEAN ECONOMIES AND THEIR ECONOMIC IMPACT

This report looks at three Indian ocean economies — Mauritius, the Comoros and Seychelles — that face the frequently cited natural constraints of SIDSs. It should be pointed out that the negative implications of these natural constraints taken together are much stronger than when considered separately (Salmon, 1997; Salmon, 2002). For example, it is often said in the economic literature that smallness leads to diseconomies of scale, but can be tackled by outward orientation. This is quite right for economies benefiting from a good geographical location (which means proximity to high-income or rapidly growing regions, such as Switzerland, Singapore or Hong Kong (China)). However, when remoteness (i.e. long distance from regions of rapid growth) is added to smallness, this solution is much less effective; this is the case of many SIDSs including those of the Indian ocean. In this context, it has been said that SIDSs are in a particularly difficult situation, since neither the well-known development strategy of export-led growth nor promotion of import substitution are likely to succeed (Faini, 1988). Domestic markets are too small for the latter strategy to succeed, while the former strategy is hampered by high transport costs (of both imported foreign inputs and national exports).[1] Service exports, often proposed as a remedy in the long run, cannot by themselves address the problem of serious diseconomies of scale.

These natural handicaps are rapidly reviewed in this first section. Taking **smallness** first, the areas of Mauritius, the Comoros and Seychelles are 2,040, 1,862 and 455 sq km respectively, and their population in 2000 was 1.2, 0.56 and 0.08 million inhabitants respectively. They therefore represent a little more than half (in the Mauritian case) the area of an average French *Département,*[2] and, in the case of the Seychelles, the population of a small French city. Clearly these sizes do not permit the usual learning curves derived from the domestic market, especially in many activities prone to economies of scale. Similarly, their combined GDP is about US$ 5 billion, which is less than 5 per cent of South Africa's GDP. **Insularity** is not always considered a constraint as such, even if it impedes trans-connectivity in infrastructure and related goods (roads, rail, electricity). But for many SIDSs, including the Indian Ocean ones, insularity combined with **remoteness** hurts the competitiveness of production and exports. For example, sea freight costs from Mauritius to the main European ports are around US$ 30 per tonne, and US$ 110-120 and US$ 130 per tonne respectively for the east and west coasts of the United States. By way of comparison, freight costs for Central American countries to United States ports are only US$ 25 per tonne.[3] This margin of difference, of US$ 100 per tonne, might disappear in a liberalized United States sugar market.[4] Similarly, air freight costs for fruits and vegetables from Mauritius to Europe are quite high, at 42 Mauritian rupees per kg (or 1.68 euros)[5] in July 2002. Here again the combination of smallness and remoteness creates a competitiveness problem. This is compounded by the fact that, in the case of Mauritian pineapples (see below), the quantities exported are too small to warrant transport by sea cargo and the air cargo involves high transport costs. The Government of Mauritius sought to address this problem by introducing a Freight Rebate Scheme (FRS) in 1991, that has been operated by the Agricultural Products Export Promotion Authority since 1998. It has been reformed several times since its introduction, when it provided a rebate of 50 per cent of export freight costs for pineapples, orchids, beans and spices (subject to a ceiling of 2 million Mauritian rupees per exporter) and a rebate of 25 per cent for mangoes, carambola, lychees and avocadoes. During the 1990s the FRS benefited principally the pineapple exporters, who earned from 1 to 3.5 million Mauritian rupees, varying from year to year, and even 7.5 million Mauritian rupees 1998-1999 as a result of the relative take-off of pineapple exports (see below). This proved to be rather expensive for the public finances. Thus, in September 2000, a new system was introduced for pineapple on a weight basis, and in March 2001 it was planned to return to a 25 per cent rebate for fresh pineapple (50 per cent for processed pineapple).

[1] See for example the recent papers by Redding and Venables (2001 and 2002).
[2] But with a much higher density of about 600 people per sq km in Mauritius.
[3] Interview with Michel Hardy, former director of the Mauritius Sugar Syndicate.
[4] Assuming a price of US$ 300/tonne as the completely liberalized market price of sugar, it would still represent a differential transport cost of one third of this price.
[5] The exchange rate used in this report is 25 Mauritian rupees = 1 euro, which was the rate at the time of the field mission.

It should also be pointed out that since all these three States are archipelagoes, they face what some call *double insularity* as a result of inter-island costs. This is considered a particularly binding constraint on Comorian agricultural development.

As for **natural disasters**, their frequency has a huge impact on the economy, especially on agricultural production. For example, Mauritius frequently experiences hurricanes and droughts: in the past 12 years it has been hit by cyclones Firinga (1989) and Hollanda (1994), and droughts in 1993, 1994, 1995 and 1999. The results can be very damaging, as from the last drought in 1999, when sugar production was 40 per cent lower than that of a typical good year (1997 or 1998 with 620,000 tonnes). This severe drought, from October 1998 to January 2000, strongly reduced cane yield and had lasting effects on the 2000 crop as well (see the following table).

Mauritius	**1996**	**1997**	**1998**	**1999**	**2000**
Sugar production (tonnes)	588 455	620 589	628 588	373 924	569 289
Cane yield (tonnes/ha)	73.3	79.5	78.1	53.6	69.9

It appears that the measures listed in Annex II of the Agreement on Agriculture (AoA) of the WTO, regarding support to agricultural producers/exporters, do apply to a situation such as the 1999 drought.[6] However, financing of such support, presently ensured by the Sugar Protocol, could be a serious issue in a liberalized world sugar market (see part II below).

II DEVELOPMENT OF THE AGRICULTURAL SECTOR AND MAJOR INTERESTS

This section offers a detailed review of the main agricultural interests of each country. The first part focuses on the domestic market, while the second part consists of an analysis of items of export interest.

II.1 Production for the domestic market

a) Mauritius

Mauritius has succeeded in becoming a rather diversified economy – by SIDSs standards – from a sugar monocrop economy until the 1970s, progressively to a service-based economy. Industrial activities (mainly clothing) in the export processing zone (EPZ) have played an important role in contributing to the economic take-off. The per capita gross national income (GNI) reached US$ 3,800 in 2000 (World Bank, *Atlas*, 2000), whereas for the same year the per capita gross domestic product (GDP) in terms of purchasing power parity dollars (PPP$) was much higher, at US$ 10,017 (UNDP, 2002). Following the decline of sugar in *relative* terms, agriculture in 2000 represented a small part of the total value added in the country (7 billion Mauritian rupees, or 6.6 per cent of the total), as well as of employment (54,000 persons, or 9.3 per cent) and exports (7.4 billion Mauritian rupees, or 19.6 per cent).[7] However the sugar sector continues to play an important multifunctional role (see more below).

[6] It is specified in Annex II, paragraph 8 of the AoA that support to producers/exporters is permitted if production loss caused by a natural disaster exceeds 30 per cent of the average of production in the preceding three-year period. In the present case, the 1999 crop of 373,934 tonnes represented 61 per cent of the 1996-1998 average of 612,544 tonnes.

[7] Source: Central Statistical Office (2000).

Mauritius: Share of sugar production in GDP, employment and exports

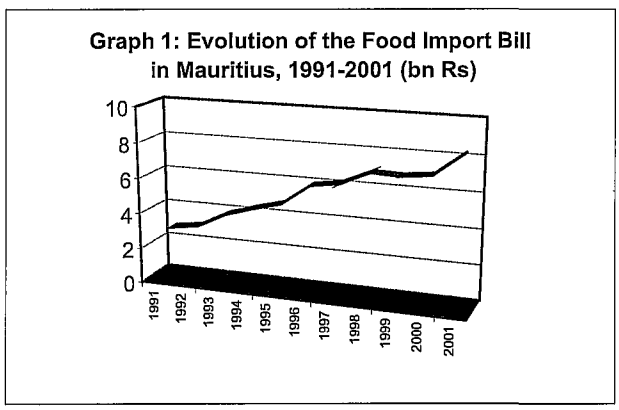
Period	Share of sugar in GDP (%)	Sugar in total employment (%)*	Sugar in total exports (%)
1970s	25	45	90
1980s	13	20	40
1990s	10	15	30
2000	3.3	10	15

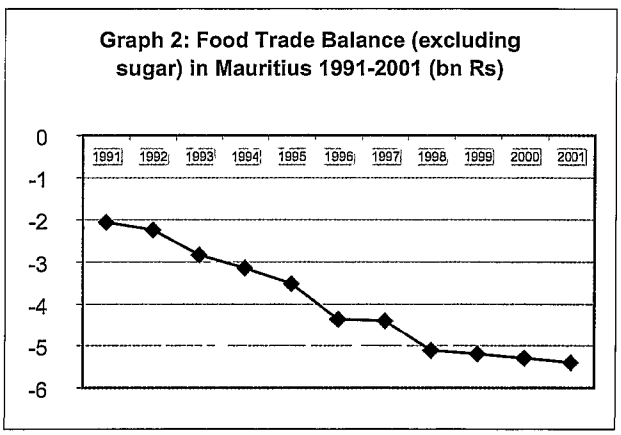
* Direct contribution

Source: Mauritius Chamber of Agriculture (MCA), except for 2000, for which author's calculations based on figures from the Central Statistical Office.

The agricultural policy objectives of Mauritius have been (i) to preserve the benefits of the Sugar Protocol in the long run by satisfying export commitments, and, more recently, by planning to rationalize the entire industry (see below), and (ii) to expand the production of other goods as much as possible through agricultural diversification programmes and incentives. Major non-trade concerns of Mauritius are related to sugar production (for details, see export section below). Mauritius is one of the more active States among members of the World Trade Organization (WTO), and is a good example of the importance of the multifunctionality of agriculture.

The **agricultural diversification** objective in Mauritius had already been seriously addressed in the early 1980s, notably with the 1983 White Paper on Agricultural Diversification, which noted that food imports (amounting to 1.2 billion Mauritian rupees) accounted for 25 per cent of total imports and contributed to 70 per cent of the total trade deficit (of – 1.7 billion Mauritian rupees) in 1982. This paper proposed the development of non-sugar agricultural production without reducing the area under sugar production, hence mainly using sugar land interlines and rotational crops. The objective was to achieve self-sufficiency in maize, onions, garlic and ginger, and the production of other crops (e.g. beans, peas, coconuts, citrus fruits, and spices) was also encouraged.[8] However there were many difficulties in realizing this objective, including poor land quality, topography (limiting the use of mechanization) and climate conditions. In the 1990s the Government gave a new impetus to agricultural diversification with the encouragement of high value crops. But with the exception of anthurium flowers, and to a much lesser extent pineapple and lychee (see sub-section II.2 below),[9] the results have again been disappointing.





[8] Potato was not cited in the objectives.

[9] We will not analyse the case of lychees, as this is a mainly cottage production, and not well registered. Suffice it to mention that lychee exports to the EU rose from 17 tonnes in 1991 to 116 tonnes in 1999 (MCA, 2001).

Hence the results of diversification were rather limited, as production of many new agricultural items declined[10] or was even abandoned. Finally, the **food import bill** increased rapidly, reaching almost 7 billion Mauritian rupees,[11] and even more than 8 billion Mauritian rupees in 2001 (see tables 4 & 5[12] and figure 1 above). And the trade deficit in food (excluding sugar) has been growing, reaching more than 5 billion Mauritian rupees since 1998 (table 6 and figure 2). A further deterioration of this situation was avoided in 2001 mainly due to a strong increase in canned tuna exports (see sub-section II.2 below). Thus, excluding sugar, Mauritius appears more and more clearly as belonging to the category of net food importing developing countries (NFIDCs).

In 2001, the Mauritius Chamber of Agriculture (MCA) proposed a new strategic orientation for the agribusiness sector, including a redefinition of the agricultural diversification concept. Considering the inherent constraints face by local producers (including land pressure and scarcity, high costs of production due to rising prices of imported inputs, lack of scale economies, unfavourable climatic and agronomic conditions), the MCA concluded that Mauritius should move away from an inward-looking strategy, essentially based on supplying the domestic market, and adopt, instead, a more outward-looking approach, focusing on broader regional and international markets (MCA, 2001). The idea was to take advantage of the region as a production base and make Mauritius an agro-processing hub, notably exploiting opportunities arising from the United States' African Growth and Opportunities Act (AGOA). However, although this proposition seems appealing at first sight, it remains to be seen how such a strategy will cope with the high cost of freight (even regional freight) and high unit costs of production due to the small scale of production and high unit labour costs experienced by many SIDSs, including Mauritius (see Salmon, 1997). The canning business in Mauritius (except for tuna canning, to some extent) is already hampered by its very small scale, by international standards, and its dependence on imported raw materials for 90 per cent of its needs. In the end many agro-industrial products such as processed tomatoes and fruit juices, are actually supplied mainly from imports. Hence it also remains to be seen whether this new agribusiness strategy would not be better oriented first towards local consumption, with national producers turning to regional markets only after rapidly achieving competitiveness.

We have selected eight products of importance to Mauritian "domestic" agricultural interests: potatoes, onion, carrots, tomatoes, bananas, pineapples, tea and poultry (chicken). These are the non-sugar items with significant production volumes in this country. Most of them, with the exception of pineapple,[13] are produced exclusively for the local market. As farm income is largely dominated by sugar sales, this non-sugar production is considered important essentially in the context of renewal of the agricultural diversification strategy. The Agricultural Marketing Board is responsible by law for the import, export, storage and selling of the so-called "controlled products", which include potatoes, onions, maize, beans, fresh milk and groundnut (potatoes and onions are discussed below in more detail). When local production of vegetables has been hit by a natural disaster (e.g. the storm of January 2002), the customs regulations and duties can be temporarily relaxed until local producers resume their supply.

Potatoes

Potato production in Mauritius has been stimulated since the mid-1970s in the context of the policy on agricultural import-substitution and diversification. It was hoped that self-sufficiency could be reached with a production of 24,000 tonnes. Many measures were taken for that purpose: imports were banned during the production season, retail prices were subsidized and controlled, and subsidized storage facilities were provided to producers. Despite this, self-sufficiency was never reached, except in 1986. The area under potato cultivation was reduced from 1,000 ha in 1994 to 600 ha by end 1990 following a reduction in profitability (see below). Local production of potatoes in the 1990s fluctuated between

[10] In the case of maize, far from reaching self-sufficiency, local production reached its peak of 6,000 tonnes in the 1980s before falling to several hundred in the late 1990s, whereas local consumption is around 60,000 tonnes. The local cost of production, at 5 Mauritian rupees per kg, is much higher than the price of imported maize from South Africa and Argentina which is only 2.5 Mauritian rupees per kg (MCA, 2001).

[11] This is only 13 per cent of total imports amounting to 55 billion Mauritian rupees, but nevertheless contributes to 50 per cent of the total trade deficit.

[12] See annex II for tables 1 to 9.

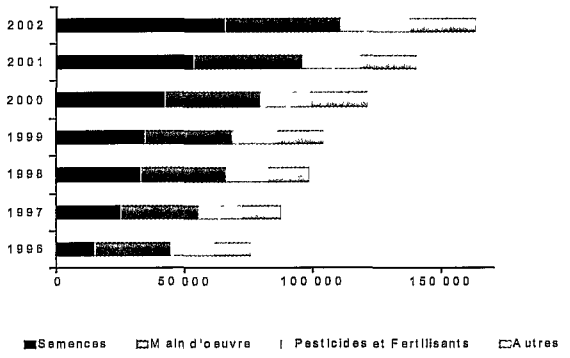
[13] And for tea, more than 10 years ago, but not any more since then.

14,000 and 18 000 tonnes (see table 1), with the exception of the bad year of 1996 when it was only 10,600 tonnes. Hence production remains very erratic, on a downward trend,[14] depending on climatic and agronomic factors, and the quality of imported seeds. The ratio of imports to national production in 2000 was around 60 per cent (table 2), with a volume of imports of 8,100 tonnes, which in the end means that local consumption of potatoes somewhat declined, to 21,000 tonnes during that year.

In 1998, a reform was implemented, in the face of growing subsidies (from 5 million Mauritian rupees in 1980 to 30 million Mauritian rupees in 1997). The new target for national production was fixed at 20,000 tonnes. The Government affirmed its commitment to the principle of a guaranteed producer price, at a level adjusted at the beginning of each season according to the actual cost of production.

The import regime was somewhat liberalized in January 1998, permitting free imports by private operators during the off-season (February to June). Prior to 1998, the AMB had been the only importer. But because of serious supply problems, it was decided in 1999 that the AMB would retain an import quota of 50 per cent over total potato imports, while the other 50 per cent quota was to be allocated to private operators through an import licensing system. At present, there is still some retail price monitoring: registered dealers are required to sell products supplied by the AMB at prices recommended by the latter, which also closely monitors them.

Figure 3: Evolution of the production costs of potato, 1996-2002 (Mauritian rupees/ha)
Source: MCA, 2002.



The local cost of production doubled between 1996 and 2000 (see figure 3), largely because of the rising price of seeds paid by producers. This is explained by the elimination of seed subsidies and the rising costs of seed imports (which represented 50 per cent of total needs) faced by the AMB, which keeps a monopoly over seed imports and supply. The AMB also buys all local seeds (produced by sugar estates and planters), the price of which rose rapidly during the decade, by more than 200 per cent, against more than 116 per cent for imported seeds; the prices of both seeds are now similar. This upward trend in production costs has implied rapidly rising retail prices, especially since the 1998 liberalization, which was not accompanied by a guaranteed producer price (see below). Hence the major benefits of price liberalization went to dealers, including international ones. The average c.i.f. unit price of imported potatoes was 8,630 Mauritian rupees per tonne in 2000 (table 3), which is similar to the producer price, but far below the retail price, whereas imported potatoes enter with zero duty (table 4),[15] coming mainly from Australia and South Africa.

Potato price (Mauritian rupees/tonne)	1991	1997	1998	2000	2001
Guaranteed producer price	3 900	7 000	7 000	8 300	9 600
Retail price	5 000	9 000	12 000	14 320	14 400

Source : MCA, 2002.

[14] The average annual production for the second half of the decade was 14,400 tonnes, as against 16,600 tonnes in the first half.
[15] While the UR-bound tariff rate for potato is 37 per cent (see Mauritius WTO Country Schedule, and table 4).

Onions

National production of onions is following a strong upward trend, from almost 3,000 tonnes in 1991 to 8,500 tonnes in 2000. Average annual growth rates for the periods 1991–1995 and 1996–2000 were 19.2 per cent and 16.4 per cent respectively (see table 1). Despite this, Mauritius needs to import large quantities: the import ratio (over local production) varies from 70 per cent to 100–120 per cent (in drought years) (see table 2).

The market for onions is highly regulated through the intervention of the AMB. The main locally produced variety (70 per cent) of onion is the "high-yielding" variety, the producer price of which remains officially fixed, with an adjustment in 1999 to 9 Mauritian rupees per kg. The AMB wholesale price and the retail price have been fixed at 12.7 and 14 Mauritian rupees per kg respectively since 1999. The other varieties are the local "*toupie*" (low- yielding), the price of which was fixed at 9.8 Mauritian rupees per kg before its liberalization in August 1997. However, the AMB still buys 1,600 tonnes from the local "*toupie*" production on a quota system, at a regularly negotiated price (revised up to 12 Mauritian rupees per kg in 2000. The retail prices have been highly unstable, from 22-23 Mauritian rupees per kg in May-June 2000 (off-season) to 16-17 Mauritian rupees per kg the same year (during the production season).

The import regime is also highly regulated, as the AMB is the sole importer of onions.[16] Imports are operated only during the off-season (with an ad valorem duty of 15 per cent against a UR-bound rate of 37 per cent) to cater for the local market. As with local production, imports followed a strong upward trend during the decade. The local average unit price in 2000 was 9.3 Mauritian rupees compared to the average unit price of imports of 6.88 Mauritian rupees (table 3): the difference of 35 per cent. Hence any progressive liberalization — including trade from regional suppliers such as Egypt or, more so South Africa, respectively members of the Common Market of Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC) — threaten to undermine local production.

Carrots

National production of carrots followed a strong upward trend during the 1990s, from a low volume of around 1,000 tonnes at the start of the decade to more than 6,000 tonnes in 1999, and even a surprising 11,000 tonnes in 2000 (table 1).[17] Although carrots are imported freely, with a low ad valorem duty of 15 per cent (table 4),[18] the import volume is nil or marginal (table 2). This logically means that local production is competitive enough, at an average unit price of about 12 Mauritian rupees per kg.[19] Carrot production does not seem to be of much importance in Mauritius, perhaps since it is expanding, apparently without serious difficulty. But its export potential to regional markets may be worth considering, and investigating in a separate study.

Tomatoes

During the 1990s the production of tomatoes in Mauritius strongly fluctuated from year to year around an average of 11,000 tonnes, with a unit cost of production that stabilized at around 20 Mauritian rupees/kg by the end of the decade (table 1). There are no imports of fresh tomatoes, and this product does not belong to the AMB list of controlled ones, and the tariff charged is only 15 per cent.[20] As with carrots, this can be explained by the relative competitiveness of the national producers, whose unit price of production is close to international prices.[21] Furthermore, there are some strong phytosanitary

[16] Seed onion imports were liberalized in 1996.

[17] This last figure, produced by the agricultural unit of the Central Statistical Office (CSO) (see also CSO, 2000) probably needs some confirmation or explanation, since it surprised some experts contacted during the field mission.

[18] The Mauritian final UR-bound tariff rate for carrots is the general Mauritian agricultural one of 122 per cent.

[19] Or 0.4 US$ per kg (18cs/lb) (using an exchange rate of 30 Mauritian rupees per US$). The United States grower price of fresh carrot was about 14 cs/lb in the late 1990s (http://nfapp.east.asu.edu/Outlook02/Carrots.htm), whereas the average FOB price during the 1980–1999 period was 13 cs/lb. (www.ers.usda.gov/briefing/tomatoes/tomatopdf/FOBRetailPriceVeg.pdf)

[20] The UR-bound tariff rate for fresh tomatoes is 122 per cent.

[21] Of about 30cs/lb, or 20 Mauritian rupees per kg (at an exchange rate of 30 Mauritian rupees to US$ 1).

norms applied by the quarantine section of the Ministry of Agriculture in order to protect the local varieties from imported germs. On the other hand, since there is no local tomato processing industry, Mauritius is dependent on external suppliers of processed tomato products.

Pineapples

The production of fresh pineapples (Victoria variety) is highly erratic in Mauritius: in some years production volume is as low as 1,000-1,500 tonnes (1991 and 1997–1999), and in others it is more than 4,000 tonnes (1993 and 1995). There are still no significant pineapple imports, so that the consumers must adjust the quantities they demand. The unit cost of production is about 15 Mauritian rupees per kg, and the ad valorem tariff is 40 per cent (table 4).[22] There is no world price for fresh pineapple, but the average 2000 f.o.b import prices for the United States and the EU were US$ 0.49 and US$ 0.72 per kg (or 15 and 21 Mauritian rupees) respectively.[23] So it can be concluded that local production of pineapple is fairly competitive, but faces some expansion problems. Yields are considered low and the production suffers considerably from insects. In all, the volume produced appears insufficient and too unstable to potentially supply a local canning industry. There are some exports of fresh pineapple (several hundreds of tonnes in the most successful years — see the section on exports), but growth is hampered by high freight costs.

Bananas

Banana production in Mauritius is about 9,000 tonnes, except for difficult years (table 1). The average unit production price is more or less 4 Mauritian rupees per kg, which signifies a rather efficient production system, since the most competitive producers in the world (e.g. Costa Rica) export at prices of about US$ 0.25 or 8 Mauritian rupees per kg. Hence there are neither significant imports, which would be further discouraged by an ad valorem duty of 40 per cent (table 4),[24] nor exports. The export potential of bananas may be explored, but at present it is probably limited by scarcity of land.

Poultry

The poultry industry (chicken) is a good success story of the development of Mauritius' non-sugar primary products sector. Local production rose regularly in the 1990s, and reached its peak in 2000 with a volume of 25,000 tonnes (table 1), all locally consumed. There are neither exports nor significant imports of poultry (table 2). The local market is highly protected, with an ad valorem tariff of 80 per cent (table 4).[25] The average unit price of production is almost 40 Mauritian rupees per kg, which shows some degree of efficiency, considering the small-scale operations of Mauritian poultry producers (the biggest factory in Mauritius produces around 8,000 tonnes of chicken per year). In 2000, the average world import price for chicken meat was near US$ 1 per kg (or 30 Mauritian rupees), whereas the average EU export price was US$ 1.3 (or 39 Mauritian rupees).[26] Nevertheless, the regional trade liberalization process (through COMESA and SADC) could represent a serious threat to the local industry, particularly in the SADC case, as the South African producers operate on a much larger scale (a typical factory produces 25,000 tonnes) and may represent a stronger regional rival supplier of the "rainbow chicken"[27] (personal communication, Mauritius Chamber of Agriculture). Our investigation revealed that the export unit price of South African chicken meat was about US$ 1 per kg in 2000.[28]

---

[22] The UR-bound tariff rate for fresh pineapples is 122 per cent.

[23] FAO agricultural trade database. According to the CSO external trade data, Mauritius still benefits from a f.o.b export unit price of about 40 Mauritian rupees per kg, which is much higher (see section on exports and table 7).

[24] The UR-bound tariff rate for banana is 82 per cent.

[25] The UR-bound tariff rate for fresh or chilled poultry is 122 per cent.

[26] World imports for that year were estimated at 5.9 million tonnes for a total bill of US$ 6 billion, of which EU exports accounted for 1.69 million tonnes worth US$ 2.23 billion (FAO Agricultural Trade Database).

[27] The SADC Trade Protocol provides for "sensitive products" including chicken, to be liberalized between 2008 and 2012.

[28] South Africa exported 6,393 tonnes of chicken meat for a total value of US$ 6,668,000 (FAO Agricultural Trade Database). It also exported 9,616 tonnes of other poultry meat.

This amounts to a price difference (producer price in Mauritius less South Africa f.o.b export price) of about 10 Mauritian rupees/kg, or more than US$ 300/ tonne, which is largely enough to cover freight costs and eliminate, in case of free trade, the Mauritian industry. Thus the caution expressed by the MCA is worth serious consideration. The impact of free trade with the EU (following an Economic Partnership Agreement) would be much less damaging for the Mauritian poultry industry, since the average costs appear similar between the EU producers and the Mauritian ones.

Tea

Tea is the last product on our Mauritian "domestic list". It used to be an interesting case of agricultural diversification in Mauritius, and was considered a relative success, even if the Tea Board Authority, a State trading enterprise (STE), which owned 70 per cent of the area under tea, had a poor record of managing the sector (English, 2002: 4). Production reached its peak with a total volume of 30,000 tonnes in the early 1990s (mainly green leaf harvested on 3,000 ha), while the total export volume rose to more than 4,000 tonnes, earning a substantial export revenue (e.g. 103 million Mauritian rupees in 1993, from black tea exports — see table 7). But it experienced a crisis during the 1990s, with production falling to only 6,400 tonnes in 2000 (on 670 ha), whereas exports were less than 40 tonnes, valued at 6 million Mauritian rupees (going mainly to France and Reunion Island).[29] By the end of 1998, 2,374 ha of tea had been uprooted, most of which was converted to sugar cane and the remainder allocated to horticultural products.[30] The remaining production almost exclusively caters to the local market, which is quite protected since a permit, issued by the Tea Board, is necessary to import.[31] Imports by manufacturers are thus permitted for blending purposes, while private traders may import those types of teas that are not grown in Mauritius. Furthermore a nominal tariff of 40 per cent is normally applied, somewhat reduced for little packs of black tea to a lower effective rate (after exemptions, see table 4). Very small volumes of green tea (4 tonnes) and black tea (8 tonnes) were still imported in 2001 (table 4). During our field mission, some experts affirmed that local production had suffered from low competitiveness vis-à-vis foreign competitors, notably Kenyan ones, but this is not so evident considering available figures.[32]

b) Seychelles[33]

The Republic of Seychelles is an archipelago of 116 islands, spread over an exclusive economic zone (EEZ) of 1.3 million sq km. against a total land area of 475.65 sq km., of which 47 per cent is protected as a nature reserve. Mahe, the largest island with 90 per cent of the population, is only 29.4 km long and 12.4 km wide at the widest point. The GNI per capita in 2000 was US$ 7,310 and the GDP per capita at PPP$ stood at 12,508 (in 1998). The main recent economic problem of Seychelles has been a chronic shortage of foreign exchange resulting from a large balance of payments deficit caused mainly by public overspending (that resulting in a gap of almost 20 per cent of GDP in the late 1990s (Salmon, 2001). Seychelles is in the process of acceding to the WTO,[34] though it suffers from a clear lack of human and financial resources to master all the implications of accession[35] (the same applies to its regional trade negotiations within SADC and COMESA).[36] Some elements of its trade policy, including substantial non-tariff barriers,[37] also appear to be in conflict with WTO accession prerequisites[38] (or at least costly in terms of compliance with WTO rules).

[29] As tea exports plummeted to almost zero, they will not be treated in the section on exports.

[30] The Tea Board is now monitoring the conversion to sugar cane of lands formerly under tea, since the Government decided to withdraw from tea plantation.

[31] Mauritius Chamber of Commerce and Industry (MCCI), at: www.mcci.org/IT_imports.htm

[32] The average unit production price in Mauritius is 10 Mauritian rupees per kg (for green leaf tea, see table 1), and the Mombassa market price of tea, was less than US$ 1.5 in the mid-1990s, and rose to US$ 2.4 in 2001 (UNCTAD, InfoComm). These figures do not clearly confirm the assertion of low competitiveness.

[33] Except otherwise cited, all information for Seychelles in the report is taken from Moustache (2002).

[34] The WTO Working party on the accession of Seychelles was established on 11 July 1995.

[35] Notably the TRIPS Agreement.

[36] Seychelles is a member of both COMESA and SADC, but is not yet applying their trade protocols.

[37] Among others a State Monopoly Trading Enterprise (see below) import permits, at the discretion of the government, some quantitative restriction of imports (which are non-binding because of the severity of the foreign exchange shortage).

[38] Hence the WTO Working Party on Seychelles' accession stopped its meetings after 1997, at least to 2000.

Fishing and tourism are the two principal industries, while agriculture is much less significant, contributing only 3.8 per cent to GDP in 1999.[39] With the two principal sectors being outward oriented, it might be surprising that this country could suffer from a foreign exchange shortage. However, this is because the smaller the country (as Seychelles is), the more dependent it is on imports for domestic consumption (especially at an upper income level). A large part of the consumption basket is simply not produced locally, for reasons of scale economy.

Following its social welfare policy, as enshrined in the Constitution, the Government is strictly regulating land allocation through State committees. Both privately owned plots and on State-leased land are under agriculture. Of the 2,900 ha of potential agricultural land only 600 ha are under arable agriculture, of which 200 ha are under intensive cultivation. The average farm size is between 0.5-2 ha and there are 520 farmers registered with the Ministry of Agriculture and Marine Resources (MAMR) (with an estimated 3,200 individuals working in agriculture), and no producer association or cooperative. The annual recurrent budget for the MAMR has been between 13.8 and 19.9 billion Seychelles rupees or US$ 2.5–3.6 billion,[40] which amounts to 2–2.7 per cent of the total budget.[41] The Seychelles Marketing Board (SMB) has the sole monopoly to import seven essential food items: rice, sugar, flour, cooking oil, fruit, vegetables and milk and dairy products, which it sells with a range defined by a retail price formula (i.e. c.i.f. price + trade tax + a 30 per cent mark-up). These seven products are imported with zero duty,[42] while imported meat, fish and other foodstuffs are charged an ad valorem rate of 25 per cent, 100 per cent and 0-25 per cent respectively (150 per cent for imported canned tuna). The SMB is also the sole producer of agro-industrial products such as juices, jams, milk and pickles, processing them from imported inputs, while some recent privates initiatives (a few homes and three small industrial units) have been launched that need technical and financial assistance. Under the Investment Promotion Act of 1994, which established the Seychelles International Trade Zone (SITZ), different tax concessions are granted to new investment projects in several sectors including agriculture, marine resources and manufacturing. Promoted sectors also benefit from preferential credit rates.

A new strategic plan for development of the agricultural and fisheries sector has been proposed for the 2000–2010 decade by the MAMR (MAMR, 2002), but has not yet been approved by the Government. It aims at rationalizing both production and public support in agriculture to achieve greater self-sufficiency in a range of products.[43] In 2000, local supply met 65 per cent of domestic demand for vegetables,[44] 40 per cent for fruit,[45] and 100 per cent for eggs. Statistics for production of the major common crops and imports are shown below. Meat production and import figures are shown in the next table; they indicate a good market share for local producers of poultry and, to a lesser extent, pork. On the other hand, 96 per cent of beef and 100 per cent of rice is supplied by imports.

Concerning fish and seafood,[46] the total small-scale, local fish catch fluctuated between 3,300 and 4,800 tonnes during the period 1995–2000, while the semi-industrial fish catch boomed, from 26 tonnes to 457 tonnes in 1999 but fell to only 390 tonnes in 2000. The catch of prawns also followed a strong upward trend, from 196 tonnes in 1995 tonnes to 425 tonnes in 2000, which shows a high level of self-sufficiency. The high volumes of fish imports over the past five years (78,000 tonnes in 2000 alone) consisted almost entirely of frozen tuna destined for the canning factory.

Seychelles is often classified as a NFIDC. The food import bill has more than doubled during the 1990s, from US$ 34 million in 1990 to US$ 76 million in 2000 (World Bank, *Countries at a Glance*

[39] In 1999, the GDP was estimated at US$ 610 million (World bank, Country at a Glance tables); hence agricultural value added must have been about US$ 23 million.

[40] With an exchange rate of 5.5 Seychelles rupees = US$ 1. The Government's recurrent budget for agriculture is allocated mainly for personnel emoluments.

[41] An amount of about US$ 20 million was allocated for public investment in agricultural infrastructure during the 1990s, financed by both multilateral agencies and development banks (mostly the Asian Development Bank (ADB), which loaned US$ 8 million).

[42] Following the Trades Tax Regulation (1996).

[43] The 1990s saw significant encroachment by housing and tourism development, and the 2000–2010 plan suggests the formulation of legislation to protect all agricultural land.

[44] The 2000 production volume for vegetables was about 3,200 tonnes

[45] The 2000 production volume for fruits was about 800 tonnes

[46] Excluding tuna canning; this is treated in the section on exports.

tables). At the same time, the net gains from canned tuna exports were about US$ 68 million in 2000, an exceptionally good year (see section on exports).[47] Despite these figures, Seychelles qualifies as a NFIDCs. As in many SIDSs, the Government of the Seychelles is also conscious of the necessity to protect its beautiful natural resources, and is therefore pursuing the sustainable development concept; it would probably be favourable towards negotiations on non-trade concerns as a member of the WTO.

Supply of selected common crops in Seychelles (tonnes), 2000

Crop	Banana	Cucumber	Tomato	Chinese cabbage	Pineapple	Eggplant	Sweet melon
Local production (P)	611	602	711	376	42	137	10
Imports (M)	3	1	155	0.4	151	0.7	35
Ratio P/M (%)	99.0	99.8	82.0	99.9	21.7	99.5	22

Source : MAMR, 2000.

Seychelles: Local meat production (P) (1996-2000) and imports (M) (in 2000) (tonnes)

	1996	1997	1998	1999	2000	Imports 2000	Ratio P/M, 2000 (%)
Chicken	1 056	1 187	1 127	1 157	1 276	285	82
Pork	358	318	397	427	574	435	57
Beef	24	12	13	23	25	537	4

Source : MAMR, 2000.

c) The Comoros[48]

The Comoros is made up of three separate small islands : Grande Comoro (1 148 sq km.), Anjouan (424 sq km.) and Moheli (290 sq km.), with a total of 530,000 inhabitants. With a GNI per capita of US$ 380 in 2000 (the GDP per capita at PPP stood at US$ 1,588), it belongs to the LDC category. Unlike the Seychelles, and to a lesser extent Mauritius, in the Comoros the agricultural sector still plays the most important role in both production; it contributed to 40 per cent of GDP, estimated at US$ 210 million in 2000 (World Bank, Countries at a Glance tables) and to 70 per cent of employment, and it is the only exporting sector. However, the average annual growth rate of agriculture has been declining, from 4 per cent in the 1980s to 1.6 per cent in the 1990s, whereas the average growth rate of the population was 2.5 per cent during the 1994-2000 period (World Bank, *Countries at a Glance* tables). The economy is suffering considerably due to the underdevelopment of most of its sectors: its export/ import ratio is less than 10 per cent, as imports are necessary despite the very low level of income. In particular production is hampered by an inadequate infrastructure[49] and credit, and a low level of education (with one half of the adult population illiterate). the Comoros is not yet a member of the WTO, although the Government has expressed some interest, in principle, of accession.

The agricultural sector consists of subsistence/micro farming, with a high level of domestic consumption and farming for export (see the section on exports for the latter). Only export statistics are known precisely (available from the customs office). However, according to some estimates, the main agricultural production consists of food crops (47 per cent of total), fisheries (21 per cent), products for export (13

[47] This does not take into account the expenditure on the maintenance of foreign vessels and fees paid in the Seychelles.
[48] Except otherwise cited, information for Comoros is taken from IFRC (2000), and figures are from the Direction des Statistiques (of the CSO).
[49] For example, business activities are hampered by many electricity cuts, technical problems in main ports, etc.

per cent), forestry (11 per cent) and livestock rearing (8 per cent). Production for the local market includes coconut (75 tonnes in 2001), banana (60 tonnes), paddy (2,900 tonnes) and maize (3,800 tonnes) (Direction de la Statistique, various). Fish imports are negligible (about 200 tonnes) and there is near self-sufficiency in fish products, with an annual catch of 13,500 tonnes.[50] The Comoros has signed some fishing agreements with foreign vessels to let them operate in the Comorian EEZ, but since there is no local transhipment, it is difficult to evaluate these industrial catches. Meat is consumed in very small quantities, as the livestock rearing industry faces many difficulties (hence dependence on imports, particularly chicken, is very high). In general, the agricultural sector in the Comoros has some unexploited potential, notably good naturally fertile volcanic lands,[51] and a favourable climate, which allows for continuous harvesting. But it faces many constraints, including (a) inadequate land rights, (b) high inter-island transport and communication costs, and (c) insularity and isolation from main international cargo maritime routes. More precisely, local households often prefer to consume imported rice, which is less expensive than such locally produced traditional food crops as bananas, sweet potatoes and cassava (see below). Hence one of the main challenge for Comorian agriculture is to increase the competitiveness of its products at the consumer level, notably through an intensification of production and a rationalization of the distribution channels. This has been one of the objectives of many agricultural development projects and plans,[52] among them the more recent EU project for staple food development and seed support (DECVAS—Développement des cultures vivières et appui semancier) and the World Bank's pilot programme for agricultural services. The former set some new price objectives for local food crops, as shown in the following table. From this, we can observe that the present local price of the main food crops is about 200 Comorian francs (CF) (or 0.4 euros) per kg, compared with the average price of imported rice, which was 156 Comorian francs in 1999 (to which is added a customs duty of 50 Comorian francs – a tariff equivalent of 33 per cent, see table below).

Present price and objectives for selected food crops: the Comoros, 2000

Product	Present price (CF per kg)	Objective	Variation (%)
Bananas	225	150	-33
Cassava	175	140	-20
Potatoes	200	175	-13
Taro	250	200	-20
Igname			-10

Source: Assoumani, 2000.
NB: In January 1999, 1 Comorian franc (CF) = 0.00198 euros.

Though imports of meat, fish and dairy products have been declining in recent years, the food import bill has been rising, from US$ 10 million in 1990 to US$ 23 million in 2000 (World Bank, *Countries at a Glance* tables), of which rice accounted for more than US$ 9 million (4 721 million Comorian francs). The import regime has been liberalized, with the rationalization of tariffs and the elimination of all non-tariff barriers (NTBs), except for rice. Vegetables and roots face a 40 per cent ad valorem duty (IOC, at: http://www.coi-info.org). Imports of fish and basic rice face a customs duty of 150 Comorian francs (or 0.3 euro) and 50 Comorian francs (0.1 euro) per kg respectively (IOC database). Basic rice is imported solely by the State-trading enterprise, ONICOR (about 30,000 tonnes a year), which, according to the Government, has a monopoly for reasons of security of supply and price stability. The low duty on rice (equivalent of 33 per cent ad valorem) is intended to maintain the local consumer price, but at the same time it may be hampering profitability for the local food crops sector, thus limiting its development and efforts towards self-sufficiency, as in many African countries (Mamaty, 2002; FAO, 2001a and 2001b).

[50] All from traditional boats (latest evaluation available from IFRC, 2000, Rapport Pêche). The yearly catches have been increasing thanks to the use of fish concentration devices (FCD), but of course this is also highly dependent on their maintenance.
[51] But irrigation potential is limited, with almost no possibility in Grande Comore (according to some studies done during the 1970s). The present irrigated area is only 85 ha.
[52] Such as the Nouvelle Politique Agricole (NPA) (the new agricultural policy), started in 1994.

Evolution of food selected food imports: the Comoros (1997–1998).

Imported products	Quantity (tonnes)			Value (million CF)		
	1997	1998	1999	1997	1998	1999
Rice	34 322.6	25 896	30 237	3947.3	3 184.1	4 721
Meat and fish	3 343.1	2 271.1	2 118	2 513.6	1 786.2	1 528
Dairy products	938.4	762.8	698	800.5	638.6	551

Source: Aboubacar Allaoui, in IFRC (2000).

II.2. Agricultural exports

a) Mauritius

The main agricultural export for Mauritius is sugar. We also discuss three other products, as examples for their relative success (anthurium, tuna), or fragility (pineapple); the failure with tea has been treated above.

Sugar

In Mauritius more than 70,000 ha are under sugar cane cultivation, representing nearly 90 per cent of the total arable land and almost 50 per cent of the total land area of the country. Almost the entire production is exported (depending on the annual production), mainly to European destinations[53] thanks to the Sugar Protocol. Another sugar trade preference is accorded by the United States (see below). The sugar industry is highly regulated, with the Mauritius Sugar Syndicate (MSS), a private (planter-owned) institution having a monopoly, by law, over both the external and internal trade in sugar. The Mauritius Sugar Authority (MSA) is a parastatal body in charge of managing the public policy aspects, such as subsidizing field extension services to planters, investment in mechanization, bulk storage and handling facilities. The MSA operations are financed by a levy ("global cess") on sugar export earnings, paid back by the MSS (for the 2000/01 crop this amounted to 475 Mauritian rupees).

Under the Sugar Protocol (which is independent of the Lomé Convention and its successor, the Cotonou Agreement), the EU undertakes for an indefinite period to purchase and import, on a duty-free basis, and at a guaranteed price, specific quantities of cane sugar originating in ACP countries, including Mauritius which enjoys an annual quota of 487,200 tonnes per year. This is considered WTO-compatible in terms of Article XIII of GATT 1994 and the EU market commitments under Article 4 of the AoA,[54] but is likely to be increasingly challenged (e.g. the ongoing disputes between the EU on the one hand, and Brazil and Australia on the other). Besides, the tariffication of sugar in the EU has been devised to largely match the difference between the internal and external prices (c.i.f.) even in the final bound rate of 2004 (UNCTAD, 1996).[55] The Special Preferential Sugar (SPS) Agreement[56] provided an additional initial quota of 85,000 tonnes, paid at 85 per cent of the EU intervention price, but the 2001/02 SPS quota for Mauritius was only 38,500 tonnes. The Sugar Protocol and the SPS Agreement are today an

[53] More specifically to Great Britain, which accounted for more than 80 per cent of total sugar exports in 2001 (see table 9), the largest proportion of which was due for delivery to Tate and Lyle under a five-year rolling contract signed by the MSS.

[54] The EU has made a market access commitment of 1.3 million tonnes, which corresponds to the quota already provided to ACP suppliers in the Protocol.

[55] The final bound rates for raw and white sugar are 339 ECU/tonne and 419 ECU/tonne respectively or ad valorem equivalent of 287 per cent and 256 per cent (source: UNCTAD, 1996, annexes VI and VII).

[56] Signed in July 1995 (with a duration of 6 years) in order to cope with the EU enlargement to include Finland and Portugal, it was renewed in 2001 with specific provisions to take account of the implications of EU sugar imports arising from the Everything-But-Arms (EBA) Initiative. This means (because the growing LDC quota in the EU sugar regime is deducted from the annual total) that the quota for Mauritius under the SPS Agreement will be progressively reduced before 2009, when all LDC sugar is due to enter the EU duty- and quota-free.

integral part of the EU sugar regime. In the EU, reform of the Common Agricultural Policy (CAP) implies a further reduction of support prices towards world market levels with compensation in the form of direct income aid to European farmers[57] No mention has been made so far about sugar in the Agenda 2000 document,[58] which, in a way, could be seen as recognition of the special status of sugar. The EU sugar regime will be comprehensively reviewed in early 2003. But since 1986 the EU price restrictive policy (e.g. nominal freeze) has already implied a serious decline in real prices paid to producers (of around 45 per cent in Mauritius, according to MSS, 2000).

Mauritius also benefits from United States sugar policy, with an annual tariff rate quota (TRQ) of 15,000–25,000, tonnes at a high price which is 15–20 per cent less than the EU one (see graph), but the difference narrows when the euro depreciates. Reforms of the United States Farm Act in 1996 did not concern sugar, but the TRQs are threatened in the longer term with arrangements under the North American Free Trade Agreement (NAFTA), according to which Mexican sugar exports will enter the United States market duty- and quota-free from 2008.

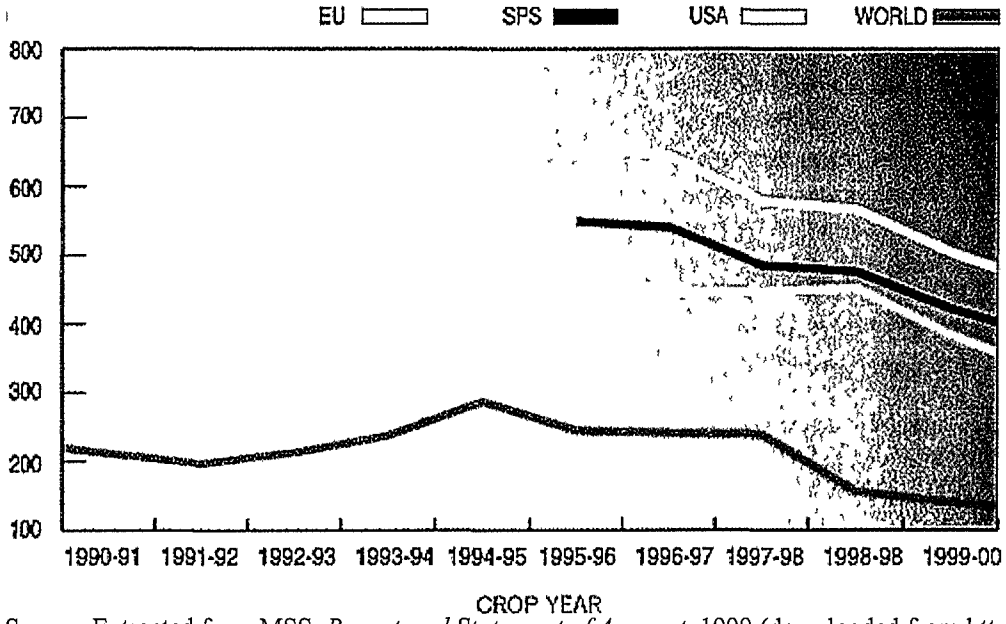
The price Mauritius received for its sugar in the 1990s was two to three times the world price, which represented a bonus of around than US$ 250 per tonne. For an export volume of say 550,000 tonnes per year, this preferential arrangement amounted to a bonus of almost US$ 140 million a year,[59] or 5 per cent of the country's 1993 GDP.[60] Thus the role of sugar trade preferences in the economic take-off of Mauritius cannot be overlooked, even without considering the excellent external (multifunctional) effects it also had (more on this below).

Price of sugar	EU price for ACP sugar	United States price (New York no.14 domestic)	World price (New York spot price)
2000/01	523.70 euros per tonne (22 cs/lb)*	$463 (21cs/lb)	$200–240 (9–11 cs/lb)

Source : MSS (2000)

* Using an exchange rate of 1.1 euros = US$ 1; one pound = 453 6 grammes (1 kg = 2.2 pounds)

AVERAGE COMPARATIVE PRICES FOR RAW SUGAR ($ FOB)



Source: Extracted from MSS, *Report and Statement of Account*, 1999 (downloaded from http://mss-website.intnet.mu)

[57] Which has to be decoupled in order to qualify for the "green box"

[58] Containing the EC's proposals in respect of CAP reform

[59] Borrell (1991) gives an estimate of US$ 193 million

[60] The 1993 GDP was estimated at US$ 2,780 million (World Bank, World Development Report, 1995) This bonus evaluation simply omits the fact that, without the Protocol, Mauritian sugar might not be competitive enough in the world market to enable sugar exports

The table below also shows that the internal sales prices are maintained at a fairly low level,[61] but the ex-syndicate price paid to producers is rather high, representing more than the EU price for the 2000/01 crop. Indeed, the average unit cost of production is still very high in Mauritius, around 18 cs/lb, or more than 80 per cent of the EU/ACP-guaranteed price of 2000/01. That leads us to consider the prospects for the sugar sector in Mauritius.

Prices of sugar sold by the MSS (export and local market) and paid to producers (ex-syndicate price, Mauritian rupees/kg)

	EU price (Sugar Protocol)	United States price	Average export unit price (Mau Rs/kg)	Average. local market	Ex-syndicate price
1999/00	14.28	16.18	14.27	5.27	12.37
2000/01	13.25	15.94	13.16	5.41	11.57

Source: MSS (2000).
NB: Since 1995, local sales prices have been fixed by government notice at Mau Rs. 2.21 (raw sugar to a wholesaler), Mau Rs 3.71 (white sugar to a wholesaler), and Mau Rs.8.3 (raw or white sugar for industrial usage).

The future of sugar in Mauritius is clearly dependent both on external and internal issues. On the external side, it is highly dependent on the EC sugar regime-EU intervention price. Thus it is relevant to take a look at the export subsidies aspect of the negotiations on agriculture (discussed below in section III). There have been several analyses of the possible impact of liberalization of the world sugar market. Borrell (1999) presents some interesting elements similar to other simulation results. In the world market for sugar, nominal producer subsidies amount to US$ 18.2 billion a year. Because of strong protection measures, efficient producers simply cannot compete and displace less efficient regions. According to some model simulations used to evaluate the impact of a complete liberalization of the world market by 2008 (without taking into account rationalization efforts by competitors), the world price should increase by 38 per cent, while western Europe and United States prices should fall by 40 and 25 per cent respectively. Of course, this scenario envisages a complete redistribution of world sugar market shares. It estimates a world welfare gain of US$ 4.7 billion per year, but there are of course winners and losers, and this is not good news for the so-called "small preferential exporters", including Mauritius. These countries are described as high-cost producers that use expensive resources to produce sugar and qualify for export subsidies.[62] To calculate the net loss these small preferential exporters will face with the removal of export subsidies in the EU and the United States (under free trade), it is proposed to net out the rise in world prices and costs of production. With "reasonable assumptions",[63] Borrell concludes that the welfare loss for Mauritius under free trade will not be the initial protocol bonus (of US$ 193 million), but rather 56 per cent of it, that is US$ 109 million, with

[61] Sugar imports are normally banned in Mauritius, but are allowed in some years to compensate for unusually poor harvests (e.g. in drought years) and to help meet export commitments. This means that sometimes all local production is exported and the local consumption is then satisfied from imports. In this case imports enter duty free and are supplied after a tender procedure that ensures the lowest prices for a given quality.

[62] It is asserted that the subsidy received creates a tendency to raise costs of production in the subsidized country. In Mauritius for example, Borrell affirms that export subsidies have been used to sustain special conditions for workers, special land market regulations and other arrangements that lock resources into the sugar industry and raise costs. Much of the benefits of export subsidies are thus said to be absorbed in inefficient resource use, and the costs of the resources must be netted out. Social measures are considered here as "inefficient use" (despite their strong contribution to the excellent socio-political fabric of Mauritius, and, by extension, to creating conditions of further growth and take-off in the other sectors of the economy). In fact this methodology implicitly hypothesizes a full employment of resources, which is debatable in terms of labour, for example, (full employment in Mauritius has been limited for a couple of years, and since the end of the 1990s unemployment rose rapidly, reaching about 10 per cent in 2002, which confirms the predictions of the SIDS labour market theory, see Salmon, 1997).

[63] That is a price elasticity of supply and demand equal to 1, an initial EU price of US$ 566/tonne, and a domestic price of US$ 566/per tonne; note that the latter does not fit the Mauritian situation, where the internal price of sugar is close to world market prices and hence will rise unless the State offers consumer subsidies, which is not yet foreseeable. In this case, some reduction of welfare for Mauritian consumers of sugar should be taken into account when assessing the net impact.

a free world price of US$ 350 (or about 16 cs/lb, instead of its present level of US$ 254 in the base scenario). In this case, production in Mauritius would decrease from 625 million tonnes to 386 million tonnes. The present cost of production in Mauritius (18 cs/lb or US$ 396) is higher than this simulated world price, which means that some internal adjustment has to be realized before Borrell's estimation makes sense (see below, concerning the internal aspects). World exports will also expand to emerging markets in developing countries, where sugar consumption should follow a strong upward trend (with their rising incomes). It will be important for Mauritius producers to get a share in these new markets.

On the internal side, in 2001 the Ministry of Agriculture introduced a four-year Sugar Sector Strategic Plan, prepared by the MSA that aimed at restructuring and rationalizing the sugar industry. That same year its recommendations were enacted to become the Sugar Industry Efficiency Act (SIE). The SIE stipulates that the production volume should be maintained at 620,000 tonnes in order to fulfil export commitments; the cost of production should be reduced from 18 c/lb to 14 c/lb in the medium term, and to a further 10-12 c/lb in the longer term (2006 to 2008). Among the many means for achieving this is a rationalization of mill operations through factory closures (from the existing 14 to, ideally, 7 or 8).[64] The plan also emphasizes the preparation of land under sugar for mechanization[65] and irrigation.[66] A substantial reduction of the labour force is envisaged through mechanization and the regrouping and modernization of small planters. This labour force adjustment should be achieved through a socially feasible voluntary retirement scheme (VRS). The SIE combines all these objectives, together with two others: democratization of land ownership and agricultural diversification, in a complex legal device.[67] Provisions for the Modernization and Agricultural Diversification Reserve (MADR) are included in sub-part C of the part III of the Act, and include a mandatory aggregate amount of 175 million Mauritian rupees to be credited by sugar producers to the MADR every year until the 2003 crop year. Here agricultural diversification is sought to be achieved through several measures: 10 per cent of the MADR shall be used solely for agricultural diversification;[68] and some minimal targets set for sugar producers to devote some harvested area to non-sugar products, and to interline and rotational crops.[69]

The success of this strategic plan may largely depend on the effectiveness of the VRS implementation, since labour costs already make up half of the total sugar production costs, and are supposed to rise further with growth in the income level of the country. As stated in a study by the Institute of Development Studies (IDS) (2001):

> *"...the merit of the plan is that it is relevant to prospective change in the EU market over both the short and longer term. It aims to cut production costs to a certain extent in the short term, thereby ensuring the continued viability of exports under the Protocol even at lower EU prices (without facing a cost of production falling under the protocol price) and to make more radical change in the long term (thus positioning the country to take advantage of EU market opening in the future (...) In the longer term (and in case of success), the Protocol would be less crucial for Mauritius than it is today..."*

[64] The 1997 blueprint on centralization of sugar mill operations remains in force.

[65] That is, mechanization of field operations, such as cane loading, and to a lesser extent (because of physical constraints on land, in spite of de-rocking activities) cane harvesting. The ultimate objective is to achieve mechanization on 60,000 ha.

[66] Half of sugar production in Mauritius falls within rain deficient but potentially irrigable areas. Only half of that latter area (i.e. 17,000 ha) is already under irrigation and another 6,000 ha are planned to follow thanks to the Midlands Dam Project. By 2010 it is hoped that 32,000 ha will be provided with water-efficient systems. All the irrigation techniques and infrastructure will also be progressively modernized.

[67] The latter notably include numerous specific provisions which reinforce the role of the Sugar Investment Trust (created in the 1988 SIE Act) in land conversion and transfer of ownership, and also in mergers and take-overs of sugar cane companies or bodies. It is important to note that excluding these specific provisions, no transformation of agricultural land to non-agricultural use is legally accepted, except (a) with prior authority of the Minister and (b) with land conversion (high) tax paid.

[68] in the Act (fifth schedule) modernization is defined as several operations such as investment in bagasse electricity production, in factory modernization, in irrigation devices, in land preparation, diversification within sugar, etc. Agricultural diversification (seventh schedule) is defined inter alia as the acquisition or construction of infrastructure for the storage and conditioning of fruit and vegetables, for aquaculture, for production of vanilla, spices and medicinal plants, the setting up of an orchard to produce specified fruits and the acquisition of know how and techniques related to items listed.

[69] Not less than 200 ha under permanent gardens, not less than 510 ha under orchards bearing specified fruits, not less than 50% of the aggregate area of land use for the cultivation in interline & rotational land of crops other than sugar cane. The latter minimum aggregate area of land shall not be less than the area used in the year 1998. Permanent gardens is defined in the ninth schedule as a plot of land devoted to at least eight years to products such as onion, tomato, cut flowers, and high value added crops, seeds, vanilla, and so on. Specified fruits in the tenth schedule include inter alia banana and pineapples.

In viewing the multifunctional role of sugar in Mauritius, its production should be seen as a part of a cluster rather than as a simple pillar of the country's development, as it also serves strong non-trade purposes. First of all, as its benefits are rather evenly distributed among the population and subregions of the island, sugar production has largely helped to alleviate poverty and to prevent massive internal migration to urban cities. It has thus contributed significantly to the harmonious socio-political condition of the nation. This has been all the more important since the population density is so high (600 inhabitants per sq km). It has been said (Humbert, undated) that, sugar activity and benefits have percolated to the very base of the society. This is reinforced by the fact that it has led to very good rural infrastructure development, which has permitted EPZ firms — key to Mauritius' success — to locate almost anywhere in the island.[70] Furthermore, in a small island with a limited area, it has prevented land speculation and rapidly rising land prices, as land under sugar is highly regulated and covers 40 per cent of the total area. From the ecological aspect, sugar cane harvesting clearly contributes to land conservation in an island potentially exposed to land erosion; it also permits reasonable water resource management. It requires a low use of pesticides in comparison to other food crops. Sugar cane is also highly resistant to cyclones and droughts. Another good external effect of sugar is the by-production of molasses and above all bagasse, which is used for the production of green energy and will soon cover 40 per cent of the energy needs of the country, thus nearly halving its energy import bill. This is particularly important in a SIDS like Mauritius because these countries usually face trade deficits; moreover, their insularity limits, or even deters, many interconnectivity links such as the energy ones (e.g. electricity or gas imports are not possible).

Other important exports

We briefly describe here some other agricultural exports of Mauritius, which are much less important in value than sugar, and among which the sole fairly important and growing sub-sector is tuna processing. In 2001, it represented 63 per cent of all non-sugar food exports (table 8).

In addition to non-processed (fresh, chilled or frozen) fish and seafood products for an amount of 15-20 million Mauritian rupees a year (representing several tens of tonnes), the fisheries industry's interests in Mauritius concern canned tuna,[71] the exports of which increased rapidly in the 1990s. Revenue from tuna rose rapidly, from less than 300 million Mauritian rupees at the beginning of the decade to nearly 1 billion Mauritian rupees by its end, and up to 1.8 billion Mauritian rupees in 2001, which represented more than 16 per cent of total food exports and 4 per cent of total domestic exports (see table 8). More than 26,000 tonnes were exported in 2001, nearly 90 per cent of which went to the United Kingdom. As for other ACP exporting countries, Mauritius canned tuna enters the EC duty- and quota-free, hence benefiting from a preferential margin of 24 per cent per cent over Asian competitors. Given an export unit price of 70 Mauritian rupees, this margin was considered decisive for Mauritian exports in 2001.[72] One of the current problems faced by tuna processors is the paucity of tuna supplies, which have not been easy to secure during the past few years. In particular, the question of rules of origin (in which waters the fish have been caught) can hamper the increase of exports; very recently, it the EC accepted a "15% value tolerance on canned tuna exports to the EU market" for ACP suppliers, which means that Mauritian exports to the EU will be authorized to include a maximum percentage of 15 per cent of tuna not caught in Mauritian seas.[73]

The second non-sugar agricultural export of Mauritius is **cut flowers**. With an annual average export volume of about 500 tonnes during the 1990s, Mauritius is the world's second largest exporter of anthurium cut flowers after the Netherlands, with an annual export revenue of about 130 million Mauritian rupees (table 7). But strong competition is putting downward pressure on prices. Again ACP suppliers benefit from a preferential margin of 7–12 per cent[74] in the EU market, but this does not seem to be

[70] 55% of EPZ employment is located in rural areas.

[71] From tuna catches by foreign boats (under licence and paying royalties).

[72] For the sake of comparison, in 1999 Thailand's pelagic canned products were exported for an average price of US$ 2 (or 60 Mauritian rupees) per kg, with an export volume of 327,098 tonnes (FAO fisheries database).

[73] See Le Mauricien (local newspaper) of July 3, 2002.

[74] Depending on competitor countries and calendar year (IDS, 2001: 114).

significant as the EU is not the main destination of exports (table 9); the major market is Japan (which accounts for 41 per cent of the total). Export competitiveness is hampered by the high cost of freight. The future of this industry is viewed with pessimism unless new varieties are found (IDS, 2001).

We have already analysed **pineapple** in the earlier section on domestic interests. Its export performance was very limited during the 1990s, despite a small rise to a range of 400–700 tonnes in volume exported at the end of the decade. Hence the export revenue of pineapple rose from a few million Mauritian rupees to between 11 and 25 million Mauritian rupees. Almost all the exports go to the EU, of which France is the main market, accounting for over 80 per cent of the total. In 2001, ACP suppliers benefited from preferential margins of 4.3 per cent and 5.8 percent over South African and Thai competitors respectively. Even though this margin has been lowered, it is still useful, since the local average unit production price is about 15 Mauritian rupees per kg, equivalent to the United States' FOB import price and inferior to the EU FOB import price (15 and 21 Mauritian rupees per kg respectively, see the paragraph on domestic production). However, freight costs are high — about 42 Mauritian rupees per kg. Without government subsidies for transport costs of pineapple (reduced lately from 50 per cent to 25 per cent of the total freight cost, see section I), this would lead to a c.i.f. export price of at least 67 Mauritian rupees (more than US$ 2), which would not be sufficiently competitive.

b) Seychelles

Seychelles' main export is canned tuna,[75] of which total exports rose from 6,921 tonnes in 1995, valued 88 million Seychelles rupees, to 41,490 tonnes in 2000 for a total value of 606 million Seychelles rupees (more than US$ 100 million) (MAMR, 2000). In 2000, canned tuna represented 90 per cent of marine product exports, the rest being fresh and frozen fish and prawns. Marine exports are geared mainly (94 per cent in 2000) towards the EU, and they represented altogether 95–97 per cent of total exports in the 1995–2000 period.

At first glance, the net foreign exchange earnings from the fisheries sector should be much less, taking account the necessity to import frozen tuna to complement the "national" catch (mostly by foreign vessels in Seychelles waters).[76] The frozen tuna import bill in 2000 was about 233 million Seychelles rupees (i.e. one third of the gross export revenue). But it should be pointed out that the industrial tuna fish activity implies also two other sources of foreign exchange revenue. The first one consists of foreign vessels' expenditure in Port Victoria, and the second is the payment of licences for access to the Seychelles EEZ.[77] If the import component of the former is taken into account, the net revenue of both sources amounted to 170 million Seychelles rupees in 2000. Hence altogether, the total net revenue of the Seychelles fisheries sector was still about 540 million Seychelles rupees in 2000, or almost US$ 100 million.

This export activity is said to depend on the preferential margin of 24 per cent in the EU market. As an ACP supplier, the Seychelles benefits from duty-free access to the EU market for fish and canned tuna (see above, on Mauritius). The average export unit price of canned tuna was 14.6 Seychelles rupees in 2000, or US$ 2.6, which is slightly higher than the Mauritian price.[78]

c) The Comoros

Exports in the Comoros are concentrated exclusively on agricultural products, and principally on vanilla, cloves and ylang. Their exports amounted to 3,063 million Comorian francs in 1999 (or US$ 6 million), representing 95 per cent of total exports. Vanilla is the most important of these exports (60 per cent of the total), although its international price has been fluctuating considerably in the 1990s. The price paid

[75] All statistical information in this paragraph on Seychelles fisheries is taken from MAMR, 2000.
[76] In 1999-2000, "national" catch in this sense was about 30 000 tonnes, whereas frozen tuna imports rose to 61,000 tonnes in 1999 and to 79,000 tonnes in 2000.
[77] Total licence fees collected in 2000 amounted to 24.6 million Seychelles rupees, down from 34.7 million Seychelles rupees in 1999.
[78] See above: 70 Comorian rupees, or US$ 2.3.

to producers was rather low (see table below), leaving all the benefits to private local dealers and to the Government (through export taxes). In 2002, the Government removed export taxes and decided to set a guaranteed floor price for producers of 5,500 Comorian francs; in addition, the entire industry has been reorganized between three groups (those producing, preparing and exporting).[79] The main export market is the EU, as the Asian and American ones are very costly to access (since in any case exports have to be sent first to Europe, which renders other destinations very expensive). The volume of vanilla exports has been increasing to 160-180 tonnes in typically good years. The Comoros' main competitor is neighbouring Madagascar, which exports much larger volumes (more than 600 tonnes), but its product is reputed to be of a lower quality. The export volumes of cloves were much less stable during the 1990s (see table below).

The recent period (1999–2001) has been one of serious political instability and crisis, with several coups, and Anjouan Island wanting to separate from the Islamic Federal Republic of the Comoros.[80] A measure of stability has been restored since 2001, but since recent statistical information was not available to the author, this analysis stops at 1999.

Main agricultural products in the Comoros: Prices and exports, 1994–1999

Products	1994	1995	1996	1997	1998	1999
Vanilla						
- Producer floor price (green vanilla)	1 250	1 350	1 250	750	1 000	1 250
- FOB export price (dry vanilla)	21 179	15 085	11 325	6 819	8 010	9 933
- Exports by value (million CF)	2 767	2 320	1 035	1 119	1 058	1 788
- Exports by volume (tonnes)	131	154	91	164	132	180
Ylang						
- Producer floor price (flower)	110	110	75-100	75-100	100-12	150
- FOB export price (essence)	20 704	19 696	17 663	16 881	18 691	23 888
- Exports by value (million CF)	930	855	645	716	793	753
- Exports by volume (tonnes)	45	43	36	42	42	32
Gloves						
- Producer floor price	190	190	75-100	150-200	225-27	1 000-1 2
- FOB export price	190	278	255	227	258	1 326
- Exports by value (million CF)	522	134	210	89	268	522
- Exports by volume (tonnes)	2 749	481	824	394	1 037	397

Sources: OCOVA, Direction générale des douanes, extracted from Kassim, (2000).
NB: Producer price in Comorian francs (CF) per kg

[79] Personal communiation from the General Secretary of the Ministry of Production, during field mission.
[80] And to be "absorbed" by France, as the neighbouring Mayotte, an island of the Comorian archipelago. The French Government refused, and the crisis has been handled by the African Union (formerly known as the Organization of African Unity).

III. OPTIMAL WTO NEGOTIATIONS: MODALITIES AND SPECIAL PROPOSALS FOR SIDSS

The objective of this section is to evaluate how the presently proposed modalities for pursuing the agriculture negotiations through the WTO (see Shirotori, 2002a) will interact with the agricultural sector of our three Indian Ocean SIDSs under review, taking account the results of the analysis of their main agricultural interests (both for the domestic market and for exports) discussed in section II. Special attention is given to proposals on special and differential treatment (S&DT) for developing countries, and to possible additional and specific ones for small developing economies.[81] We first derived our recommendations directly from the main results observed in section II; then we compared them to the negotiating proposals of Mauritius and other SIDSs. The convergence was almost absolute, which somewhat confirmed our results. Hence we sometimes refer to these proposals and frequently use their formulations to express our conclusions.

So far only Mauritius is a member of the WTO, while Seychelles is a simple observer, and the Comoros is neither a member nor an observer. The legal context of the negotiations include paragraph 13 of the Doha Ministerial Declaration of November 2001, which calls for more operational S&DT provisions in order to meet developing countries' needs, including food security and rural development; non-trade concerns are also to be taken into account in the negotiations.[82] Lastly, the Marrakech Decision on the possible negative effects of the reform programme on LDCs and NFIDCs should be kept in mind, as it is included in the WTO Agreements, even if no operational mandatory measure has been taken so far (despite Article 16 of the AoA, which clearly calls for action by developed country members).

We now look separately at the three main dimensions of the agriculture negotiations: market access, domestic support and export subsidies, even though their implications are closely interlinked. One of the most cited examples of the possible linkage between them is that between tariff cuts and the cuts in domestic support and export subsidies, as proposed notably by CARICOM (Shirotori, 2002a). Another example, which could be of interest to SIDSs, is the following one: it is often said (WTO, 2002) that the debate over non-trade concerns leads to the question whether "green box" measures are sufficient or not to satisfy them. Some countries say they are not; for example, when rice fields are necessary to prevent soil erosion (the same applies to sugar in Mauritius, according to its officials), which leads to some *coupled* domestic support,[83] and to "amber box" measures, not green ones. But for countries with limited support budgets, this leads to proposals for additional or other protection means (i.e. of market access issues). It is more the developed countries that frequently focus on domestic support, when speaking about non-trade concerns.

A final example of interconnected issues, which also illustrates the complexity of the analysis, is the prospects for sugar in Mauritius (see elements discussed in section II). If the Sugar Sector Strategic Plan turns out to be a success, the worst outcome would be the strong reduction or elimination of EU subsidies, with no change concerning EU market access: this would imply a steep decline in the unit price received, with no possibility to compensate by expanding the Mauritian share in the EU market. But of course, if the plan does not succeed in sufficiently lowering the sugar production costs, then it would be preferable for Mauritius if access to the EU sugar market (through the Sugar Protocol) were left unchanged in the long run, or not being displaced by non-preferential exporters. We return to this issue in the next section.

[81] In paragraph 35 of the Doha Ministerial Declaration, the members "agree to a work programme, under the auspices of the General Council, to examine issues relating to the trade of small economies. The objective of this work is to frame responses to the trade-related issues identified for the fuller integration of small, vulnerable economies into the multilateral trading system, and not to create a sub-category of WTO Members. The General Council shall review the work programme and make recommendations for a
ction to the Fifth Session of the Ministerial Conference". This decision followed many initiatives and proposals from Mauritius and other small economies and SIDS (see Salmon, 2002).

[82] The exact formulation was : "We agree that special and differential treatment for developing countries shall be an integral part of all elements of the negotiations and shall be embodied in the schedules of concessions and commitments and as appropriate in the rules and disciplines to be negotiated, so as to be operationally effective and to enable developing countries to effectively take account of their development needs, including food security and rural development. We take note of the non-trade concerns reflected in the negotiating proposals submitted by Members and confirm that non-trade concerns will be taken into account in the negotiations as provided for in the Agreement on Agriculture".

[83] Income in exchange for rice field exploitation and hence production.

III.1 Market access

Like many other SIDSs in the Uruguay Round (UR) negotiations, Mauritius chose to bind its agricultural tariffs at a level exceeding 100 per cent (actually 122 per cent), and so is not required to offer tariff reductions during the implementation period. It thus has not reserved the right to apply the special safeguard (SSG) provision and similarly it opened no TRQ. In general the bound rates chosen by Mauritius appear to be sufficiently high (see section II) (i.e. the applied tariffs can be raised to bound ones in case of an import surge threatening local production. However, they may not always be effective if the international price of the product concerned is highly unstable or reaches very low levels (Mamaty, 2002).

Furthermore, there are some special cases where the import of agricultural products in Mauritius, such as potatoes, onions and sugar, are highly regulated, for example through the operations of a STE (or a private entity in the case of sugar), seasonal import bans and import licensing. These complex devices are not illegal *per se*; Article XVII of the GATT 1947 on STEs, and its 1994 Understanding, do not ban STEs, but rather affirm that any STE shall conduct its operations in a non-discriminatory way and with considerable transparency (through rigorous notification procedures).[84] As for the AoA, Article 4 (in its paragraph 2) on market access requires members to "not maintain, resort to or revert to any measures of the kind of which have been required to be converted into ordinary customs duties, except as otherwise provided for in Article 5 and Annex 5."[85] This was at the origin of the tariffication process. But as already mentioned, many developing countries, among them SIDSs, have preferred to avoid it and have chosen to bind their tariffs at high levels instead. In that case, what should become of their NTBs? We refer to Annex 5 of the AoA, which provides special treatment with respect to paragraph 2 of Article 4. The provisions of this paragraph shall not apply to any primary agricultural product in respect of which some listed conditions are applied.[86] It appear that these conditions are quite restrictive (with regard to these conditions, outlined in footnote 86, it is necessary to clarify what a "predominant staple in a traditional diet" means) and some efforts should be made to enlarge them, such as proposing a new S&DT measure for all developing countries or for SIDSs/small economies. Actually it could be argued that a STE, or a private single export body, is helpful for mitigating the negative impacts of the numerous natural constraints which beset SIDSs, among which the very small size of their operators (many smallholding farmers have to trade in commodities with big multinationals, for example). The presence of such a body could ensure that the quota rent goes to producers (e.g. MSS), instead of being captured by dealers (as has been the case since the partial liberalization of potato imports in Mauritius, see above).

The case of Seychelles is similar in some ways to that of Mauritius, with a more interventionist STE and some reasonable tariffs combined with quantitative import restrictions. It also allows for a much greater degree of potential distortion and discretion by the Government (see sub-section III.2 below). Hence if Seychelles were to become a member of the WTO, the national issues on the basis of which the modalities for the negotiations would be selected could well resemble those of Mauritius, particularly with regard to tariff preference issues and the export interests relating to canned tuna.

The Comorian case is simpler: it has already liberalized its market access conditions through structural adjustment programmes, so that tariffs are rather low and NTBs are almost non-existent. But its economic

[84] For the smallest SIDS, such as Seychelles, it is therefore the costs of WTO compliance rather than the existence of the STE per se which could become the main issue.

[85] This concerns NTBs such as quantitative import restrictions, discretionary import licensing, non-tariff measures maintained through STEs as listed in footnote 1 of the paragraph.

[86] These conditions are listed separately in sections A and B. The former concerns products (a) the imports of which comprised less than 3 per cent of corresponding domestic consumption in the base period 1986-88, (b) that received no export subsidies, (c) to which effective production-retrictive measures are applied. These three conditions (among the five listed) seem enough to disqualify sugar, potatoes and onions in Mauritius. Section B refers to agricultural products that are the "predominant staple" in the traditional diet of a developing country member. In order to qualify a product, the developing country should be given appropriate minimum market access opportunities both for that product (as specified in Section B, paragraph 7a of annex 5) and for other products under the AoA. Onions and potatoes could well qualify here, provided they can be rightly considered as predominant staples in Mauritius' traditional diet, which remains to be seen. Any negotiation on the question of whether there can be a continuation of this special treatment after the end of the implementation period shall be initiated and completed within this period itself (paragraph 8).

development will depend largely on the growth of its agriculture, which might well require a degree of freedom to pursue its own agricultural policy, including the use of non-WTO-compatible protection measures. In this context, owing to its LDC status, there should be as much flexibility as possible.

It thus appears from this analysis, that in the interests of the three countries concerned, it would be preferable that the modalities for tariff rate reductions be based on the UR final bound rates, using a UR formula which authorizes some lower EU tariff reductions for "preferential" products such as canned tuna.

Furthermore, it is in the interest of Mauritius to preserve the duty-free quota access for its sugar on the EU market provided by the Sugar Protocol. It should continue to defend this by evoking historical trade preferences, non-trade concerns (see section II, concerning the multifunctional role of sugar in Mauritius), the natural handicaps confronting SIDSs/small economies and the fact that it is a single-commodity producer,[87] at least until the unit cost of production of sugar in Mauritius has been reduced to its long-term competitive objective. This leads to the following principles or propositions:

- SIDSs should be provided with security of access for the one or two commodities they are able to produce on a commercial basis.
- Non-reciprocal preferential tariff rates provided to developing countries, in particular SIDSs, in the agricultural sector should be improved and bound under the framework of the AoA.
- Any review of the administration of TRQs should not have a negative impact, but rather a positive one, on terms and conditions of current market access for SIDSs or other single- commodity producers/small developing economies.[88]
- These modalities in the negotiations on market access should at the same time authorize as much flexibility as possible with regard to developing countries' (or SIDSs/small developing countries) commitments, in order to leave them some degrees of leeway in their future agricultural policy.
- In SIDSs, unlike OECD countries, local financial resources to support local production are often lacking (whatever the colour of the boxes used). Thus market access commitments by resource-poor countries and SIDSs should remain limited. Provision of a degree of flexibility in this respect would include some renewed agreement on NTBs (which presently play an important role in Mauritius and Seychelles, as described above). Alternatively SIDSs could be granted the possibility of excluding their very sensitive products from market access commitments and from a reduction in eventual domestic support and export subsidies.
- A new SSG for developing countries (or rather, specifically SIDSs) would also be welcome, to be used whenever necessary to protect their local producers.

III.2 Domestic support

Mauritius does not belong to the list of 30 countries that have included ("amber box") subsidies in their schedule (and hence are allowed to use them under the terms of agreed reduction commitments). Similar to all sub-Saharan Africa countries, except South Africa (Mamaty, 2002), Mauritius reported a zero-base total aggregate measurement of support (AMS) in its country schedule. And for such countries there is no possibility of introducing new non-exempt subsidies unless they fall under the *de minimis* category (or S&DT category, see Mamaty, 2002).

The AMS has not been calculated in Mauritius, but is believed to be inferior to the *de minimis* limit of 10 per cent for developing countries (see below). Major agricultural subsidies have been eliminated in

[87] See both Negotiating Proposals by Mauritius (WTO, 2000b) and SIDS (WTO, 2000a).
[88] The question of the price of sugar will be treated in the sub-section on export subsidies.

recent years. In fiscal year 2001/02, the Government spent 105 million Mauritian rupees in support to the agricultural sector, that was over an ex-ante budget of 80 million Mauritian rupees, of which 50 million Mauritian rupees were managed by the Ministry of Agriculture, and the remainder through credit subsidies from the (publicly owned) Development Bank of Mauritius. The latter are provided for different agricultural projects and purposes (e.g. irrigation, mechanization, land preparation and plantation, and chill rooms) in the sugar and non-sugar sector. This needs to be compared to a gross agricultural output of 9.7 billion Mauritian rupees in 2000 (at basic prices, probably inferior to the 2001 one): thus the internal public support probably amounts to around 1 per cent of output, which amply qualifies for the *de minimis* provision.

Furthermore, our analysis has not found any significant evidence of agricultural products in our Indian Ocean SIDSs that could be potentially harmed by domestic support of agriculture in OECD countries. Nor do these SIDSs give strong domestic support to their farmers. Hence they could well afford to push for a reduction of domestic support in the context of the current AoA negotiations in WTO. But at the same time, they need to think of their future needs, when it might become necessary for support to be given to new agricultural sub-sectors in order to develop or diversify their agriculture.

We can therefore conclude with caution that the best approach in terms of negotiating domestic support modalities, from the point of view of Mauritius, Seychelles and the Comoros, appears to be similar to that of the "African Group" which calls for substantial reduction of *actual* domestic support[89] by developed countries and more flexibility for developing countries to address food security or rural development issues, in case of future need. One possibility is to raise the *de minimis* level in a new S&DT approach, for all developing countries or for small developing economies, even if this does not yet seem necessary in our three country cases. Mamaty (2002) warns that, according to many observers, including the FAO (2001a), *"past experience in agricultural development suggests that it is achieved through a judicious mix of subsidies, pricing policies and border measures, as well as other institutional and infrastructural support measures (...) and that coupled measures have been more effective in rapidly rising agricultural productivity and production than decoupled ones."* The second best choice would be to follow the "cautious group" line of reduction of domestic support as agreed in the UR with maintenance (or a cautious extension) of the "green box", which could well serve (at least partially) non-trade concerns in the future. Finally, in the case of SIDSs, it would be wise to extend the "green box" list of measures to privately funded ones, as is the case in Mauritius with the operations of the MSS. Also, it would be helpful to relax the conditions for exceptional support in case of natural disasters, as the existing ones are quite restrictive and SIDSs may not always qualify (see our section I and footnote 6).

III.3 Export subsidies

Like all sub-Saharan African countries, except South Africa (Mamaty, 2002), Mauritius and many other SIDSs have not reported any use of agricultural export subsidies in their schedule. This means that they will not be allowed to use them in the future, except for those allowed in the following Agreements:

- Article 9.4 of the AoA exempts subsidies for marketing, processing and transport from prohibition in developing countries. This could be helpful in case of high transport costs, as experienced by SIDSs. Mauritius is using this exemption for several exports, mainly pineapple (see above). But the exemption given refers to the implementation period only (until 2004 for developing countries); it should thus be extended in time.
- Article 6.2 of the AoA exempts (from reduction commitments) both investment subsidies, and agricultural input subsidies for low-income and resource-poor

[89] Actual annual levels of AMS in OECD countries are far below annual current total AMS values provided in the country schedules. Despite the reduction commitments, actual domestic support in OECD countries remains high (Mamaty, 2002).

producers in developing country members. It should not be required to include these subsidies in the calculation of the AMS,

- More generally, under the Agreement on Subsidies and Countervailing Measures (ASCM) (Article 27.2a and annex VII), the prohibition of export subventions does not concern LDCs or countries with a GNI per capita below US$ 1000. Other developing countries benefit from an eight-year (1994–2002) waiver, and must comply with strict WTO conditions and procedures if they want to continue to provide export subsidies (Salmon, 2002).

Generally speaking, developing countries have been calling for the elimination of export subsidies from OECD countries, especially for those affecting products of interest to them. But, as mentioned above, in the domestic support case, our analysis did not find any significant evidence of agricultural activities in the Indian Ocean SIDSs that are potentially harmed by OECD countries' export subsidies in agriculture.[90] Nor do they themselves give significant export subsidies to their farmers. But there is a crucial difference here: sugar producers in Mauritius received huge export subsidies thanks to the combination of the Sugar Protocol and the EU sugar regime (see section II). Mauritian negotiators are therefore understandably defensive in the WTO discussions about export subsidies, and of course they will be in favour of any formula which permits a delay or reduction of EU internal sugar price adjustment[91] (provided the EC itself does not want to go faster and deeper in the adjustment, which is a reasonable assumption). This price has already declined significantly in real terms (see section II). Furthermore, if there were a rapid elimination of export subsidies in OECD countries, including the EU, Mauritius could well be hurt twice: first, it would lose the benefits of the high price of sugar, and secondly, as with other NFIDCs, its net food import bill would rise further. Mauritius thus has much to lose on the export subsidies issue. While waiting for the main elements of reform of the EU's sugar regime (in early 2003), it would be helpful to progress towards an agreement on a prolongation of the peace clause, due to end in 2003, at least as long as the agriculture reform process is under way.

Hence the optimal modalities for export subsidy negotiations would be, from the point of view of Mauritius and Seychelles, and perhaps also the Comoros,[92] those which avoid a rapid substantial reduction of export subsidies by OECD countries, and which allow more flexibility for their agricultural export policy, including the extension of Article 9.4, both in time and beyond the sole provisions of Article 9.1(d) and (e). These should go together with implementation of compensation measures for NFIDCs.

Finally, it should be reiterated that small islands should continue to base their requests in WTO negotiations on agriculture as well as in any other trade negotiations (including those on free trade agreements) on their specific needs as SIDSs or small economies, and try to obtain some specific rights (e.g. extension of the S&DT provided to LDCs in Article 15 of the AoA[93], as well as of Annex VII of the ASCM[94]) or any new rights, such as the right to implement a specifically designed internal tax regime, or the right to maintain non-reciprocity for strategic products in FTAs with developed countries (see Salmon, 2002).

---

[90] Except perhaps for the import of rice in the Comoros, which may displace local production of food crops, an issue that could be easily handled with a higher tariff or an adjustment of government policy (through the operations of ONICOR, the STE in charge of basic rice imports).

[91] Avoiding, for example, the down payment in the first year plus an accelerated process of reduction, as suggested by the Cairns Group with India, the Democratic Republic of the Congo and Poland (Shirotori, 2002a).

[92] But there is the risk of its continuing to hurt local production in the latter country, if it is not adequately protected.

[93] Which exempts LDCs from reduction commitments in agriculture.

[94] Which exempts LDCs from prohibition of export subsidies.

BIBLIOGRAPHY

Assoumani A (2000). *Etude de la mise en place d'une ligne de crédit au profit des acteurs de la filière vivrière.* Projet DECVAS, Moroni, Ministry of Production, The Islamic Federal Republic of Comoros, December.

Beierle TC (2002). From Uruguay to Doha: Agricultural trade negotiations at the WTO. Discussion Paper No. 02-13, Resources for the Future, Washington, March.

Borrell B (1999). Sugar, the taste test of trade liberalization. Paper prepared for the World Bank's Integrated Programme of Research and Capacity Building to Enhance Participation of Developing Countries in the WTO 2000 Negotiations. Presented at the Conference on Agriculture and the New Trade Agenda in the WTO 2000 Negotiations, Geneva, 1-2 October.

Central Statistical Office (2000). *Digest of Agricultural Statistics.* Port Louis, Minstry of Economic Development and Regional Co-operation, Government of Mauritius. Website address: http://statsmauritius.gov.mu/

FAO (2001a). Some issues relating to food security in the context of the WTO Negotiations on Agriculture. FAO Discussion Paper No. 1 for the Geneva Round Table on Food Security in the Context of the WTO Negotiations on Agriculture, Geneva, 20 July.

FAO (2001b). Incorporating food security concerns in a revised Agreement on Agriculture. Rome, FAO.

FAO Discussion Paper No.2 for the Geneva Round Table on Food Security in the Context of the WTO Negotiations on Agriculture, Geneva, 20 July.

Faini R (1988). Problèmes de développement spécifiques aux économies insulaires. In : Crusol J, Hein Ph. and Velas F (eds.), L'enjeu des petites economies insulaires, *Economica.*

English P (2002). *Mauritius, Re-igniting the Engines of Growth. A Teaching Case Study.* Economic Development Institute, Washington, DC, World Bank.

Government of Mauritius (1983). White Paper on Agricultural Diversification. Port Louis, L. Carl Achille, Government Printer.

Humbert J-N (2000). The Multi-functional Role of Sugar in Mauritius. Paper presented at the 7th World Sugar Farmers' Conference, Durban, South Africa, 10-15 September.

Institute of Development Studies (IDS 2001) Study on ACP-EU Economic Partnership Agreement (EPA) for Mauritius. Final Report, IDS, Sussex, United Kingdom.

Islamic Federal Republic of the Comores (2000). Appui à la stratégie de relance du développement agricole et rural. Report. Moroni, Ministry of Production, with support from the United Nations Development Programme and the FAO.

Kassim M (2000). Aspects macroéconomiques et institutionnels de la stratégie agricole. In: IFRC, *op.cit.*

Mamaty I (2002). African countries and the Agreement on Agriculture: What scope for sustainable development? ICTSD Resource Paper No.3. Geneva, International Centre for Trade and Sustainable Development, March.

Matringe O (2002). Trade in Sugar: Implications of future liberalization. Presentation Geneva, UNCTAD, Division on International Trade in Goods and Services, and Commodities.

Mauritius Chamber of Agriculture (1999). Farmers' society and green box issues (mimeo).

Mauritius Chamber of Agriculture (2001). *A New Strategic Orientation for the Agribusiness Sector.* Port Louis, August.

Mauritius Chamber of Agriculture (MCA) (2002). Atelier de travail sur la filière pomme de terre. Report of the Workshop, May.

Mauritius Sugar Syndicate (2000). *Annual Report.* Port Louis.

Ministry of Agriculture (2001). *Sugar Sector Strategic Plan 2001-2005.* Port Louis, Republic of Mauritius.

Ministry of Agriculture and Marine Resources (2000). *Annual Report.* Republic of Seychelles. Victoria, June.

Ministry of Agriculture and Marine Resources (2002). *The National Agricultural and Fisheries Policy 2000-2010: Sustainable Agricultural and Fisheries Development to Enhance Food Security.* Victoria, Republic of Seychelles, May.

Moustache A-M. (2002). The Seychelles' Case Study. COMESA Common Agricultural Policy Review and Capacity Assessment (mimeo). Victoria, COMESA, June.

Redding S, Venables AJ (2001). Economic geography and international inequality. (Mimeo) London, Department of Economics, London School of Economics.

Redding S, Venables AJ (2002). The economics of isolation and distance. Presentation prepared for WTO meeting on Small Economies, Geneva, WTO, February.

Republic of Mauritius (2001). Sugar Industry Efficiency Act 2001. Port Louis

Salmon J-M (1997). *Marché du travail et développement économique dans les petites economies insulaires.* Paris, Editions Harmattan .

Salmon J-M. (2001). Mission d'identification d'un projet d'appui à l'intégration économique régionale de la COI. Report for the COI. February.

Salmon J-M (2002). Mission d'identification des themes relatifs aux petites economies insulaires et vulnérables pour les négociations des futures accords de partenariat économiques EU/ACP. Report for the Indian Ocean Commission.

Shirotori M (2002). WTO Negotiations on Agriculture: Negotiations on new modalities. Informal paper, UNCTAD, Geneva, March.

UNDP (2002). *Human Development Report, 2002* New York, Oxford University Press.

UNCTAD (1996). Prospects for the world sugar economy in the light of the Uruguay Round Agreements. Report for the Unctad Secretariat, UNCTAD/COM/72, Geneva, August.

World Bank (1995). *World Development Report, 1995: Workers in an Integrating World.* New York, Oxford University Press.

World Bank, Countries at a Glance tables can be found at the following World Bank website: http://www.worldbank.org/data/countrydata/countrydata.html.

WTO (2000a). WTO Negotiations on Agriculture: Proposals by SIDS. Communication from Dominica, Jamaica, Mauritius, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, and Trinidad and Tobago, 29 December, G/AG/NG/W/97 (and correction 1 of the 14 February 2001).

WTO (2000b). WTO Negotiations on Agriculture. Negotiating Proposal by Mauritius, 28 December, G/AG/NG/W/96.

WTO (2001b). Statement by Mauritius on Behalf of Small Vulnerable Developing Economies, Including SIDS. Ministerial Conference 4th Session, Doha, 9-13 November, WT/MIN(01)/ST/66.

WTO Secretariat (2002). WTO Agriculture Negotiations: The issues, and where we are now. Geneva, 8 April.

Blank page

Page blanche

ANNEX

ANNEX I – List of meetings and participants

Geneva

Tuesday, 18 June, 2002

Permanent Mission of the Republic of Mauritius :
H.E. Ambassador J. Meetoo
G. Govinden, Representative of both Mauritius Chamber of Agriculture and Mauritius Sugar Syndicate
U. Dwarka-Canabady, Minister-Counsellor and Deputy Permanent Representative
G. Rajpati, Executive Director of the Mauritius Sugar Authority.

Wednesday, 19 June 2002

UNCTAD, Division on International Trade in Goods and Services, and Commodities (DITC).
Miho Shirotori, Project Manager
O. Matringe, Economic Affairs Officer, Commodity Information, Risk Management and Finance, and manager of the InfoCom website.
M. Arda, Officer-in-Charge, Commodities Branch.
M. Tortora, Coordinator, Commercial Diplomacy

WTO
M. Fall, Economic Affairs Officer, Agriculture and Commodities Division

Mauritius Chamber of Commerce and Industry Office for Europe
J-C Montocchio, Director

Thursday 20th, June 2002

UNCTAD .
B. Graham and S. Laird, Trade Analysis Branch, DITC
Ph. Hein, former staff member in the Office of the Special Coordinator for Least Developed, Landlocked and Island Developing Countries[95]

Mauritius

Thursday, 4 July 2002

Indian Ocean Commission, Quatre Bornes
Erik Van Overtraeten, conseiller principal,
Raj Mohabeer, chargé de mission
Siti Soifiat Alféine, assistante technique régionale

[95] His successor, P. Encontre, not present during that period.

Friday 5 July 2002

Ministry of Industry and International Trade (International Trade Division), Port Louis
N. Boodhoo

The Mauritius Chamber of Agriculture, Port Louis
J-N. Humbert, General Secretary
J-C Monty, Officer-in-Charge of Diversification, Natural Resources and Environment Service
L Law Toon Fong, Supporting Officer for Legal and International Affairs

The Mauritius Sugar Authority, Port Louis
Dr. G. Rajpati, Executive Director.

Miscellaneous
M. Hardy, former Director of the Mauritius Sugar Syndicate, Port Louis

Monday 8 July 2002

Central Statistical Office (CSO), Port Louis
H Bundhoo, Director of Statistics
G Vydelingum, Principal Statistician

Agricultural Research and Extension Unit (AREU), Quatre Bornes
Mr Ramnauth, biometrician

Tuesday 9 July 2002

Central Statistical Office
G. Vydelingum, Principal Statistician
Mr. Seenauth, Agricultural Division
Mrs N. Joomun, External Trade Division

Thursday 11 July 2002

Customs and Excise Department, Port Louis
S Gunnoo, General Director
G Chung Kam Chung, Acting Deputy Controller of Customs

Agricultural Marketing Board (by phone)
Mr Nillaya, Officer-in-Charge of "controlled products" (by phone)

Ministry of Industry and International Trade (Trade Policy Unit), Port Louis
A Bhuglah, Officer-in-Charge (WTO expert)

Friday 12 July 2002

Indian Ocean Commission House,
H. Idaroussi, General Secretary, Ministry of Production, the Comoros
S. Mdziani, Regional Director of the DECVAS project, the Comoros

ANNEX II – Tables

Table 1 : Major non-sugar agricultural products in Mauritius, gross output (quantities in tonnes and values in Rs'000), 1991-2000 (domestic market)

		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	g91-95 (%)	g96-00 (%)
Banana	**production**	6490	8530	9880	6725	9437	9387	9557	9343	7550	8500	9.8	-2.5
	value							35170	31392	33739	36557		
	a.u.p (Rs/kg)							3,7	3,4	4,5	4,3		
Pineapple	**production**	1480	2300	4048	3887	4199	2973	1559	1462	1014	3416	29.8	3.5
	value							23230	20029	15281	49139		
	a.u.p (Rs/kg)							14,9	13,7	15,1	14,4		
Onion	**production**	2960	3240	3637	5403	5974	6067	5036	6727	9066	11134	19.2	16.4
	value							41337	55128	74296	103365		
	a.u.p (Rs/kg)							8,2	8,2	8,2	9,3		
Carrot	**production**	915	1250	2188	2624	3131	3141	4878	3363	6127	11461	36.0	38.2
	value							59448	48826	74670	147362		
	a.u.p (Rs/kg)							12,2	14,5	12,2	12,9		
Tomato	**production**	9385	10220	13001	9166	13486	10877	12226	10729	8037	9719	9.4	-2.8
	value							207879	233061	151892	210140		
	a.u.p (Rs/kg)							17	21,7	18,9	21,6		
Potato	**production**	16445	19175	13780	17800	15718	10639	17584	14612	15322	13843	-1.1	6.8
	value							113904	95372	91932	114900		
	a.u.p (Rs/kg)							6,5	6,5	6	8,3		
Poultry	**production**	13250	15500	17000	18850	19235	20550	20825	18300	20900	25600	9.9	5.6
	value							690800	709300	794200	921850		
	a.u.p (Rs/kg)							33,2	38,8	38	36		
Tea (green leaf)	**production**	30863	30379	30900	27204	21419	13209	9026	7393	7134	6440	-8.7	-16.4
	value	78900	122400	117000	102000	80000	79000	61000	66000	64400	64400		
	a.u.p (Rs/kg)							6,8	8,9	9	10		

Source: CSO, Agriculture unit

g=average annual growth rate

a.u.p. means average unit price (to be taken with great care, as several product lines are aggregated and prices are subject to high season variations).

Table 2 : Major non-sugar agricultural products in Mauritius, ratio (%) of imports to domestic output (quantities in tonnes), 1991-2000 (domestic market)

		1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Banana	**production (1)**	6490	8530	9880	6725	9437	9387	9557	9343	7550	8500
fresh or dried	**imports (2)**	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	ratio (2)/(1)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Pineapple	**production (1)**	1480	2300	4048	3887	4199	2973	1559	1462	1014	3416
fresh or dried	**imports (2)**	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	ratio (2)/(1)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Onion	**production (1)**	2960	3240	3637	5403	5974	6067	5036	6727	9066	11134
fresh or chilled	**imports (2)**	*4777*	*4251*	*5580*	*5508*	*4768*	*5488*	*6203*	*7125*	*9296*	*7776*
	ratio (2)/(1)	161,4	131,2	153,4	101,9	79,8	90,5	123,2	105,9	102,5	69,8
Carrot	**production (1)**	915	1250	2188	2624	3131	3141	4878	3363	6127	11461
fresh or chilled	**imports (2)**	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*51*	*221*	*41*
	ratio (2)/(1)	0	0	0	0	0	0	0	1,5	3,6	0,4
Tomato	**production (1)**	9385	10220	13001	9166	13486	10877	12226	10729	8037	9719
fresh or chilled	**imports (2)**	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
	ratio (2)/(1)	0	0	0	0	0	0	0	0	0	0
Potato	**production (1)**	16445	19175	13780	17800	15718	10639	17584	14612	15322	13843
fresh or chilled	**imports (2)**	*8155*	*7216*	*7610*	*6297*	*9485*	*11525*	*11558*	*10150*	*7986*	*8168*
	ratio (2)/(1)	49,6	37,6	55,2	35,4	60,3	108,3	65,7	69,5	52,1	59
Poultry	**production (1)**	13250	15500	17000	18850	19325	20550	20825	18300	20900	25600
see NB	**imports (2)**	*930*	*926*	*330*	*0*	*0*	*0*	*0*	*553*	*78*	*0*
	ratio (2)/(1)	7	6	1,9	0	0	0	0	3	0,4	0
Green tea	**production (1)**	30863	30379	30900	27204	21419	13209	9026	7393	7134	6440
	imports (2)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*13*	*0*	0
	ratio (2)/(1)	0	0	0	0	0	0	0	0,2	0	0

Source: CSO, external trade statistics for imports (in italics) ; and agriculture unit (from table 1) for production. Ratios: author's calcul
NB: product coverage of production may differ from the import one,
- imports of onions exclude onion seeds, whereas imports of potatoes include seed potatoes. In both cases production include seeds.
- imports of poultry includes five HS Code lines (02701100 to 02071400 plus 02072100)

Table 3 : Main source of imports of fresh or chilled potatoes (other than seed potatoes) and onions, Mauritius, 2000

HS	DESCRIPTION	Country of origin	Quantity (Kg)	CIF Value (Rs)	Market share*	av. CIF price (Rs/kg)
07019000	Potatoes,fresh or chilled	AUSTRALIA	3 016 300	27 755 077	43	9,2
07019000	Potatoes,fresh or chilled	FRANCE	500	5 134	0,007	10,27
07019000	Potatoes,fresh or chilled	INDIA	1 951 910	14 018 105	27,8	7,18
07019000	Potatoes,fresh or chilled	NEW ZEALAND	27 300	210 568	0,4	7,71
07019000	Potatoes,fresh or chilled	SOUTH AFRICA	2 024 955	18 621 983	28,8	9,2
07019000 Total			**7 020 965**	**60 610 867**	**100**	**8,63**
07031000	Onions and shallots, fresh or chilled	AUSTRALIA	530	5 603	0,007	10,57
07031000	Onions and shallots, fresh or chilled	EGYPT	104 000	943 865	1,3	9,08
07031000	Onions and shallots, fresh or chilled	INDIA	6 619 984	43 211 103	85,1	6,53
07031000	Onions and shallots, fresh or chilled	SOUTH AFRICA	1 051 110	9 319 296	13,5	8,87
07031000 Total			**7 775 624**	**53 479 867**	**100**	**6,88**

Source: CSO

* based on quantity supplied

Table 4 : Tariff Regime of main agricultural non sugar products, Mauritius 2001

HS CODE	Description	WTO bound tariff rate	Rate of Customs Duty	NWGT (KG)	CIF (Rs)	av. CIF price (Rs/kg)	Customs Duty	Effective rate
02071100	Meat of gallus domesticus fowls not cut in pieces, fresh or chill	122	80	216	25014	115,8	20010	80
02071200	Meat of gallus domesticus fowls not cut in pieces, frozen	122	80	9907	611151	61,7	488920	80
02071300	Cuts and offal of gallus domesticus fowls, fresh or chill	122	80	34	9098	267,6	7278	80
02071400	Cuts and offal of gallus domesticus fowls, frozen	122	80	56624	1850661	32,7	746649	40
07019000	Potatoes other than seed potatoes, fresh or chilled	37	0	8795828	74298924	8,4	-	-
07020000	Tomatoes, fresh or chilled	122	15	7	74	10,6	-	-
07031000	Onions and shallots, fresh or chilled	37	15	8527380	66147341	7,8	9845117	15
07061000	Carrots and tumips, fresh or chilled	122	15	6845	191482	28	28236	15
08030000	Bananas, including plantains, fresh or dried	82	40	18	1790	99,4	716	40
08043000	Pineapples, fresh or dried	122	40	82	5877	71,7	2351	40
09021000	Green Tea (not fermented), in packing not exceeding 3 kg	82	40	792	377604	476,8	151042	40
09022000	Green Tea (not fermented), in packing exceeding 3 kg	82	40	3178	253310	79,7	101324	40
09023000	Black Tea (not fermented), in packing not exceeding 3 kg	82	40	4877	882078	180,9	157297	18
09024000	Black Tea (not fermented), in packing exceeding 3 kg	82	40	3562	302241	84,9	119092	39

Source: Customs and WTO Country Schedule (CXVIII Mauritius), author's calculs

Table 5 : Food Import Bill, Mauritius, 1991- 2001

Value : Million Rupees

SITC section/description	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
0 - Food and live animals	**2 692**	**2 915**	**3 744**	**4 241**	**4 673**	**5 845**	**6 091**	**6 826**	**6 761**	**6 948**	**8 235**
Meat and meat preparations	361	380	420	559	540	577	683	733	629	*697*	*740*
Dairy products and bird's eggs	547	597	668	766	849	947	964	1 038	1 092	*1 072*	*1 318*
Fish and fish preparations	240	211	375	488	635	689	867	1 113	793	*1 058*	*1 754*
Wheat	114	197	288	359	379	599	367	504	488	*496*	*525*
Rice	314	276	464	398	329	668	506	556	764	*660*	*620*
Wheaten flour	76	53	45	11	3	85	73	114	-	-	*198*
Cereal preparations	104	130	135	173	165	192	221	235	248	*261*	*298*
Vegetables and fruits	370	383	470	523	532	695	804	850	951	*932*	*990*
Other	*566*	*688*	*879*	*964*	*1 241*	*1 393*	*1 606*	*1 683*	*1 796*	*1 772*	*1 792*
1 - Beverages and tobacco	**113**	**132**	**151**	**201**	**221**	**212**	**262**	**312**	**527**	**369**	**364**
Beverages	*99*	*117*	*131*	*177*	*196*	*191*	*228*	*275*	*437*	*300*	*270*
Tobacco & tobacco manufactures	*14*	*15*	*20*	*24*	*25*	*21*	*34*	*37*	*90*	*69*	*94*

NB: 2000 revised and 2001 provisional

Table 6 : Macroeconomic Food Balance, Mauritius, 1991 - 2001

Value : Million Rupees

Year	Total exports (F.O.B) Value	Sugar exports (F.O.B Value)	Non sugar exports (F.O.B Value)	Total Imports (C.I.F Value)	Food Trade Balance (excluding sugar)*	Food Trade Balance (including sugar)**
1991	5 932	5 298	634	2 692	-2 058	3 240
1992	6 512	5 841	671	2 915	-2 244	3 597
1993	6 681	5 770	911	3 744	-2 833	2 937
1994	6 970	5 873	1 097	4 241	-3 144	2 729
1995	7 702	6 543	1 159	4 673	-3 514	3 029
1996	9 836	8 347	1 489	5 845	-4 356	3 991
1997	9 192	7 495	1 697	6 091	-4 394	3 101
1998	10 618	8 907	1 711	6 826	-5 115	3 792
1999	9 165	7 599	1 566	6 761	-5 195	2 404
2000	7 201	5 544	1 657	6 948	-5 291	253
2001	10 975	8 138	2 837	8 235	-5 398	2 740

Source: CSO external trade statistics, related to HS Code Section 0 (food and live animals)
* columns IV - V ; ** columns II - V

Table 7 : Main 'domestic' exports of food products, Mauritius, 1991 - 2001 (quantity in tonnes and value in Million Rupees (FOB)

(source: CSO, external trade statistics and author's own calculs)

HS	Description	1991		1992		1993		1994		1995	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
06031000	Fresh cut flowers and buds for bouquet or ornamental purpose	480	87	501	93	583	112	568	111	596	134
08043000	Pineapples, fresh or dried	92	2	343	5	321	7	132	3	296	6
09021000	Green tea (not fermented) in packing not exceeding 3 kg	1 992	37	893	16	-	-	-	-	-	-
09022000	Green tea (not fermented) in packing exceeding 3 kg	142	3	82	1	-	-	161	3	-	-
09023000	Black tea (fermented or partly fermented) in packing not exceeding 3 kg	2 160	39	4 360	75	4 138	96	2 611	50	2 839	47
09024000	Black tea (fermented or partly fermented) in packing exceeding 3 kg	201	4	82	2	196	7	1 257	30	55	4
16041400	Prepared or preserved tuna, skipjack and atlantic bonito	6 747	297	7 380	289	7 779	377	8 879	479	12 271	596
17011100	Raw cane sugar, in solid form, not flavoured or coloured	551 442	5 298	597 401	5 674	539 984	5 822	518 784	5 866	523 890	6 326

HS	Description	1996		1997		1998		1999		2000	
		Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value	Quantity	Value
06031000	Fresh cut flowers and buds for bouquet or ornamental purpose	579	133	603	127	555	131	457	117	472	127
08043000	Pineapples, fresh or dried	255	5	352	8	475	14	758	25	438	11
09021000	Green tea (not fermented) in packing not exceeding 3 kg	-	-	-	-	-	-	-	-	-	-
09022000	Green tea (not fermented) in packing exceeding 3 kg	-	-	9	1	5	1	5	1	4	1
09023000	Black tea (fermented or partly fermented) in packing not exceeding 3 kg	1 208	22	230	6	126	4	9	2	8	1
09024000	Black tea (fermented or partly fermented) in packing exceeding 3 kg	159	5	279	5	80	5	32	5	27	3
16041400	Prepared or preserved tuna, skipjack and atlantic bonito	13 082	703	15 136	872	12 625	935	14 921	946	18 006	954
17011100	Raw cane sugar, in solid form, not flavoured or coloured	612 524	8 347	575 308	7 495	602 072	8 907	533 834	8 009	424 312	5 539

HS	Description	2001			av. annual growth (value, %)	
		Quantity	Value	unit price (Rs/kg)	1991-95	1996-00
06031000	Fresh cut flowers and buds for bouquet or ornamental purpose	496	132	266,13	11,4	-1,1
08043000	Pineapples, fresh or dried	505	19	37,62	31,6	21,8
09021000	Green tea (not fermented) in packing not exceeding 3 kg	-	-	-	ns	-
09022000	Green tea (not fermented) in packing exceeding 3 kg	7	1	142,86	ns	nc
09023000	Black tea (fermented or partly fermented) in packing not exceeding 3 kg	21	4	190,48	4,8	-53,8
09024000	Black tea (fermented or partly fermented) in packing exceeding 3 kg	10	1	100	0	-12
16041400	Prepared or preserved tuna, skipjack and atlantic bonito	26 802	1 796	67,01	19	7,9
17011100	Raw cane sugar, in solid form, not flavoured or coloured	599 422	8 138	13,58	4,5	-9,7

nc=non computable

ns=non significant (-100%)

Table 8 : Shares of main agricultural exports, Mauritius, 1991-2001

Year	Sugar Exports (FOB, Mn Rs)	Cut flowers Exports (FOB, Mn Rs)	Fresh pineapple Exports (FOB, Mn Rs)	Prep. or preserv. Tuna Exports (FOB, Mn Rs)	Non sugar food* exports (F.O.B Value)	Total food* exports (F.O.B) Value	Total domestic Exports (Mn Rs)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1991	5 298	87	2	297	634	5 932	18 084
1992	5 841	93	5	289	671	6 512	19 685
1993	5 770	112	7	377	911	6 681	22 443
1994	5 873	111	3	479	1 097	6 970	23 196
1995	6 543	134	6	596	1 159	7 702	25 786
1996	8 347	133	5	703	1 489	9 836	30 776
1997	7 495	127	8	872	1 697	9 192	31 888
1998	8 907	131	14	935	1 711	10 618	37 762
1999	7 599	117	25	946	1 566	9 165	37 705
2000	5 544	127	11	954	1 657	7 201	37 609
2001	8 138	132	19	1 796	2 837	10 975	42 474

Source: CSO, external trade statistics ; * all HS Code section 0 ("food and live animals")

Year	Share of sugar in total food exports (%)	Share of cut flowers in total food exports (%)	Share of pineapples in total food exports (%)	Share of pre. tuna in total food exports (%)	Share of sugar in TOTAL DOMESTIC exports (%)	Share of cut flowers in TOTAL DOMESTIC exports (%)	Share of pineapples in TOTAL DOMESTIC exports (%)	Share of pre. tuna in TOTAL DOMESTIC exports (%)
	(8)=(1)/(6)	(9)=(2)/(6)	(10)=(3)/(6)	(11)=(4)/(6)	(12)=(1)/(7)	(13)=(2)/(7)	(14)=(3)/(7)	(15)=(4)/(7)
1991	89,3	1,5	0,03	5	29,3	0,5	0,01	1,64
1992	89,7	1,4	0,08	4,4	29,7	0,5	0,03	1,47
1993	86,4	1,7	0,1	5,6	25,7	0,5	0,03	1,68
1994	84,3	1,6	0,04	6,9	25,3	0,5	0,01	2,07
1995	85	1,7	0,08	7,7	25,4	0,5	0,02	2,31
1996	84,9	1,4	0,05	7,1	27,1	0,4	0,02	2,28
1997	81,5	1,4	0,09	9,5	23,5	0,4	0,03	2,73
1998	83,9	1,2	0,13	8,8	23,6	0,3	0,04	2,48
1999	82,9	1,3	0,27	10,3	20,2	0,3	0,07	2,51
2000	77	1,8	0,15	13,2	14,7	0,3	0,03	2,54
2001	74,2	1,2	0,17	16,4	19,2	0,3	0,04	4,23

Table 9: major destinations of main agricultural export, Mauritius, 2001

HS CODE	DESCRIPTION	COUNTRY OF DESTINATION	QUANTITY (KG)	F.O.B VALUE (RS)	share of total value (%)
06031000	Fresh cut flowers	JAPAN	133 177	54 465 664	41,1
06031000	Fresh cut flowers	ITALY	155 668	29 667 529	22,4
06031000	Fresh cut flowers	FRANCE	63 743	17 789 873	13,4
06031000	Fresh cut flowers	AUSTRALIA	41 045	7 039 905	5,3
06031000	Fresh cut flowers	HONG KONG	17 876	5 922 519	4,5
06031000	Fresh cut flowers	UNITED STATES	15 714	4 760 227	3,6
06031000	Fresh cut flowers	TAIWAN	5 492	1 944 484	1,5
06031000	Fresh cut flowers	UNITED ARAB EMIRATES	3 875	1 944 446	1,5
06031000	Fresh cut flowers	REUNION	33 280	1 804 147	1,4
06031000	Fresh cut flowers	miscellaneous	25 896	7 094 049	5,4
06031000 Total			**495 766**	**132 432 843**	**100**
08043000	Pineapples, fresh or dried	FRANCE	428 662	15 576 698	83,5
08043000	Pineapples, fresh or dried	ITALY	31 292	1 526 535	8,2
08043000	Pineapples, fresh or dried	BELGIUM	15 350	520 714	2,8
08043000	Pineapples, fresh or dried	UNITED KINGDOM	11 300	395 500	2,1
08043000	Pineapples, fresh or dried	SWITZERLAND	13 536	390 534	2,1
08043000	Pineapples, fresh or dried	miscellaneous	4 620	255 293	1,4
08043000 Total			**504 760**	**18 665 274**	**100**
09021000	Green tea (not fermented) in packing not e»	FRANCE	20	1 229	12,6
09021000	Green tea (not fermented) in packing not e»	SEYCHELLES	10	8 500	87,4
09021000 Total			**30**	**9 729**	**100**
09022000	Green tea (not fermented) in packing excee	JAPAN	7 000	995 165	100
09022000 Total			**7 000**	**995 165**	**100**
09023000	Black tea (fermented or partly fermented) in	FRANCE	16 088	2 924 722	77,5
09023000	Black tea (fermented or partly fermented) in	REUNION	4 642	699 341	18,5
09023000	Black tea (fermented or partly fermented) in	JAPAN	500	99 956	2,6
09023000	Black tea (fermented or partly fermented) in	miscellaneous	290	49 473	1,3
09023000 Total			**21 520**	**3 773 492**	**100**
09024000	Black tea (fermented or partly fermented) in	REUNION	9 513	1 257 692	89,6
09024000	Black tea (fermented or partly fermented) in	FRANCE	873	140 568	10
09024000	Black tea (fermented or partly fermented) in	GERMANY,FEDERAL REPUBLIC OF	18	4 740	0,3
09024000 Total			**10 404**	**1 403 000**	**100**
17011100	Raw cane sugar, in solid form, not flavoure	UNITED KINGDOM	489 827 985	6 620 558 353	81,4
17011100	Raw cane sugar, in solid form, not flavoure	PORTUGAL	59 350 000	733 892 000	9
17011100	Raw cane sugar, in solid form, not flavoure	UNITED STATES	19 601 564	274 550 985	3,4
17011100	Raw cane sugar, in solid form, not flavoure	FRANCE	5 685 133	101 291 600	1,2
17011100	Raw cane sugar, in solid form, not flavoure	GERMANY,FEDERAL REPUBLIC OF	4 912 084	88 821 876	1,1
17011100	Raw cane sugar, in solid form, not flavoure	BELGIUM	4 889 893	86 175 434	1,1
17011100	Raw cane sugar, in solid form, not flavoure	NETHERLANDS	2 591 393	45 826 904	0,6
17011100	Raw cane sugar, in solid form, not flavoure	ITALY	2 316 450	41 736 663	0,5
17011100	Raw cane sugar, in solid form, not flavoure	SPAIN	2 010 840	34 163 994	0,4
17011100	Raw cane sugar, in solid form, not flavoure	miscellaneous	8 236 880	111 228 735	1,4
17011100 Total			**599 422 222**	**8 138 246 544**	**100**
16041400	Prepared or preserved tuna, skipjack and a	UNITED KINGDOM	22 847 349	1 574 697 113	87,7
16041400	*Prepared or preserved tuna, skipjack and a*	GERMANY,FEDERAL REPUBLIC OF	977 291	52 297 251	2,9
16041400	Prepared or preserved tuna, skipjack and a	NETHERLANDS	745 862	42 891 692	2,4
16041400	Prepared or preserved tuna, skipjack and a	FINLAND	651 420	37 033 944	2,1
16041400	Prepared or preserved tuna, skipjack and a	SWEDEN	547 850	33 190 695	1,8
16041400	Prepared or preserved tuna, skipjack and a	miscellaneous	1 032 387	55 423 075	3,1
16041400 Total			**26 802 159**	**1 795 533 770**	**100**

Blank page

Page blanche

CASE STUDY

THE PACIFIC ISLANDS

BY
MS. MARGARET B. MALUA*

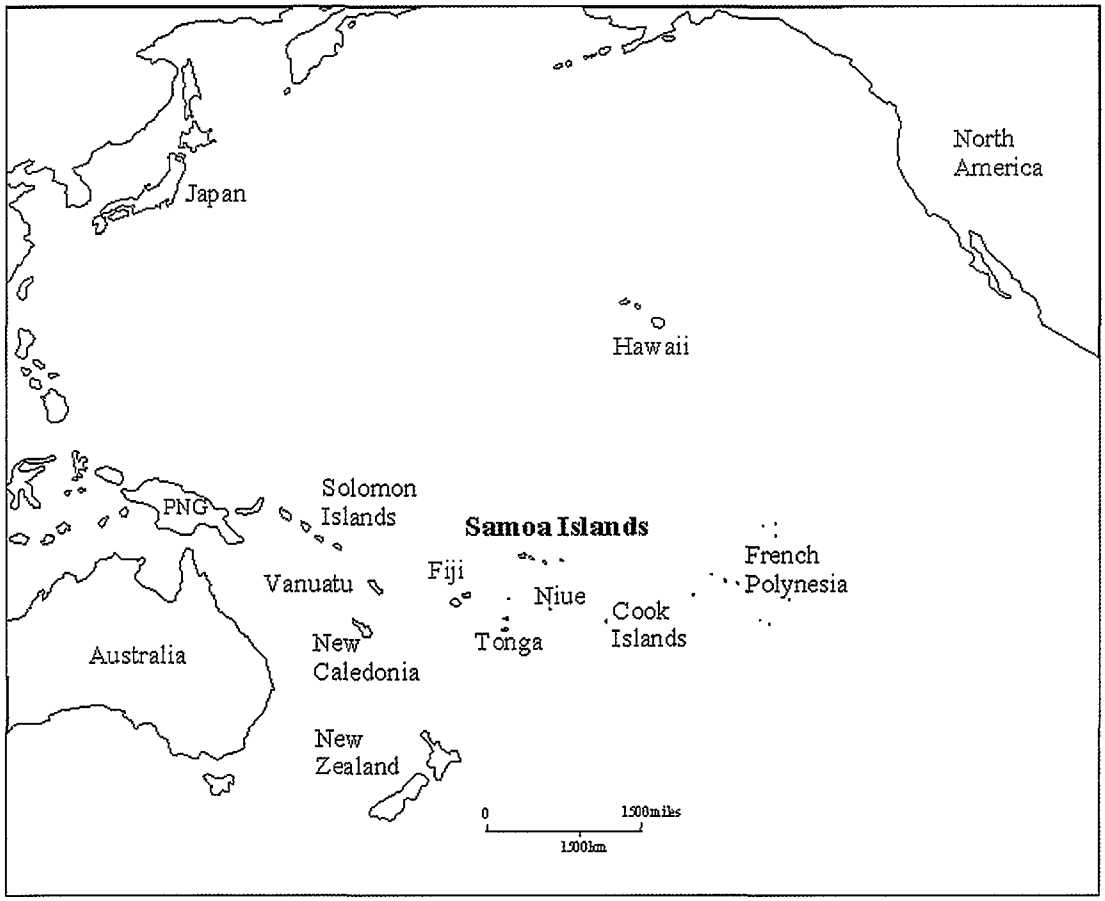
* Senior consultant, KVA Consultant Ltd

Blank page

Page blanche

TABLE OF CONTENTS

MAP OF THE PACIFIC REGION



EXECUTIVE SUMMARY

Agriculture remains the backbone of the Pacific Island economies: it is the main source of livelihood for the population as well as a major export earner. The "islandness", smallness and remoteness of the Pacific Island countries has hindered their economic development in the world economy. Their smallness constitutes a major constraint in that the limited land available for agricultural activities produces little for local consumption and sale to the domestic and export markets. Access to finance for agricultural development is also very limited and traditional production methods are still being used. The remote location of the Pacific Island countries from the international markets results in high transportation costs for exports, and high distribution and marketing costs. This results in Pacific Island exporters becoming mainly price takers in the international markets.

Vulnerability to external shocks in the world markets greatly affects agriculture exports and the worst hit are people in the rural areas, where most of the agricultural activities take place. High vulnerability to natural disasters such as cyclones, droughts and rising sea level complemented by increasing pests and diseases have significantly slowed down economic growth of most of these economies, cutting their level of development back by 10 years.

Market access is a common problem for small island economies; these countries strain to meet the many requirements (especially the non-tariff requirements) of the international markets, and in most cases supply capacity constraints clearly limit access to these markets. Furthermore, existing preferential market access arrangements have been substantially reduced, leading Pacific Island exports to lose their competitiveness and market shares in the international markets. Institutional capacity to strengthen agricultural development is also very limited, as are the financial resources available in most Pacific island economies.

The commitments by Pacific Island economies to integration into the multilateral trading system has implications for the future of these economies, given their susceptibility to natural and economic catastrophes.

Samoa is one example of a Pacific Island economy that has experienced problems relating to the development of its agricultural sector and the policies its Government needs to adopt to address ongoing problems ranging from natural catastrophes to external shocks in the world markets. Samoa is currently negotiating its accession to the World Trade Organization (WTO), and, as part of its economic reforms, the Government has developed policies which are in line with WTO objectives and requirements. However, further tariff liberalization and reductions in domestic support have serious implications for the future of the Pacific Island economies. Problems relating to food security and increasing poverty, mainly at the grassroots level, will increase if Pacific Island economies totally commit to the requirements of the WTO Agreement on Agriculture. Given the vulnerability of these small island economies, recognition of these constraints within the context of the Doha Round of negotiations is vital to the sustainable development of these countries.

Small islands economies should receive special and differential treatment (S&DT) for tariff reductions and the level of domestic support permitted in order to alleviate any major impact on the agricultural sector. They also need technical assistance for development of the appropriate institutional and infrastructural capacity to meet market requirements and to administer the WTO work and obligations.

The Pacific Island economies rely on a small number of agricultural exports as a source of foreign exchange and for the welfare of their people. Any domestic support for their products would not have any significant impact on the world market. They should be allowed to introduce measures that could address such constraints from time to time with the ultimate aim of alleviating poverty and maintaining the livelihoods and prosperity of their populations.

Blank page

Page blanche

I. INTRODUCTION

The Pacific islands are made up of a group of islands, the inhabited ones of which have relatively small populations. This means that the difficulties associated with sea transport are compounded by the small quantities of produce that the islands have to sell and the small quantities of goods they can buy. While export markets offer greater potential than the limited domestic markets, supplying these markets is not without its problems. Prices can fluctuate considerably, and in the past decade have been largely disappointing. For main commodities, accumulating sufficient quantities at individual export ports can be difficult, as international vessels are only prepared to visit a limited number of ports and require reasonable quantities for shipment.

In general there is no discernible upward trend in the level of agricultural exports. Poor prices in recent years have been a constraint to expanding production of traditional commodities, while the small markets have presented problems for roots and tubers and non-traditional crops. Productions constraints include such factors as land availability and tenure, lack of knowledge about appropriate technologies, and insufficient availability of labour. The traditional export commodities of copra, coconut oil and cocoa continue to play an important role in most of the South Pacific, however price fluctuations and natural disasters continue to hamper sustainable growth of these commodities.

The worldwide trend away from government marketing services is also evident in the South Pacific with the closure of government operated marketing boards in most countries including Samoa and Tonga.

Agriculture plays an important role in the Samoan economy; at least two thirds of households rely on a mixture of subsistence and cash income. In 1989, more than 70 per cent of the economically active population of 55,967 were employed in the agriculture, fishery and forestry sectors. An estimated 72 per cent of 15,474 rural households were active to some degree in agriculture, with 19 per cent producing only for home consumption and 47 per cent producing mainly for home consumption. About 90 per cent of village households maintain mixed livestock enterprises comprising mainly pigs and chickens, but some also have cattle, horses and goats. Commercial agricultural production, including coconut products, cocoa and taro was estimated to account for 14 per cent of GDP in 1994, and 17 per cent (including fisheries) of total GDP in 1998.

Tonga's natural resources are its land, its people and the sea. The economy depends heavily on agriculture, which accounts for about 60 per cent of the GDP. Crops are grown for subsistence, sale on the local market and, increasingly, for export. The most successful export crops are squash pumpkin, sold exclusively to Japan, and vanilla, purchased by France, Japan and the United States. Traditional root crops and vegetables such as taro, kumara, cassava, watermelon and yams are exported to New Zealand and Australia.

II. 'ISLANDNESS' AND VULNERABILITY

II.1 Smallness

Samoa is geographically mountainous and about 98 per cent of the population is spread along the narrow coastal plains which are becoming increasingly vulnerable to rising sea levels, tidal waves and *tsunami*. About 43 per cent of the land is classified as arable and three quarters of the population still depends on the land and the sea as a main or supplementary source of income. Samoa is ecologically fragile and vulnerable to environmental degradation and to the impact of cyclones. It is estimated that over 30 per cent of agricultural production is carried out in areas where the soil is severely depleted, and steeper slopes are being cleared, increasing the vulnerability to erosion. With only limited land area available for agriculture, planting and farming are restricted to very small plots with low yields, thus leading to supply constraints for both the domestic and export markets.

The limited resources available for agricultural production means that all equipment, fertilizers and chemicals for agriculture have to be imported, and only those with sufficient income can invest in these. Access to financial support is also limited. Hence most farmers use traditional methods which are susceptible to diseases and pests and harvest low quality produce. One example is the development of the livestock industry where everything (including the cattle) is imported. For poultry, "day-old" chicks, feed and the packaging materials for eggs are all imported so that investment in this industry is very expensive.

II.2 Price disadvantage

Samoa and other Pacific island countries have relied on copra production for export. The supply and demand of coconut oil in the open market is the determining factor in calculating copra prices in the world market. In the year 2000, the decline in world prices for copra was linked to an increase in the supply of coconut oil from the Philippines and Indonesia; the Philippines increased its coconut oil exports by 85 per cent from the previous year. The small area of the islands is a constraint to increasing the volumes of copra produced, which makes Samoa and Fiji price takers rather than price setters. Hence, regardless of the world price, both islands have to sell at the price buyers offer them. Even between Samoa and Fiji, the Samoan copra price cannot compete with the Fijian price owing to the small volume it exports. Furthermore, Samoan farmers have to give priority to growing crops that earn the highest income with the least labour and production input. Given the downturn in world copra prices, farmers have shifted from copra to other crops. The same situation has occurred with Tongan vanilla: when world prices fell, farmers shifted their concentration to other crops such as kava.

II.3 Remoteness

The Pacific islands are remotely located from the world markets, a remoteness reflected in the small number of airlines serving the Pacific. In the case of Samoa, only three airline services are available through the government-owned Polynesian Airlines, Air Pacific and Air New Zealand. The number of flights are determined by the level of travellers using these airlines. By way of comparison, it is more expensive to travel from New Zealand to Samoa than from New Zealand to Singapore. This is also reflected in agricultural exports from Samoa to the outside world. The freight costs are very high compared to exports from Asia to the world markets. For perishable produce such as bananas, which have to be airfreighted to reach the New Zealand market on time, the airfreight rates range from US$0.30 cents/kg to US$0.50 cents/kg. Since cargo space is also limited, the exporter is required to book a space 3 to 4 days prior to a flight.

Freight costs for a 20-foot container from Samoa (dry goods)

Country	Cost in US$	Shipping period
New Zealand	$1 500.00	1–2 weeks
Australia	$2 000.00	1–2 weeks
United States (Los Angeles	$2 200.00	2–3 weeks
market)	$3 500.00	6–10 weeks
Europe		

Source: Wilex Marketing International

In terms of distribution and marketing costs, the main disadvantage for Samoa is that all packaging materials are imported, and given the low value of the Samoan tala, marketing and distribution costs in the overseas market are very high. For a product to enter the market at a competitive price, the exporters have to reduce their selling price so that all other costs can be included in the final price.

II.4 Natural Disasters

Samoa's vulnerability to natural disasters, which affects its economic performance, was highlighted when it was struck by two devastating cyclones in the early 1990s. These caused considerable damage to both agriculture and infrastructure, exacerbated by the taro leaf blight disease (TLB) which wiped out the country's major food and export crop from late 1993 onwards. Other possible sources of natural disasters identified for Samoa include drought, floods, fluctuations in ocean temperature, a rise in sea level, plant disease and pests, human diseases, earthquakes and volcanic activity.

The damage to agricultural and fisheries production by two consecutive cyclones in 1990 and 1991 resulted in a cumulative decline in real GDP of almost 12 per cent during 1990–1992. The agro-processing industries, particularly coconut oil, have yet to fully recover, reflecting both the depletion of coconut trees and also depressed world market prices for copra and coconut oil. Similarly, timber production and coconut cream post-production levels have not yet recovered to the levels achieved prior to the onset of the two cyclones. Consequently the composition of traditional Samoan exports has been affected, with production of coconut oil and cream, as well as taro, being surpassed by recent successes in commercial fishing. The effects of the cyclones also revealed the difficulty of maintaining food security in the face of major disasters, since they destroyed about 90 per cent of all food crops and food imports had to be drastically increased.

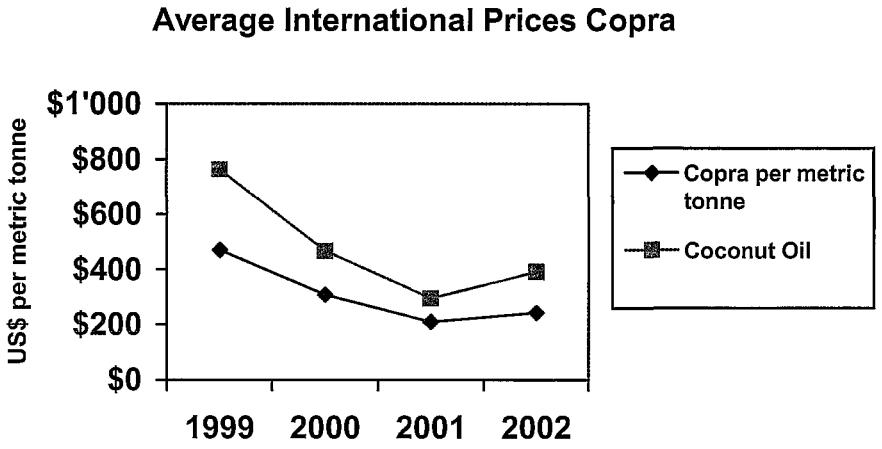
This experience also highlighted the need for strengthening the institutional and support framework for disaster preparedness. As a result, the capacity and capability of the Samoan meteorological office to access critical weather information on a timely basis and to receive and disseminate advance warning on any natural disaster such as cyclones, *tsunamis* and earthquakes, has been considerably upgraded and improved.

Tonga's agricultural sector has also experienced damaging effects, and, more recently, in January 2002 that island's main export crop, squash, was destroyed by a cyclone. Occasional drought also hampers production of the island's main agricultural crops.

In Fiji's case, sugar was severely affected by drought in 1998, which also contributed to a decline in Fiji's sugar exports.

II.5 Economic and political vulnerability

The Pacific islands' agriculture and the economy are also very vulnerable to destabilizing impacts of external shocks, such as fluctuating commodity prices, exchange rate movements and changes in the economic policies of trading partners. Low world market prices for coconut greatly affected the agricultural sector in Samoa, the worst affected being the rural communities. The price of copra paid to the farmers in Samoa dropped from a high of US$ 220 to a low of less than US$ 100 per metric tonne. This was the result of a plunge in international prices as indicated in the chart below.



Source: Coconut Market FOCUS International Bulletin, 2002

The Tongan vanilla industry, which had flourished for some years with an annual output of 40 tonnes, faded when global competition brought prices down. In recent years, the value of vanilla exports has been less than 1 million pa'anga (T$) (US$0.5 million), and in some years very much below.

Fiji's growth slowed down in 1997 when the sugar industry suffered from low world prices and rent disputes between farmers and landowners. Fiji Sugar Corporation had to revise its forecast further downwards with sugarcane production falling to 3.16 million tonnes (from 3.20 million tonnes in 1996) and sugar production to 328,500 tonnes (from 336,400 tonnes in 1996). Factors contributing to the downward revision included adverse weather conditions, transportation problems, mill stoppages due to insufficient cane supply, industrial disputes and expiring land leases. Political instability in Fiji also affected the agricultural industry and the economy as a whole.

III. AGRICULTURAL PERFORMANCE

III.1 Economic performance of the agricultural sector

Indicators of Samoa's agricultural production (volume indices 1982 = 100) have fluctuated over the period 1991–1996, declining from a peak of 77.7 in 1993 to a low of 41.0 in 1994, and then increasing to 71.5 in 1996.[1] Agriculture and fisheries have been the backbone of the Samoan economy during the past decade, but their share decreased from 21 per cent of the total GDP in 1997 to 14 per cent in 2001. In 2000, agricultural exports of approximately US$ 10.4 million represented 63 per cent of the country's export earnings. However, the allocation of public sector investment to the agriculture sector in 2000/01 was only 4.48 per cent. Similarly, agricultural exports of approximately US$ 12.7 million represented 79 per cent of the country's export earnings in 2001, but allocation of public sector investment to the sector in 2001/02 was only 4.8 per cent.

III.1.1 Overview for 2001/02

At current prices, agriculture accounted for 5.9 per cent of total GDP in 2001, down from 7.6 per cent in 2000 and 12.3 per cent in 1997. The decline reflects the residual impact of the taro leaf blight and African snail on the main export crop, taro, as well as damage by other pests that caused extensive damage to fruits and vegetables. The lower world price for copra and the closing down of overseas markets for kava and other agricultural produce also had a discouraging effect on farmers. Both monetary and non-monetary agriculture showed declines in 2001. Non-monetary agriculture however recorded an increase in the share of total agricultural output, from 73.9 per cent to 76.3 per cent.

[1] Central Bank of Samoa (CBS) Bulletin, March 2002.

The fishing industry accounted for 8.3 per cent of total GDP in 2001 and contributed 0.5 percentage points to real GDP growth for the year. Statistics provided by the Ministry indicate that the industry increased production in real terms by 7.0 per cent following no growth in 2000. Fish continues to be the main export commodity for Samoa.

III.2 Products of interest to the domestic market

III.2.1 List of main products for Samoa

Key staples	Taro, bananas, and other root crops (*taamu* and *taro palagi*)
Basic food items	Meat, fish, pork, chicken, tropical fruits and vegetables
Processed food	Cocoa, coconut oil, copra, coconut cream

- **Taro** has been Samoa's main staple food, which could be compared to potato for European countries or rice for Asian countries. It has been the main source of income for all farmers, particularly farmers in the rural areas. Taro was also Samoa's major export after the failure of the coconut oil and cocoa markets until 1993, when all taro plantations were wiped out by the effect of the taro leaf blight. Continuous research into new taro varieties has led to an increase in the domestic supply of taro, however production costs have also increased leading to an increase in prices for taro.

- **Banana** is also Samoa's main staple food. The taro leaf blight caused farmers to diversify rapidly into the production of bananas, which then took over as the major food staple for Samoans. However, when production was affected by disease and nematode build-up, high management requirements to maintain export quality escalated the production costs.

- **Coconut** is a basic food item in Samoa, used for both human and animal consumption. Used in the production of copra and coconut oil, it is regarded as a major source of income for farmers and rural communities .

- **Cocoa** is highly demanded in Samoa as a beverage which competes with tea and coffee. However the devastating effects of the cyclones in the early 1990s wiped out most of the cocoa plantations, which in turn led to an increase in the domestic price of cocoa.

- ***Taro Palagi* and *Taamu*** (giant taro), which were not commonly consumed, became important substitutes for taro and banana during the time of the taro leaf blight.

- The basic food items for Samoans are fish, beef, pork and chicken. Fish is now the main source of income; about 36 per cent of fish caught are consumed and 64 per cent are sold in the domestic and export market.

- The local supply of beef does not meet local demand as it is commonly used for cultural feasts and ceremonies, as is pork. Fifty per cent of pigs are supplied for cultural ceremonies, 40 per cent for consumption and only 6 per cent are sold in the domestic market.

- Fruits and vegetables are also grown in very small patches for domestic consumption and for sale in the domestic market. The supply of these fruits, vegetables is seasonal, and is very limited during the wet or rainy reason.

Samoa: Indicators of agricultural production
(Volume indices 1982 = 100)

Description	Weights	1991	1992	1993	1994	1995	1996
Copra	0.40	0.2	4.2	0.0	0.2	36.2	39.2
Taro	0.29	191.3	179.8	190.2	61.3	70.5	63.5
Fish	0.12	17.6	44.2	51.3	55.1	60.9	172.1
Bananas	0.06	21.0	11.4	42.1	64.1	71.9	67.3
Cocoa	0.05	0.0	0.0	0.0	0.0	0.9	1.8
Beef	0.04	169.5	171.2	174.6	142.4	111.9	115.3
Pork	0.02	343.8	343.8	331.3	337.5	350.0	387.5
Passion fruit	0.01	51.1	0.0	0.0	0.0	0.0	0.0
Poultry	0.01	26.7	26.7	26.7	26.7	26.7	26.7
Total	**1.00**	**73.4**	**73.8**	**77.7**	**41.0**	**58.3**	**71.5**
Percentage change over the previous year		-13.7	0.6	5.3	-47.2	42.2	22.6
Memorandum items		-	-	-	-	-	-
Production value (in million ala)		43.7	50.2	41.5	47.2	60.3	96.1
Percentage change over the previous year		-3.8	14.9	-17.4	13.8	27.8	59.4

Source: Central Bank of Samoa, based on Agricultural Survey results.

III.2.2. Imports

The impact of the cyclones and the taro leaf blight resulted in the lowering of duties for food items such as rice and flour. These provided an alternative for starch foods and substituted for the limited supply of taro. Although rice and flour are imported duty free, they have not changed the tastes of Samoans who prefer taro or bananas; however they provide a cheaper alternative, especially for families in the urban areas with no plantations.

Samoa currently produces about 700 to 900 tonnes of beef, based on the 1999 agricultural census, which is not, however, sufficient to meet local demand. Hence beef imports range from 900 to 1,000 tonnes annually for canning, and approximately 8,000 tonnes of other, generally poor quality, meat cuts for food consumption. Current figures for meat imports (including poor quality meat cuts) are not available, but are estimated to have increased by 0.5 to 1.5 per cent per annum.

The cattle industry is largely constrained by the absence of vertical integration (abattoir, processing, marketing infrastructure) associated with steady improvements in productivity (animal nutrition and husbandry practices). This is currently being addressed by the Government.

Imported agricultural food products, particularly meat, chicken and eggs, are cheaper than the local products, and meat imports are generally of poor quality. The locally produced products are generally of a higher quality (freshly produced), which enables them to fetch a higher price. Beef and lamb off-cuts are imported mainly from New Zealand and Australia, while the United States is the main source for imported chicken, eggs and turkey parts.

Chicken prices on the Samoan market (Landed c.i.f. price plus 12.5% VAGST)*

Source	Price per kg (WS$)**	Price per kg (US$)
Australia	$4.32	$1.30
New Zealand	$5.00	$1.51
United States	$3.30	$1.00
Note: No duty for imported chicken		

Source: Customs Department

*VAGST = value added goods and services tax

**WS$= tala

Prices of imported and local eggs

Source	Price per dozen (WS$)	Price per dozen (US$)
United States	$3.73 (incl. 20% duty + 12.5% VAGST)	$1.13
Local eggs	$5.00	$1.51

Source: Customs Department

Chicken is imported from Australia, New Zealand and the United States and the chicken from the United States does not enter the Samoan market through a food aid programme. Given the lower prices of chicken from the United States and the transportation distance to freight chicken to Samoa, it would appear that the United States is giving subsidies to its poultry farmers.

The setting up of a chocolate manufacturing company has led to the importation of cocoa from other Pacific island countries, as the domestic supply is inadequate to meet the production capacity of the factory. Imported cocoa comes mainly from Fiji and Papua New Guinea. However it accounts for less than 1 per cent of the local market and it is imported mainly for the chocolate factory.

Import duties for agricultural food items

Product	Duty c.i.f (*ad valorem*) (%)	Source
Rice	0	Australia, United States
Potatoes	20	New Zealand
Chicken	0	United States
Lamb flaps	8	New Zealand, Australia
Flour	0	New Zealand, Fiji, Australia
Eggs	20	United States
Meat	8	New Zealand and Australia
Cocoa	20	Papua New Guinea, Fiji

Source: Customs Department

III.3 Exports

III.3.1. Main exports and performance

Samoa

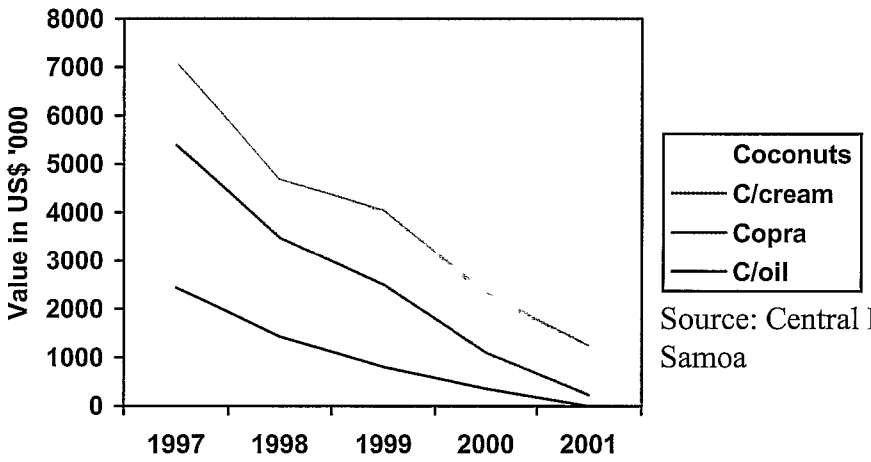
Samoa's main agricultural exports include taro, coconut and coconut products (coconut oil, copra, coconut cream and desiccated coconut), kava, bananas, *noni* (a herbal medicine) and fish. In 1997, the share of agricultural exports amounted to 57 per cent of total exports (excluding fish). However in 2001, this share dropped to 10 per cent of total exports (excluding fish, which constituted 67 per cent of the total exports). The main markets for Samoan agricultural exports are American Samoa (United States Territory), the United States, Europe (mainly Germany and the United Kingdom), Australia and New Zealand. Very little is exported to Japan and other Pacific island countries.

The taro industry, which was one of the leading export earners for Samoa in the 1980s and which suffered badly from the taro leaf blight in the 1990s, has now recovered its position as the predominant staple food crop in Samoa. The new resistant varieties of taro have started to enter the export market, but further research and breeding trials are planned to fully address the quality aspect for export. Taro exports are now on the rise, with an export value of 814,000 tala in 2001, and estimated to rise further.

Today, the most important primary product comes from fisheries, notably the lucrative tuna industry. The design of the local *alia* type fishing vessel and modifications to accommodate long line commercial fishing, as well as private sector participation in marketing and processing has spearheaded the development of the tuna fishery industry. This has taken fisheries from being the third largest export earner (3 per cent) in 1994 (contributing $0.257 million tala) to the leading export earner in 1998, at about $25.5 million tala, with a share of 8.1 per cent ($54.7 million tala, at current GDP prices).[2] Fisheries remains the leading export earner in 2001 at 36.0 million tala, and a share of 8.3 per cent ($70.9 million tala at current GDP prices). Projects for 2002 show a slowdown of export earning growth for Samoa, as environmental and external marketing factors (e.g. the events of 11 September 2000) have affected the industry.

The second most important primary products are coconut-derived (copra, oil, meal, cream and desiccated coconut). Coconut was the most important primary product before world prices plunged and cyclones in the late 1980s and 1990s caused considerable damage to the crop. Recovery has been slow, but present acreage figures suggest coconut production will reach previous levels; the infrastructure for diverse products derived from it is now in place. In 2000, coconut products for export earned $7,465 tala, most of which was from copra. Export values for 2002 are expected to increase with rising world prices and the reopening of the coconut oil mill.

Samoa: Exports of coconut products, 1997-2001



Source: Central Bank of Samoa

[2] 2001 National Accounts Report – Treasury Department, July 2002

Cocoa has been another important crop but exports have declined to zero from a peak of over 5,000 tonnes in 1962. Samoa produces a fine flavoured, high quality cocoa; however production declined as a result of a fall in world market prices, segmentation of the government estates and large private plantations, inefficiencies in the industry and natural disasters. Cocoa production is now recovering and is geared mainly to local processing. Some cocoa products such as chocolate and Samoan processed cocoa (*koko Samoa*) are also exported in small amounts.

Banana and kava are also important export crops. However these have had their fair share of export problems, such as the recent ban by the European pharmaceutical industry on kava imports. Banana exports continue to face the challenge of trying to meet the sanitary and phytosanitary requirements of the New Zealand market.

Banana exports to New Zealand – a market access issue

Samoan green bananas enter the New Zealand market under strict quarantine rules aimed at protecting New Zealand against the possible spread of fruit fly. Samoan bananas were required to be shipped green and were not allowed into New Zealand if they arrived there already ripened. The shipment of bananas takes 14 days, or longer if there are delays, which means that bananas often become ripe by the time they arrive in a New Zealand port. Samoan exporters had argued that the bananas were shipped green without any fruit flies, but this was not accepted by the New Zealand authorities. Nevertheless, a Bilateral Quarantine Agreement between New Zealand Quarantine and Samoa Agriculture was signed specifying new procedures and requirements for shipping bananas to New Zealand. However this led to another problem where new packaging materials and specifications were required for the bananas. The exporters complained that they had invested a considerable amount in importing the existing packaging materials and that with the new specifications more money was required. Another problem which has yet to be resolved is the exporting of organically grown bananas to New Zealand where fumigation is still required for any millibugs that may be present on the bananas. Once fumigation takes place, it takes away the organic nature of the product. The exporters have refused to allow fumigation and are still lobbying with New Zealand Quarantine.

Noni is now a successful export product being sold to the United States, EU and Japanese markets. However the possibility of these markets raising health-related issues threatens to cut off these exports as happened with kava. Other main export crops, which are becoming strong candidates for export to the New Zealand market, are heat treatment forced air (HTFA) crops such as papaya, breadfruit, and other possible fruits and vegetables currently under HTFA research trial runs.

Samoan exports, 1997-2001 (tala '000 and US$'000)

	1997 tala	US$	1998 tala	US$	1999 tala	US$	2000 tala	US$	2001 tala	US$
Coconut Oil	6 761	2 444	4 134	1 433	2 388	803	1 095	352	6	2
Fish	12 327	4 456	25 507	8 843	32 605	10 959	24 741	7 855	36 002	10 736
Coconut cream	4 772	1 725	3 517	1 219	4 550	1 529	3 618	1 161	3 384	1 009
Kava	1 485	537	4 964	1 721	2 139	719	1 049	337	490	146
Copra meal	542	196	210	73	118	40	44	14	-	
Copra	7 882	2 849	5 684	1 971	4 909	1 650	2 294	736	780	233

Taro	99	36	113	40	432	145	716	230	814	243
Garments	-		-		-		4 273	1 372	5 486	1 636
Bananas (Value)	474	171	163	57	408	137	420	134	150	45
Timber (Value)	124	45	4	1	20	7	26	8	-	
Beer	1 603	579	2 124	736	2 838	954	2 715	872	2 929	873
Cigarettes					851	286	555	178	274	82
Soft Drinks	222	80	421	146	386	130	631	203	429	128
Coconuts	136	49	126	44	224	75	414	133	167	50
Other	897	322	1 104	383	1 187	399	1 947	625	1 457	434
Re-exports	131	47	7 450	2,583	1 680	565	270	87	294	88
TOTAL	**37 455**	**13 540**	**55 521**	**19 249**	**54 735**	**18 275**	**44 808**	**14 383**	**52 662**	**15 704**

Source: Central Bank of Samoa

Fiji

Traditionally, sugar has been the largest export product for Fiji, accounting for a quarter of the country's foreign exchange and providing income to over 20,000 farmers and their families. However, with land leases already expiring and the four sugar mills and supply services in desperate need of cash to make them more economical, the sugar industry is on the verge of collapse; some have even suggested that by the year 2003 sugar will no longer be a cash crop. Little has been done to find a replacement industry to utilize the land. Fiji sugar is exported to the EU, the United States (main markets) and neighbouring Pacific markets.

Fiji's fish exports amount to about 10 per cent of the country's foreign sales with a total value of about 100 million Fiji dollars. About half of this is sold as canned tuna and over a quarter as premium fresh fish to the Japanese gourmet market. Fiji has about a million hectares of forest, almost half of which is untouched hardwood forests, and around 100,000 hectares of pine forest under cultivation. Wood chip exports amount to almost 50 million Fiji dollars. A government scheme to harvest the hardwood mahogany trees for over 500 million Fiji dollars was one of the reasons behind the mutiny in Parliament in 2000.

Other agricultural exports from Fiji include copra, taro, kava, ginger and small quantities of papaya, mangoes and spices.

Tonga

The most successful export crops for Tonga are squash pumpkin, sold exclusively to Japan, and vanilla, purchased by France, Japan and the United States. Traditional root crops and vegetables such as taro, kumara, cassava, watermelon and yam are exported to New Zealand and Australia.

Squash pumpkin (*cucurbita maxima*) became one of the main cash crops introduced to Tonga in the past decade to meet the high demands from the Japanese market, which also enabled it to command a high price. Squash has replaced bananas and copra since the late 1980s as the major agricultural export; in some years this vegetable accounts for more than half of all Tonga's export earnings and never less than one third. In 1993/94 squash exports accounted for 13 million pa'anga out of total exports of 23.2 million pa'anga (approximately US$ 12 million).

Tonga's vanilla industry had also flourished for some years with an annual output of more than 40 tonnes, representing a fair share of world production. However, it faded when global competition brought prices down. In recent years, the value of vanilla exports has been below 1 million pa'anga (US$ 0.5 million), and in some years much lower.

Kava exports from the Pacific islands have been greatly affected by the European pharmaceutical industry's ban on the use of kava, following claims that it affects the liver. There have been numerous debates, even amongst some European pharmaceutical associations, regarding the scientific evidence to this claim. Meanwhile, Pacific island farmers and exporters are seeking international assistance for proving that kava is safe for human consumption. Kava industry representatives from around the Pacific issued the following statement at a forum in Vanuatu on the kava ban.

PUBLIC STATEMENT BY KAVA INDUSTRY REPRESENTATIVES AT THE PACIFIC HERBS BUSINESS FORUM

The Pacific Island Countries are growers and exporters of kava, and more importantly come from a tradition where kava has been consumed for many hundreds of years. Kava is very important to our tradition, to our ceremonies and to our economies. The amount of kava consumed in the Pacific Island Countries greatly exceeds the dose in herbal medicine, yet no pattern of liver disease has been linked over all those years to kava consumption.

We believe that the medical authorities in some European countries have acted in haste without an adequate scientific basis for their decisions. We call upon these authorities to immediately conduct a scientific review of the alleged medical cases that led to this situation. This examination should include due reference to patients of taking several prescription and herbal products at the same time.

We bring to your attention the fact that consumption in the Pacific Islands is many times the recommended dose in an herbal preparation, but this dose is taken in the form of the natural plant. The actions in Europe will not influence the kava drinkers of the Pacific Islands but our small vulnerable economies need all the export income that we can earn. The loss of export sales will impact on our economies and on the subsistence farmers for whom kava offers one of the few opportunities to generate a cash income.

We therefore ask the European health authorities to reconsider the current actions against kava-based products.

In addition, a study was undertaken by the Fiji School of Medicine on the effects of kava, one of the main conclusions of which was that,

> *"There is no convincing evidence so far to indicate a direct link of liver toxicity when kava is consumed using traditional methods....There is concern regarding liver toxicity when using herbal kava extract as reported to the German and Swiss health authorities."*

However, the study also stated that the problem was unlikely to be dose-related, but that it was impossible to arrive at any conclusion from the cases reported in Germany until more information was made available about those cases. It mentioned the urgent need to examine the gastrointestinal effects of kava using a properly designed study.[3]

III.3.2 Preferential market access

Australian and New Zealand markets

Agricultural exports from Samoa and other Pacific island countries (within the Pacific Island Forum) have preferential access to the Australian and New Zealand markets under the South Pacific Regional

[3] See paper by Dr. Joji Malani senior lecturer, Fiji School of Medicine, Evaluation of the Effects of Kava on the Liver.

Trade and Economic Cooperation Agreement (SPARTECA). The main exports to these markets are taro, bananas, coconut and coconut products, targeting the Polynesian communities, and they have duty free access to these markets. However, the following are some of the main constraints facing agricultural exports to these markets under the Agreement:

- Stringent quarantine requirements and standards that Samoa exporters lack the resources and capacity to meet;
- Supply constraints to efficiently supply the market;
- The multilateral commitments made by Australia and New Zealand under the WTO have meant a reduction in duties imposed on most products, including coconut products. This has led to a surge in cheaper coconut cream imports from Asia. As a result, the Samoan coconut cream has lost most of its market share in these markets, leading to the closure of two factories as they could not compete with the Asian products.

European markets

Exports from the African, Caribbean and Pacific (ACP) countries, including Samoa, had been entering the EU under the then Lomé IV Agreement. The Samoan exports to the EU were limited to kava and copra, while Fiji's sugar exports entered the EU market under the Sugar Protocol of the Lomé IV Convention. The phasing out of this preferential access through the Lomé IV Convention would have an enormous negative impact on Pacific island exports. The EU's Everything-But-Arms (EBA) commitment has given more market access to other LDCs, particularly those Asian countries that have a competitive advantage in the production of such items as coconut cream and coconut oil. Thus exports from the Pacific region to the EU market have been marginalized as other developing countries have successfully competed for the EU market under the EBA initiative.

Furthermore, despite an improvement in preferential market access conditions under EBA, Pacific island LDCs have not been able to take full advantage of this due to their lack of supply capacity, and particularly their inability to meet the standards and requirements of the market. Inadequate trade facilitation support measures have also adversely affected agricultural exporters. For example, the documentation requirements for exports to the EU are so stringent, even the specifications concerning the text and thickness of the paper, that a Samoan consignment of produce sent to the EU market was rejected at the port of entry as it was accompanied by the wrong export forms. Given the distance from Samoa to the EU market, the costs to the exporter were very high. Other obstacles to access to the EU market are the requirements and standards set for that market which vary for each produce. For instance, in the case of fish exports to the EU, Samoa is required to have all the legislation in place for fish management and an internationally certified authority to test the quality of the fish. Many Pacific island countries have neither the resources nor the capacity to meet these requirements.

United States market

Samoa has preferential market access to the United States under the Generalized Systems of Preferences (GSP). Samoa's main exports to this market under the scheme are fish, *noni* and very small quantities of taro and cocoa. The main obstacle is supply constraints, as orders far exceed the supply capacity. Efforts to export coconut cream and coconut oil were unsuccessful due to the very low prices of these products in the United States market. Also, meeting product standards and United States Department of Agriculture requirements has always constituted an obstacle to agricultural exports, even to the United States' Territorial Government of American Samoa.

Regional opportunities

The Pacific Island Countries Trade Agreement (PICTA) affords opportunities for members' exports. It provides a stepping stone for exporters to build their capacity in meeting quality and supply requirements from a smaller market to a larger international market. The PICTA would come into force once six

members ratify the Agreement, and the Agreement also provides regional collaboration in addressing multilateral trade facilitation issues.

III.4 Policy measures in the agricultural sector

III.4.1 Measures concerning agricultural imports

The surge in imported products after the tariff liberalization programme in 1998 had little impact on the basic staple food crops such as taro and bananas. The main impact was on the processing and manufacturing industries. The poultry industry was significantly affected, while egg imports surged and the price of eggs fell. However, the high quality of locally produced eggs provided a competitive advantage for this product in the domestic market.

The dairy industry in Samoa is still in its embryonic stage, with only a few small fresh milk producers. Hence the reduction in duties provided vulnerable groups with greater access to cheaper dairy products.

The main effect on the agricultural sector was the removal of the government subsidy on agricultural equipment and pesticides sold through the government-owned Agriculture Store. The consequent increase in prices for agriculture equipment, fertilizers and pesticides, meant that they became less accessible for low-income farmers; this in turn led to a decline in the level and value of agricultural production.

Domestic support to the agricultural sector is mainly through technical support and advice by the Ministry of Agriculture. Furthermore, primary industries are exempted from the value added goods and services tax (VAGST), a broad-based tax applied to all goods and services sold in the Samoan market.

In meeting the challenges relating to agricultural development in Samoa, the Government, in its Statement of Development Strategy, outlined the areas of priority focus for the sector for the 2002–2004 period. These include:

- Commercial agriculture diversification;
- Village and subsistence agriculture;
- Commercial fisheries management;
- Village and subsistence fisheries development; and
- Livestock production.

The main strategy focuses on diversification and continuous research on cash crops to address the constraints relating to vulnerability to natural disasters, pests and diseases and market conditions.

The Government of Samoa has also designed policies and strategies to develop the agricultural sector, particularly the village economy, to address the challenges relating to income support and access to basic food. Some of these strategies include:

- Maintaining the share of subsistence agriculture and levels of, and cash income from, agriculture;
- Pushing for diversification of cash crops so that the country does not become too dependent on a few crops for subsistence needs and for export earnings;
- Furthering the development of subsistence and commercial fisheries;
- Devising effective strategies to revive the rural economy;
- Promoting sustainable development of the agricultural sub-sector, which requires consideration of economic, social and environmental systems;

- Drawing a distinction between the servicing needs of the commercial and subsistence sectors and, concomitantly, between economic and social objectives in providing extension and other services to farmers;
- An approach to economic development of the agricultural sub-sector that focuses on the private sector and on those already successful in commercial agriculture. Private sector entrepreneurs will provide leadership and become the "engine for growth" in agriculture;
- Recognizing that the Government, through the Ministry of Agriculture has an important role to play in extension, research, regulation and policy development;
- Making land available for commercial agricultural development through divestment of the Samoa Trust Estates Corporation and Samoa Land Corporation;
- Conducting regular surveys on pests and diseases and continuous research, training and market development.

Village and subsistence agriculture strategies include:

(i) Strengthening extension services;
(ii) Identifying more farmer groups;
(iii) Organizing regular village competitions;
(iv) Encouraging community-based stalls; and
(v) Facilitating credit access.

The Government, through a programme of the Asian Development Bank (ADB), has also introduced a Loan Guarantee Scheme that provides access to credit for small businesses. The main target group for this scheme is the farming rural communities who are given the opportunity to obtain financing for their plantations or plots.

III.4.2 Measures concerning agricultural exports

Samoa has developed a number of strategies to improve its exports, including,

- Strengthening and diversifying its agricultural products, both for export and for domestic consumption and processing;
- Targeting export growth and diversification at the commercial level;
- Developing marketing information and identifying marketing opportunities to provide a more focused and farmer-oriented service;
- Providing support to export production through the identification of other crops and products with a higher value-added potential;
- Promoting organic production for niche markets;
- Providing market information on access to domestic and export markets; and
- Improving the infrastructure to help agricultural exports meet the requirements and specifications of the overseas markets.

The Government of Samoa also introduced the Government Export Guarantee Scheme (GEGS) to address issues relating to risk in export orders and to provide exporters with access to financing for such orders (see annex 3 for details of the Scheme). The GEGS aims to boost exports by issuing Export Finance Guarantees (EFGs) as collateral to enable eligible exporters to obtain short-term finance (working capital) from the local commercial banks and the Development Bank of Samoa for confirmed export orders. In addition, the insurance policy requirement of the Scheme should strengthen the confidence of existing as well as new companies to produce new products for export and to export existing products to new lucrative markets overseas. Initially, the Scheme will apply to exports of

goods only. Eventually, it is envisaged that as the GEGS Fund and Systems develop, the Scheme will be expanded to cover exports of services as well.

In Fiji, the restructuring of the sugar industry is a major focus that requires addressing issues relating to low quality and low supply. For the copra industry, the issues to be addressed include improving the supply capacity and cooperating in efforts to stabilize world copra prices, which have been low in recent years. Strategies similar to those adopted by Samoa are being used with the aim of improving agricultural exports and meeting export market requirements and quality standards.

Tonga is also focusing on programmes for greater diversification, and is seeking to improve the quality of its exports in order to access more overseas markets. Improving the infrastructure for trade is also seen as important for Tonga as it prepares for entry into the multilateral trading system.

During the 1980s and the 1990s, two significant trends occurred in the structure of marketing, namely (a) a decline in the export of traditional commodities, and (b) the development of more specialized products for niche markets overseas. This latter trend is both an extension of the domestic market among overseas Samoans and a modern extension of the system of social and family exchanges.

The development of new lucrative markets such as for tuna fish and kava has elicited a dramatic response from the agriculture sector. However, since the turn of the century, kava exports, in particular, have been greatly marred by damaging health reports from Germany, without any proper scientific evidence. It is significant that nearly all the innovations in marketing, such as the development of high-value coconut products, the export of traditional ethnic foods and the exploration of high-value cocoa markets, have been spearheaded by the private sector, limited only by the lack of access to credible capital financing. In some instances, government intervention through financing marketing infrastructure such as the Heat Treatment Forced Air (HTFA) facility which is currently being put in place, will boost private sector exploration of marketing avenues for export of agricultural commodities.

Close collaboration between the Agricultural and Trade Ministries is being set up to strengthen the marketing of agriculture exports to overseas markets. International and regional organizations (such as FAO and the Forum Secretariat) continue to assist the Pacific Island economies in developing marketing strategies and providing support for agricultural exports.

III.5 Non-trade concerns

Most Pacific island countries (as reported by the FAO) have reported anecdotal evidence of poverty and food insecurity among certain sectors of society, particularly in urban areas. Malnutrition has been growing along with increasing incidences of non-communicable diseases. Employment in the rural sector has been declining, exacerbated by growing migration and, in the case of the larger Pacific island countries, mounting law and order problems.

Pacific island countries have significantly changed their dietary habits; there is a growing demand for and consumption of imported, highly processed foods of poor nutritional quality. Moreover the accrued dependency on imported foods has led to increased vulnerability of the traditional food systems. The agriculture balance is negative, and the value and quantity of imported foods are higher than those of exports. Limited land area, the paucity of soils suitable for agriculture, crop diseases and contamination, expansion of tourism, increasing urbanization, and availability of convenience foods at comparatively low costs have adversely affected the production of traditional foods and have led to an increase in food imports.

Food quality and safety remain a crucial issue in the Pacific. Although national food laws are at different levels of development in the region, food standards and regulations are, in general, non-existent. This lack of standards/regulations opens the door to unfair competition from imported products with some local products, and the potential risk of dumping of sub-standard foods.

In addressing rural poverty and household food security in Samoa, the Government considers agriculture and the agribusiness sectors as strategic areas for the creation of remunerative employment and livelihood options. Nutrition education and information campaigns are integral components of the new nutrition policy. Vigorous efforts have been made to promote access to, and consumption of, adequate quantities of a variety of nutritious foods, including better supplies of oils and fats, and of micronutrient-rich foods such as fruits, vegetables and good quality proteins. Other government strategies focus on health and education, which are considered key to addressing nutritional problems, as well as the provision of improved sanitation and safe and adequate supplies of drinking water.

IV. MODALITIES – INPUTS TO THE ONGOING WTO NEGOTIATIONS ON AGRICULTURE

Samoan and Pacific Island exports will continue to face many challenges as multilateral liberalization takes place. Owing to supply-side constraints, the islands are already price takers in nearly all commodities sold in the world market. Continuous liberalization by international markets provides a huge challenge for Pacific island exports in terms of competitiveness, and, as most Pacific island countries still rely on agriculture as the backbone for economic development their governments are obliged to provide support to agricultural producers.

The Uruguay Round Agreement on Agriculture and the requirements for member countries to improve their legislative framework, as well as WTO administrative requirements, have yet be fully met by the Pacific islands. Most of them lack the awareness and human resource capacity to develop the appropriate institutions and systems. In Samoa, the Agriculture Department has very little knowledge of what it is expected to do under its WTO obligations, and the same goes for Tonga.

The Pacific islands, mainly consisting of small developing and least developed States, certainly require special and differential treatment in light of commitments required under the WTO Agreements. Least developed countries (LDCs) are currently exempted from all reduction commitments. However this does not apply to newly acceding LDCs; the reduction commitments required of them will further disadvantage their economies as their small agricultural industries will have to struggle on their own, without government assistance, to develop their produce. Discussions at international forums, such as the recent World Summit on Sustainable Development, about increasing poverty have highlighted the needs of the LDCs for development assistance from their respective governments and international donors.

The special and differential treatment (S&DT) under the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS) calls for WTO members to take account of the special needs of developing country members and, in particular, the LDCs. It also allows longer time frames for compliance with the new SPS measures on products of interest to developing country members so as to maintain opportunities for exports. Since the Pacific islands currently face market access restrictions due to their inability to meet SPS requirements, WTO members should allow S&DT to facilitate export access opportunities for small developing and least developed member countries. Furthermore, technical assistance in meeting the SPS requirements would not only promote compliance but also, more importantly, continuous market access.

IV.1 Market access

(a) Tariff cuts

- Some developing countries suggest that they should be allowed exemption from reduction commitments, or be permitted to renegotiate the bound tariff levels, on some tariff lines for food security and rural development purposes.

Samoa is one of the first Pacific island countries to have undertaken substantial tariff reforms in 1998 as part of its economic reform programmes. However due to the recent cyclones, duties for most food items were drastically reduced. Tariffs were reduced from a maximum of 60 per cent to a maximum of 20 per cent; tariffs now range between 0 and 20 per cent. The main impact on the agricultural sector from these reforms has been an increase in the importation of food products, particularly those products that are also domestically produced. For instance, the duty on imported eggs was reduced from 60 per cent to 20 per cent. Since the poultry industry in Samoa is very small, and farmers have to import all the raw materials, such as day-old chicks, chicken feed and packaging materials for eggs, the industry could not compete with the imported eggs. The Government then addressed this anomaly by reducing the duties on the raw materials. However the generally low duties on imported products are seen as a threat to a domestic industry trying to establish itself in the domestic market.

As Samoa is currently negotiating its accession to the WTO, industry consultations and analyses are seen as important mechanisms to provide justification for negotiations for a higher bound rate, particularly for domestically produced agricultural and manufactured products. Samoa is committed to becoming a member of the WTO and has already put in place policies that are in line with the WTO commitments, particularly those relating to tariff reductions. However, flexibility must be given to the country to impose higher bound rates for those industries on which the economy relies heavily for employment, food security and sustainable development.

(b) Special safeguard measures

- Some developing countries suggest that there should be a modality which allows a developing country to adopt safeguard measures if a surge in food imports threatens that country's long-term food security concerns.

Samoa has never imposed a safeguard measure, neither does it currently have a safeguard measures in place, on any imports. However the Government introduced a broad-based tax, the VAGST, for all goods and services sold, except for the subsistence agricultural sector. Even for introducing a safeguard measure, Samoa currently does not have the appropriate legislative mechanism in place, nor the human resources and financial capacity to fully analyse any concerns which may warrant the introduction of a safeguard measure.

IV.2 Domestic support

- Some developing countries suggest that there should be greater flexibility in the level or the use of domestic support measures that aim to achieving food security and rural development.

Under its reform programme, the Government of Samoa has taken steps to liberalize all sectors of the economy; agriculture is no exception. It has eliminated all price-support policies for agricultural products, and now has only a limited number of policies specifically aimed at improving agriculture. These are aimed, for instance, at helping farmers to adjust to open-market conditions and at helping to improve the nutritional status of disadvantaged groups by improving subsistence farming practices. Environmental considerations are integrated into each programme. For example, specific programmes are designed to restructure the extension service, to strengthen sustainability through quarantine and disease/pest control systems and to introduce new crop varieties and reforestation. Since Samoa is an LDC, its financial outlays are modest by international standards. STABEX funds from the European Union are not used to subsidize exports, but for programmes related to the establishment of plantation access roads, the facilitation of village production, and the building of an abattoir and a heat treatment plant for exported fruit.

With respect to the "green box" provision for payments for natural disaster relief (Annex II, paragraph 8), the Government operated a bonus scheme which provided support to the agricultural sector after the

cyclones in 1990 and 1991. Under this scheme farmers received direct payments to assist in the planting of their crops. However this was abolished in 1999 when agricultural production reached a sustainable level. Paragraph 8 (a), however, states that

> *"eligibility for such payments .... shall be determined by a production loss which exceeds 30 per cent of the average of production in the preceding three-year period or a three-year average based on the preceding five-year period, excluding the highest and the lowest entry."*

This may reduce the usefulness of this provision to the Pacific islands, where the majority of farmer holdings are very small in size, with only a few commercialized farms that produce most of the total agricultural production. Calculating the 30 per cent of the average may only benefit those few farmers — not all. Furthermore, resource constraints of farmers may require governments to assist even in amounts less than the 30 per cent average. A more complicated issue is calculating 30 per cent of the average income, particularly of subsistence farmers who also earn some form of income.

Paragraph 8 (b) further restricts such payment, which can be made "only in respect of losses of income, livestock (including payments in connection with the veterinary treatment of animals), land or other production factors due to the natural disaster in question." Damages following a natural disaster, such as the cyclones in Samoa, range from the loss of production/income (from crops to livestock) to destruction of houses/homes, roads and loss of basic utilities such as water and power. In such a situation, the Government of Samoa had to start rebuilding everything from scratch, the most important being the provision of utility supplies, rebuilding roads (including plantation access roads) and providing assistance for rebuilding houses, school and churches. In redeveloping agriculture, the Government had to provide planting materials and financial assistance (including soft loans from the Development Bank of Samoa) to revitalize the village economy. Given the experience of the Pacific islands with natural disasters, payment assistance in support of reconstruction after disasters should be included.

Concerning food security and rural development, a modality that would provide developing countries with flexibility to introduce domestic support measures aimed at these important socioeconomic objectives is very important, particularly for vulnerable small island economies such as Samoa. Two recent cases which affected the rural communities, especially in the agricultural sector, has led the Government to provide domestic support measures to address these concerns with the main objective of alleviating any negative impacts on the rural communities.

In 2001 the Samoan Government reintroduced a price stabilization scheme for copra, with a view to compensating for the plunge in the world prices for copra from 1999-2000, and to encouraging farmers to produce copra. The Government allocated 1.5 million tala (approximately US$ 450,000) to stabilize the local price of copra. A minimum producer price has been set by the Government, and should the price offered be less than this minimum price the Government will top it up. For instance the current price for a metric tonne of copra is 600 tala, of which 10 per cent is the stabilizer.

In the 2002/03 Budget, the Government noted with concern the adverse impact on kava exporters of the kava ban imposed by the European and United markets. Furthermore, the Government, in recognition of the importance of expanding exports from Samoa, as well as the limited access of exporters to finance from financial institutions, introduced a Government Export Guarantee Scheme, to be used by eligible exporters as collateral for obtaining export financing from the local financial institutions. An amount of 1 million tala (approximately US$ 295,000) has been allocated for this new scheme.

- Some developing countries suggest that the *de minimis* limit of 10 per cent should be increased for developing countries. As part of its accession process to the WTO, Samoa has submitted Agriculture Support Tables (see annex 2 of this paper). Given recent cases where the Government has had to provide support to the agricultural sector, the total amount of assistance given may be more than the *de minimis* limit; hence the suggestion to raise the *de minimis* limit is relevant.

IV.3 Export subsidies

- Some developing countries suggest a targeted approach to eliminating export subsidies (e.g. immediate elimination of subsidies on products exported by developing countries).

A constraint facing many small Pacific island countries is their very limited resource base, and most countries traditionally have relied on commodities such as coconut and coconut products, cocoa and coffee. The high subsidies that developed countries provide to their soybean or corn producers has shifted the demand from coconut oil to a more competitive price (price distortion) for soybean oil and vegetable oil. The consequent reduction in coconut oil prices has adversely affected the Samoan industry, resulting in the closure of the only coconut oil mill in the country.

Pacific island economies would therefore like to see developed countries eliminate export subsidies first, prior to a targeted commitment from small island States or developing countries to reduce their subsidies, even though this may increase their bills for imported food, given that the Pacific islands are mostly net food importing developing countries (NFIDCs).

V. FUTURE OUTLOOK

In the course of ongoing WTO negotiations on agriculture, it is evident that allocation of benefits from multilateral liberalization of the agricultural sector has been uneven among WTO members countries, particularly the small island economies. Benefits for the Pacific islands lag far behind. Their biggest problems arise from their smallness, remoteness, and vulnerability, which have made it more difficult for them to access international markets successfully. The future of the Pacific islands depends upon substantial attention concessions? from the developed world, particularly for the development of the agricultural sector which is the backbone of many Pacific island economies.

In order for the small island economies to benefit from multilateral liberalization, the following modalities and assistance are needed:

i) Enhance supply capacity constraints, such as facilitating access to land and finance to improve productive systems and providing access to free or subsidized planting materials.

ii) Strengthen infrastructure for the agricultural sector. Government support is needed in the areas of research, marketing information, ongoing advisory services on opportunities available, as well as infrastructure to test the quality of the produce (such as heat treatment and abbatoir services).

iii) Reduce duties on raw materials. The narrow resource base of the island economies means that most raw materials, pesticides, fertilizers and packaging materials are imported. Lower duties on these materials would enable them to set competitive prices for their agricultural products.

iv) Domestic support. Small, vulnerable economies should be allowed flexibility to provide domestic support to specific sectors. Governments at this stage of the negotiations cannot foresee any future effects of catastrophes that may not be covered by any committed safeguard measures under the Agreement.

v) Increase knowledge and capacity concerning the multilateral trading system and, in particular, the Agreement on Agriculture. Most officials do not have a clear idea of their role and responsibilities under the WTO Agreement on Agriculture, or the requirements for SPS and technical barriers to trade (TBT) under the WTO. Improved knowledge of the WTO framework and how these officials could link it to national policies and strategies is a high priority.

vi) Trade facilitation measures. Small island economies need the necessary facilities to assist their agricultural exports to meet the requirements of the international markets, and the resources to set up such facilities.

vii) Market information. Improved access to information on markets, prices and market requirements would assist in the preparation of products for export.

viii) Participation in the multilateral negotiations. The Pacific island economies have little knowledge of the current negotiations on the Agreement on Agriculture, nor do they have the resources and capacity to attend these negotiations. A mechanism that would help them to participate is needed to enable them to contribute their comments or ideas on the negotiations;

ix) Market access. Regional free trade arrangements such as the PICTA would provide opportunities for the smaller export quantities to enter the smaller markets;

x) Non-trade concerns. Most island economies have yet to fully analyse their non-trade concerns, and building such awareness would assist the Governments in developing the right policies; these would not have any implications on non-trade concerns.

VI. CONCLUSIONS

The Pacific island economies are prepared and committed to integration into the multilateral trading system. However the many constraints associated with smallness, remoteness and vulnerability of these economies present a stumbling block to their success in world trade. Agriculture is the backbone of their economies, providing livelihood and welfare to the majority of their people. It is important for the multilateral trading system to benefit all WTO members countries, from the developed to the least developed countries, taking into consideration the special needs of these economies.

ANNEX

Annex1
Real GDP, 1996-2001 (Tala million)

At constant 1994 prices	1996	1997	1998	1999	2000	2001
Agriculture	89.56	77.34	75.81	74.91	75.34	66.12
Fishing	44.00	47.50	53.26	49.66	49.65	53.14
Food and beverage manufacturing	29.67	29.48	24.16	24.32	23.33	22.81
Other manufacturing	70.62	64.75	58.16	59.11	66.22	78.71
Construction	36.96	39.48	37.62	38.86	47.20	49.17
Electricity and water	16.31	16.89	16.75	16.34	17.64	20.68
Commerce	72.75	79.41	85.50	92.35	100.80	109.29
Hotels and restaurants	13.24	12.66	12.67	12.98	13.78	15.33
Transport and communication	57.38	59.65	66.53	70.72	78.40	88.13
Public administration	50.07	54.71	59.49	63.55	67.54	71.36
Finance and Business Services	32.74	34.94	38.82	40.15	42.24	46.18
Less enterprise share of FISIM*	-2.83	-2.86	-3.15	-3.41	-3.73	-4.17
Ownership of dwellings	20.81	21.23	21.65	22.09	22.53	22.99
Personal and other services	39.57	40.25	41.92	42.72	45.38	48.65
Value added at 1994 market prices	570.85	575.43	589.21	604.36	646.33	688.39
Implicit price deflator	97.3	108.7	111.8	115.6	119.9	123.7
Selected measures of production at constant 1994 prices:						
Non-monetary	109.41	122.93	120.62	119.12	119.81	114.06
Monetary – total	446.11	452.50	468.59	485.24	526.52	574.34
Monetary – restricted scope	391.74	406.12	428.48	443.81	479.33	515.23

*FISIM - Financial Intermediary Services Indirectly Mission

Annex 2
Domestic support, period reporting: 1996/1997 – 1998/99
(Supporting Table DS:1)

Measures exempt from the reduction commitment - "green box"

Measure Type	Name and description of measure	Monetary value of measure (tala)	Data Source
1	2	3	4
Research	General research including research Programmes relating to particular products		
	Ministry of Agriculture, Forestry, Fisheries and Meteorology;		
	1996/1997	NIL	
	1997/1998	SAT 511 204	
	Treasury Department		
	1998/1999	SAT 717 626	
	Average 96/97 - 98/99	SAT 409 610	
Pest and Disease Control	Quarantine and eradication, pest and disease control measures.		
	1996/1997	SAT 346 453	
	1997/1998	SAT 525 039	
	1998/1999	SAT 708 563	
	Average 96/97 - 98/99	SAT 526 685	

Extension and Advisory Services	Includes training services		
	1996/1997	SAT 742 103	
	1997/1998	SAT 2 095 041	
	1998/1999	SAT 1 829 083	
	Average 96/97 - 98/99	SAT 1 555 409	
Inspection Services	Includes forest monitoring, Services and other Control measures		
	1996/1997	SAT 234 940	
	1997/1998	SAT 551 037	
	1998/1999	SAT 584 432	
	Avcrage 96/97	SAT 456 803	
	Total Value of Agricultural Production		
	1996	SAT 59.93 million	National Accounts
	1997	SAT 77.01 million	Report
	1998	SAT 67.34 million	Treasury Dept.
	Average 1996 - 1998	SAT 68.08 million	

Note: SAT= tala

Annex 3
Samoa Export Guarantee Scheme

Objectives

The Government Export Guarantee Scheme (GEGS) aims to boost exports by issuing Export Finance Guarantees (EFGs) as collateral to enable eligible exporters to obtain short-term finance (working capital) from the local commercial banks and the Development Bank of Samoa for preparing confirmed export orders. In addition, the insurance policy requirement of the Scheme should strengthen the confidence of existing as well as new companies to produce new products for export and to export existing products to new lucrative markets overseas.

As a start, the Scheme shall apply to the exports of goods only. Eventually, it is envisaged that as the GEGS Fund and Systems develop, the Scheme will be expanded to cover the exports of services as well.

GEGS Committee & GEGS Unit

A special GEGS Committee has been appointed by the Government to oversee the implementation of the Scheme. Also, a special GEGS Unit has been established within the Department of Trade, Commerce and Industry to handle the day-to-day operations of the Scheme. The Unit has authority to approve EFGs of up to $10,000, and those in excess of $10,000 that the Unit considers worthy of support shall be referred to the GEGS Committee for approval. The Committee shall meet to consider these applications once a week.

Registration of eligible exporters

All individuals and companies who wish to benefit from the Scheme need to be registered with the GEGS Committee – through the GEGS Unit.

However, only local individuals and companies that are predominately locally owned (i.e. with a local shareholding of more than 50 per cent) are eligible to register under the GEGS. To give the Unit sufficient time to process and verify the authenticity and credibility of potential users of the Scheme, all applications for registration should be lodged with the GEGS Unit at least 14 days prior to lodging an application for an EFG. For registration, the applicants need to provide authentic documentation to confirm their legal status and existence in Samoa. The quality of management staff will also need to be considered, since that staff will be responsible for the daily operations of a company. In addition to the above requirements, the Committee shall take into account the applicant's trading record and history of cooperation with the Government on other related issues.

A one-off non-refundable fee of $50 is required to process applications for registration. Revenues from these fees shall be deposited in the GEGS Fund Account.

The GEGS Committee reserves the right to accept or reject any application for registration. The Committee also reserves the right to de-register any company for breach of any of the terms and conditions of the GEGS.

Once an application for registration is approved, a certified copy of the original registration form shall be provided to the exporter while the Unit keeps the original.

Criteria for acceptance and sum guaranteed

Export Finance Guarantees (EFGs) can only be issued to registered GEGS companies and individuals. In addition, the issuances of EFGs also need to take into account whether the exporter adhered to the conditions of any previously issued EFG.

To minimize the risk exposure of the Government, the EFGs can only be issued for confirmed export orders, backed by a comprehensive trade credit and marine insurance policy to cover at least the value of the EFG to be issued. Documentary evidence of a comprehensive buyer/seller contract is required to verify the existence of a confirmed export order.

The trade credit and marine insurance policy should designate the Government of Samoa as the sole beneficiary. The trade credit part of the insurance policy should at least cover commercial risks (buyer insolvency, protracted default by a solvent buyer, contract repudiation) and political risks. In assessing this requirement of the Scheme, the reputation and track record of the insurance companies involved should also be taken into account.

Sum guaranteed

Based on discussions with exporters, it is estimated that 20 per cent of the value of an export order represents the profit margin for the exporter and the rest (80 per cent) represents the full cost price of the order. Given that the purpose of GEGS is to provide working capital to exporters, an Export Finance Guarantee should only be issued up to a maximum of 80 per cent of the total confirmed value of the export order.

Since the values of the export orders are likely to be denominated in foreign currency, the sum guaranteed shall be calculated and specified in Samoan Tala at the exchange rate prevailing at the EFG'S date of issue.

Terms of an Export Finance Guarantee (EFG)

An EFG may not be issued earlier than 30 days prior to the expected date of shipment of the export order. The EFG shall become void once the bank receives the export proceeds. However, if the export proceeds are not received within five months from the date of issue, the lender may proceed to call up the EFG. To allow sufficient time for the GEGS Unit and the lender to execute an EFG that has become callable, the EFG shall remain valid for no more than two weeks after the stated five-month period has lapsed.

Once the export proceeds have been received, the bank should certify the original EFG form / certificate to that effect and return it to the GEGS Unit for closure.

On the other hand, if the EFG loan repayment is not received by the relevant bank after the five-month period stated above, that bank may proceed to certify the original EFG form to that effect and submit it to the GEGS Unit to recover the funds to repay the EFG loan.

Issuance of Export Finance Guarantees

The Application Form for EFG shall be completed in quadruplicates. Once an application for EFG is approved, the original form (for the relevant bank), the first copy (for the relevant insurance company) and the second copy (for the exporter) shall be provided to the exporter for appropriate action while the GEGS Unit shall keep the remaining copy. The exporters are required to submit the shipping documents to the GEGS Unit once the export shipments leave the country. The name of the lending institution to which the EFG is payable should be specified on the EFG Application Form. The only lenders that are allowed to participate in the Scheme are the commercial banks and the Development Bank of Samoa.

Interest rates on GEGS loans

The principle role of the Scheme is to provide collateral to secure working capital from the local financial institutions. Given that Samoa aspires to become a member of the World Trade Organization, it is necessary to ensure that the Scheme is not seen as providing a direct interest rate subsidy to

exporters. Exporters are, therefore, required to pay the normal market rate of interest (i.e. the base lending rate plus the normal risk margin) that is charged on these types of borrowing by the banks.

However, since the Government will absorb virtually all the risks, the commercial banks shall retain only the base lending interest rate and pay the rest to the GEGS Fund.

Transfer of ownership

EFGs may not be transferred to other parties.

Confidentiality of information

The GEGS Committee and Unit shall maintain the confidentiality of all commercially sensitive information that is collected in the course of administering the GEGS.

Review of the Scheme

The Scheme shall be reviewed every six months. The reviews shall be prepared by the GEGS Unit for endorsement and submission to the Cabinet by the GEGS Committee. The reviews shall incorporate the views of all stakeholders in the Scheme.

For further information, contact the Industry Development Unit of the Department of Trade, Commerce and Industry on:

Tel: (685) 20471/20472 /20882
Fax: (685) 21646
E-mail: industry@tci.gov.ws
Internet address: http://www.tradeinvestsamoa.ws

BIBLIOGRAPHY

Asian Development Bank (1985). *Western Samoa Agriculture Sector Study, Vol 2: Background and Sector Review.* Samoa, ADB April.

Central Bank of Samoa (2002). Central Bank of Samoa Bulletin. Apia, Samoa. June.

Coconut Development Authority, Marketing and Research Division (2000). *Coconut Market Focus,* Monthly Bulletin Vol. II, Colombo, Sri Lanka. November.

Coconut Development Authority, Marketing and Research Division (2001). *Coconut Market Focus*, Monthly Bulletin Vol. VI, Colombo, Sri Lanka. November.

Duncan R, Cuthbertson S and Bosworth M (1999). Pursing economic reform in the Pacific. *Pacific Studies Series*, Asian Development Bank, Manila, Philippines. October.

Fairbairn Te'o IJ (1993). *Western Samoa's Census of Agriculture: Major Features and Implications for Development.* NSW, Australia, University of New South Wales.

FAO Subregional Office for the Pacific Islands (2001). Report of the Fourth Meeting of South West Pacific Ministers for Agriculture, Port Vila, Vanuatu, 23-24 July.

Government of Samoa, Ministry of Agriculture, Forestry & Fisheries (1998). Corporate Plan 1999-2001 (final working draft). Apia, Samoa, 19 November.

Government of Samoa (2001). 2001/2002 Budget Address by Hon Misa Telefoni, Minister of Finance, Samoa, 31 May

Government of Samoa (2002). Strategy for the Development of Samoa 2002-2004 (SDS). Treasury Dept.,, Apia, Samoa, January.

Government of Samoa, Ministry of Agriculture, Forests, Fisheries and Meteorology (2002). *Corporate Plan July 2002- June 2005.* Samoa, March

Government of Samoa (2002). 2002/2003 Budget Address by Hon. Misa Telefoni, Deputy Prime Minister and Minister of Finance. Treasury Department, Apia, Samoa, 31 May.

Government of Samoa, Dept. of Statistics (1999). *Census of Agriculture 1999* (Preliminary report) Apia, Samoa. April.

Government of Samoa, Dept. of Statistics (2000). *Agriculture Survey 2000.* Apia, Samoa

Government of Samoa, Dept. Of Trade, Commerce and Industry (1998). Memorandum on the foreign trade regime of Samoa. Apia, Samoa.

McGregor A (1999). *Linking Market Development to Farming Systems in the Pacific Islands.* Apia, Samoa, FAO Subregional Office.

SAPA (1999). Report of the FAO Regional Workshop on Improved Agricultural Marketing, Apia, Samoa, 13-16 April, 1999. FAO, Apia, Samoa. September

Shepard A (1999). *Agricultural Marketing in the South Pacific.* Apia, Samoa, FAO

UNCTAD (2001). *Competitiveness of Samoan Enterprises for Effective Integration into the Multilateral Trading System.* Report of the national workshop organized under Technical Cooperation Project: SAM/00/001, Trade Policy and Export-Oriented Strategies for the Effective Integration of Samoa into the Multilateral Trading System, Apia, Samoa, 5-9 February 2001.

World Trade Organization (1995). *The Results of the Uruguay Round of Multilateral Trade Negotiations: The Legal Texts.* Geneva, Switzerland, WTO.

VISITS & CONSULTATIONS

SAMOA

1.	Dr Vili Fuavao Mr Matairangi Purea Mr Dirk Schulz Mr Aleki Sisifa	FAO Sub-Regional Representative Plant Protection Specialist Food & Nutrition Officer FAO Adviser
2.	Ms Mutaaga Enosa-Faalogo	Assistant Project Officer, UNDP Office, Apia
3.	Mr Tuala Falani Chan Tung	Secretary of Trade, Commerce & Industry
4.	Ms Nella Tavita	Principal Policy Officer, Trade, Commerce & Industry
5.	Mr Iulai Lavea	Deputy Financial Secretary, (Planning & Finance) Treasury Department
6.	Mr Seumanutafa Malaki Iakopo	Director, Ministry of Agriculture, Forestry & Fisheries
7.	Mr Frank Fong	Principal Policy and Economic Analyst, Ministry of Agriculture, Forestry and Fisheries
8.	Mr Leilua Richard Mariner	Collector of Customs, Customs Department
9.	Mr Eddie Wilson	Wilex Marketing International

FIJI

1.	Ms Mere Falemaka	Trade Policy Adviser, Pacific Island Forum Secretariat
2.	Ms Lailun Khan	Deputy Permanent Secretary, Ministry of Foreign Affairs and External Trade
3.	Ms Yolinda Chan	Ministry of Foreign Affairs and External Trade
4.	Ms Soraia Marawa	Principal Economic Planning Officer, Ministry of Commerce, Business Development and Investment
5.	Mr Arthur Sushil Kumar	Fiji Customs
6.	Ms Maria Joao Rahla	Economic Adviser, European Commission

TONGA

1.	Mr Paulo Kautoke	Secretary, Ministry of Labour, Commerce and Industries
2.	Mr Manase Felemi	Deputy Director, Ministry of Agriculture
3.	Mr Robert Bolouri	President, Tonga Chamber of Commerce
4.	Mr Warwick Hawker	New Zealand High Commissioner, Tonga Office
5.	Mr Ilaisa Vai Koaneti	Assistant Principal Revenue Officer, Tongan Customs and Revenue

ANNEXES

Blank page

Page blanche

TABLE OF CONTENTS

Blank page

Page blanche

PROGRAMME

Blank page

Page blanche

UNCTAD

Forum on Small Island Developing States and Agricultural Trade Liberalization[1]

Organized by UNCTAD/Commercial Diplomacy Programme

Thursday, 7 November 2002

Conference Room XXV, Palais des Nations, Geneva

Opening

9:30 – 9:45 Ms. Lakshmi Puri, Director, Division on International Trade in Goods and Services, and Commodities, UNCTAD

Segment 1 **Development issues for SIDS in the international trade agenda**

9:45 – 10:00 Ms. Manuela Tortora (Commercial Diplomacy Programme,UNCTAD)
Ms. Miho Shirotori (UNCTAD)

10:00 – 11:30

Findings of Regional Studies

Case of the Indian Ocean region (Comoros, Mauritius and Seychelles)
Dr. J.-M. Salmon (Faculty of Law and Economics, Université des Antilles et de la Guyane)

Case of Barbados
Mr. Gregg Rawlins (Agricultural Planning Unit, Ministry of Agriculture, Barbados)

Case of the Windward Islands
Mr. Gary Melville (Agricultural Economics and Agribusiness Management, Sir Arthur Lewis Community College, St. Lucia)

Case of the Pacific Islands
Ms. Margaret B. Malua (Senior consultant, KVA Consultant Ltd)

11:30 – 12:00

Findings from the Diagnostic Study

Factors influencing SIDS agricultural trade and a quantitative assessment of impacts of the new round of multilateral agricultural liberalization
Mr. Michael Swidinsky (Agriculture and Agri-Food Canada), Mr. Luca Monge-Roffarello (UNCTAD)

12:00 – 13:30 *Discussions*

Mr. Géo Govinden (Mauritius Chamber of Agriculture, Mauritius Sugar Syndicate)
Pierre Encontre (UNCTAD)
Mr. Hiroshi Takahashi (International Affairs Department, Ministry of Agriculture, Forestry and Fisheries, Japan)
Mr. Panos Konandreas (FAO)

13:30 – 15:00 Lunch break

Segment 2 **Options for SIDS in regional and multilateral trade negotiations**

Moderator: Ms. Manuela Tortora (Coordinator, Commercial Diplomacy Programme, UNCTAD)

15:00 – 18:00

1.SIDS in the WTO Work Programme on Small Economies
Mr. Roman Grynberg (Commonwealth Secretariat)
Pierre Encontre (UNCTAD)

2.Options in terms of "modalities" under the WTO negotiations on agriculture
Ms. Miho Shirotori (UNCTAD)

Discussions

Mr. Edwin Laurent (Ambassador, the Organization of Eastern Caribbean States)
Mr. Henry Gill (Caribbean Regional Negotiating Machinery)
Dr. Jean-Michel Salmon
Ms. Margaret B. Malua
Mr. Panos Konandreas (FAO)

18:00 - Reception at the Palais des Nations

[1] Organized under an UNCTAD project "Analyzing SIDS-specific needs in multilateral liberalization in the agricultural sector" is being undertaken pursuant to the UNCTAD X Plan of Action (paragraphs 130 and 133), and funded by the Government of Japan.

PRESENTATIONS: SEGMENT 1

Blank page

Page blanche

UNCTAD

Agricultural trade liberalization and Small Island Developing States (SIDS)

By Luca Monge-Roffarello, Michael Swidinsky and David Vanzetti

UNCTAD

Agricultural trade liberalization and Small Island Developing States (SIDS)

By Luca Monge-Roffarello, Michael Swidinsky and David Vanzetti

The ISSUE:

"SIDS are concerned that further trade liberalization in agriculture might not be beneficial"

- As net food importers, SIDS expect to pay a larger food import bill
- As beneficiaries of preferential trade arrangements, SIDS are concerned that these preferences will be eroded

....and the questions.....????

- Why SIDS as a special case ?
- Why is agriculture important for them ?
- What is the value of their preferences ?
- What might be the impact of trade liberalisation?
- If negative, is there any possibility for compensation?

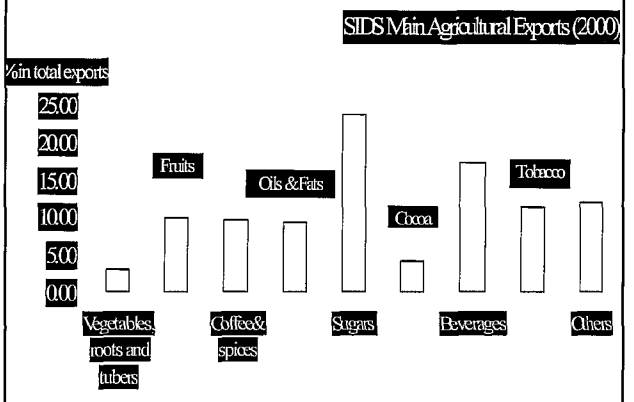
Why SIDS ???

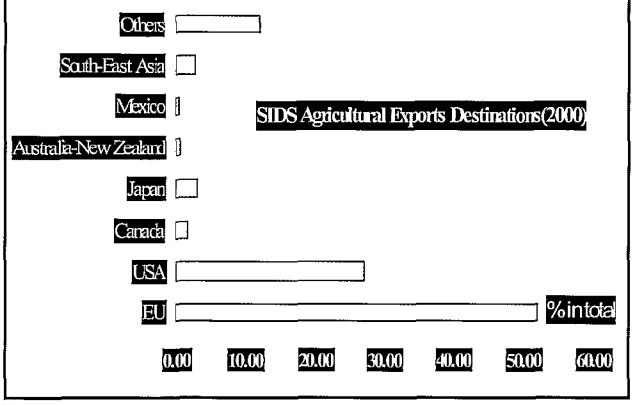
- SIDS economic structure and constraints (small size, insularity and remoteness) are well documented;
- the **U.N.** recognise SIDS: Programme of Action for the Sustainable Development of Small Islands Developing States in 1994; the recent 2002 WSSD called for a international meeting on the Sustainable Development of Small Island Developing States
- In the context of the **WTO** there is reference to Small Economies (par 35 of Doha Declaration) although *"..not to create a sub-category of WTO Members"*.

Why is agriculture important for them ?

Country Groups (year 2000)	Agri exports in total exports	Agri imports in total imports	Imports/ Exports Ratio in Agriculture	Ratio of agricultural exports to GDP (1999)	Ratio of agricultural imports to GDP (1999)
Developed	6.75%	6.53%	1.06	1.12%	2.92%
Developing (exc.LDCs)	7.20%	6.74%	0.98	2.70%	6.99%
LDCs	31.40%	16.41%	1.12	3.74%	7.35%
SIDS	24.00%	14.00%	2.50	7.40%	14.65%

Note: trade information from UN COMTRADE, GDP data are taken from the World Bank's World Development Indicators; *Data on GDP only available for selected countries.





MFN Tariff Treatment in the QUAD

SIDS Groupings / MFN range	% Of total SIDS export	African SIDS	Caribbean SIDS	Pacific SIDS
MFN = 0%	19%	11%	14%	39%
0% < MFN =< 10%	42%	6%	52%	32%
10% < MFN =< 20%	3%	1%	4%	0%
MFN > 20%	31%	81%	23%	28%
MFN AVE not available	5%	2%	6%	1%
Total QUAD	100%	100%	100%	100%
% in Total SIDS exports	84%	93%	86%	74%

Trade Preferences in the QUAD

QUAD account for 84 per cent of SIDS exports

- **EU:** Cotonou, GSP and GSP/EBA
- **USA:** GSP, GSP/AGOA, CBI/CBTPA (NAFTA parity)
- **Canada:** GSP, GSP/LDCs, CARIBCAN
- **Japan:** GSP, GSP/LDCs

Trade Preferences in the QUAD

EU accounts for more than 50% of SIDS exports

Rates and Margins MFN range	% of SIDS exports	MFN Rate	GSP Rate	EBA Rate	ACP Rate	(MFN - ACP)	(GSP-ACP)
MFN = 0%	14%	0	0	0	0	0	0
0% < MFN =< 10%	35%	6	3.8	0	0.2	6.1	3.5
10% < MFN =< 20%	2%	14.8	10	0	1.1	13.7	9
MFN > 20%	48%	39.9	19.2	0	10.3	25.1	14.7

Trade Preferences in the QUAD

US accounts for 27% of SIDS exports

Rates and Margins MFN range	% of SIDS exports	MFN Rate	Preferential rate	MFN - Pref. Rate
MFN = 0%	20%	0.0	0.0	0.0
0% < MFN =< 10%	60%	4.2	0.0	4.2
10% < MFN =< 20%	5%	14.2	0.0	14.3
MFN > 20%	1%	49.1	0.0	34.7
MFN AVE Not available	14%	n/a	n/a	n/a

Trade Preferences in the QUAD

CONSIDERATIONS ON EROSION OF PREFERENCES

- Preferences on some 50% of SIDS exports (70% for Caribbean) are "empty" or diluted;
- African SIDS enjoy the highest level of preferences;
- The impact of liberalisation on preferences depends on whether preferential tariffs are "linked" or "de-linked" to MFN rates;
- Recent initiatives in market access have yet to fully materialize their effects;
- Current preferences could be still expanded

Quantitative assessment

- Presumed that SIDS, as net food importers and exporters of a narrow range of tropical products are unlikely to benefit directly from further agricultural trade liberalization.
- It is thought that world prices of temperate agricultural products would rise, increasing the food import bill for SIDS. In addition, SIDS are anticipated to lose out due to the erosion of tariff preferences (effect on the term of trade).

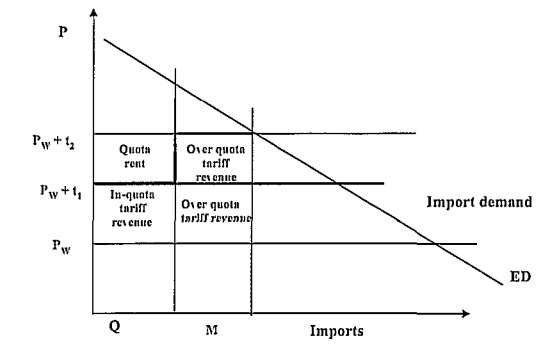
The UNCTAD's Agricultural Trade Policy Simulation Model (**ATPSM**)

- To assess the potential impacts of agricultural liberalization on SIDS, UNCTAD's Agricultural Trade Policy Simulation Model (ATPSM) is used.
- ATPSM is a partial equilibrium model that can be used to evaluate agricultural trade policy changes in the main areas covered by the URAA – market access, export subsidies and domestic support.
- There are 161 countries in the model, including 25 of the 32 SIDS members. In addition, the 36 commodities covered include numerous tropical products.
- ATPSM solution gives estimates of changes in trade volumes, prices and welfare, including quota rents.

The UNCTAD's Agricultural Trade Policy Simulation Model (**ATPSM**) cont.

- Unlike a general equilibrium model, ATPSM is confined to the agricultural sector and does not model interactions with other sectors of the economy.
- It is assumed that, for sugar, as the most important product for SIDS, quota rent accrues to producers in exporting countries. For all other quotas, rents are shared equally among importing and exporting countries
- ATPSM allocates quota among suppliers using bilateral trade flows. In addition, ATPSM assumes that quota is filled and that the out-quota tariff (or applied tariffs) determines the domestic price.
- **The main drawback to using ATPSM for this study is that it does not include bilateral tariff data and cannot capture trade diversion and creation effects from changes in preferential arrangements.**

Quota rents with binding out-quota tariff



ATPSM commodity aggregation (1)

- Bovine meat
- Sheepmeat
- Pigmeat
- Poultry
- Milk, fresh
- Milk, conc.
- Butter
- Cheese
- Wheat
- Maize
- Sorghum
- Barley
- Rice
- **Sugar**
- **Oil seeds**
- **Vegetable oils**
- Pulses
- Roots, tubers

ATPSM commodity aggregation (2)

- Tomatoes
- Non-tropical fruits
- **Citrus fruits**
- **Bananas**
- **Other tropical fruits**
- Coffee green bags
- Coffee roasted
- Coffee extracts
- Cocoa beans
- Cocoa butter
- Cocoa powder
- Chocolate
- Tea
- Tobacco leaves
- Cigars
- Cigarettes
- **Other tobacco - mfr.**
- **Cotton linters**

Five scenarios are simulated...

1) **Ambitious**. Across the board out-quota bound tariff reductions following the Swiss formula with a maximum of 25 per cent, and elimination of export subsidies and production-distorting domestic support.
2) **Conservative**. 36 per cent cut in out-quota bound tariffs and export subsidy equivalents and 20 per cent cut in domestic support in developed countries. Two thirds of these reductions in developing countries and no reductions in least developed countries.
3) **Tariff50**. 50 per cent cut in out-quota bound tariffs in all countries.
4) **Preferential**. Scenario 3 plus removal of in-quota tariffs on SIDS exports under quota.
5) **Compensatory**. Scenario 3 plus removal of all tariffs on all SIDS exports

The rationale behind these scenarios

- **Scenario 1** reflects agricultural exporters' proposals such as those of United States and some Cairns Group members. A Swiss tariff cutting formula is aimed at reducing the peaks. A Swiss coefficient of 25, the US proposal, reflects a very heavy cuts;
- **Scenario 2** is a repeat of the Uruguay Round formula;
- **Scenario 3** reflects a reasonable middle ground and serves as a benchmark for comparison;
- **Scenarios 4 and 5** are aimed at assessing whether the SIDS could be compensated for the losses stemming from preference erosion by changes in other policy variables, such as the size of the in-quota tariff or the tariff rate quota;

Results of the simulation: prices

	Scenario 1 (aggressive)	Scenario 2 (conservative)	Scenario 3 (benchmark)		Scenario 1. (aggressive)	Scenario 2. (conservative)	Scenario 3 (benchmark)
	%	%	%		%	%	%
Bovine meat	8	3	3	Roots & tubers	3	1	2
Sheepmeat	9	4	6	Apples	4	2	3
Pigmeat	5	2	3	Citrus fruits	2	1	1
Poultry	7	2	4	Bananas	1	1	1
Milk, fresh	8	3	5	Other tropical fruits	4	1	3
Milk, conc.	18	6	8	Coffee green	1	0	1
Butter	27	11	10	Coffee roasted	0	0	0
Cheese	14	6	5	Coffee extracts	0	0	1
Wheat	14	5	3	Cocoa beans	0	0	0
Rice	3	1	2	Cocoa powder	1	1	1
Barley	3	1	2	Cocoa butter	1	1	1
Maize	4	1	2	Chocolate	4	3	4
Sugar	9	3	3	Tea	4	1	2
Oilseeds	10	3	0	Tobacco leaves	5	2	3
Vegetable oils	8	2	4	Cigars	6	2	4
Sorghum	1	0	0	Cigarettes	2	1	2
Pulses	4	1	2	Other mfr tobacco	13	4	9
Tomatoes	3	1	2	Cotton linters	2	1	1

UNCTAD, Agricultural Trade Policy Simulation Model (ATPSM)

Result: Prices

- Price changes are correlated with the level of distortions removed and are also a broad indicator of how price-taking countries are likely to be affected.
- Price changes are positive and in the range of 0 to 27 percent and are lower for tropical than temperate products.
- Price changes are moderate for the 50 percent linear tariff cut scenario, including those commodities of interest to SIDS like sugar and bananas.

Impact of alternative scenarios on key variables

	Scenario 1. (ambitious) (US$ million)	Scenario 2. (conservative) (US$ million)	Scenario 3. (benchmark) (US$ million)	Scenario 4. (preferential) (US$ million)	Scenario 5 (compensatory (US$ million)
Export revenue					
SIDS	360	136	191	191	191
World	43'364	14'177	23'449	23'449	23'870
Government revenue					
SIDS	-110	-3	-55	-55	-57
World	-3'606	4'288	-4'451	-4'463	-4'591
Quota rent					
SIDS	-152	-79	-106	-83	70
World	-3'778	-1'226	-1'837	-1'824	-1'660
Welfare					
SIDS	-182	-104	-96	-73	77
World	27'449	11'278	15'658	15'658	15'658

Result - Export and government revenue

- As expected, SIDS exports increase following liberalization, in proportion to the increased market access.
- SIDS export revenues rise following a global 50 percent tariff cut from $2.2 billion to $2.4 billion, an increase of $191 million or 9 percent. Major beneficiaries are sugar ($67 m), other tropical fruits ($26 m), citrus ($20 m), bananas ($17 m) and vegetable oils ($13 m).
- Tariff revenue is an important source of government revenue for many developing countries, including SIDS. This is one argument against trade reform, as developing countries would be compelled to seek other sources of tax revenue.
- In SIDS, a 50 percent reduction in agricultural tariffs leads to a fall in tariff revenue from an estimated $425 million to $370 million, a reduction of 13 percent. .

Result - Quota rent

- SIDS receive in quota rent $183 million in the initial database, of which $170 million is from sugar.
- A reduction in rents of $106 million follows from a reduction of 50 percent in out-quota tariffs, of which $95 million can be attributed to sugar.
- Gains to SIDS from elimination of in-quota tariffs on their exports would not be sufficient to offset a 50 per cent tariff reduction.
- For SIDS as a group the quota rent and welfare gains are $23 million. Sugar ($13 million) and bananas ($10 million) make up the major components.

Result - Quota rent (con.t)

- While SIDS lose from reductions in quota rents associated with global tariff reform, they can be more than compensated if over-quota exports are allowed in duty free.
- The quota rents transferred to SIDS amount to $70 million, with the elimination of out-quota tariffs more than sufficient to offset the $106 million in losses from quota rents due to lower out-quota tariffs in importing countries.

Result - Welfare

- A 50 percent global cut in over-quota tariffs leads to a welfare loss for SIDS of $96 million. Loss of quota rent for sugar and to a lesser extent higher prices for imports of wheat, dairy products and sheep meat are the major factors. The major losers are Mauritius, Jamaica and Fiji.
- Extending compensation to SIDS tends to make non-SIDS worse off. The major costs are imposed on the developed countries providing the compensation through extended preferential access, predominately the European Union and the United States. Non-SIDS developing exporters are slightly worse off.

Limitations

- Limitations:

1. lack of knowledge of the distribution of quota
2. assumption that quota is filled and that out-quota tariffs (or applied tariffs) drive prices
3. model doesn't account for switching between tariff regimes
4. assumption that producers don't respond to changes in rents, implying no trade diversion

CONCLUSIONS

- trade liberalization will lead to some erosion of these preferences. This will have a significant impact in some cases, particularly for those SIDS currently enjoying quota rents, being the highest in the "Ambitious" scenario and the lowest in the "Conservative one".
- there is scope for these countries to be compensated, if was considered desirable, in two distinctive ways:

Compensation 1:

To provide in-quota duty-free treatment for all those SIDS exports already benefiting from quotas

- Gains are still insufficient to compensate entirely for the rents losses;
- Individual SIDS currently not capturing quota rents that may be inclined to favor liberalization as there are positive net benefits from improved market access and efficiency gains from domestic reform;
- Low cost SIDS producers may find themselves shut out of markets by the import quota system and may be favoured by the erosion of preferences.

Compensation 2:

To expand import duty-free quotas to cover all SIDS exports

- this would entirely compensate for losses in the rents;
- preferential quotas appear to guard beneficiaries against the erosion of preferential tariff margins and quota rents;
- it assumes that beneficiary countries' supply is capable to keep filling the additional quotas

Compensation 1&2:

- As a possible modality to "compensate" SIDS, compensation would have no or very limited effects on the welfare gains of developing countries.
- It might be sought both within the WTO framework and bilaterally;
- Given the high geographical concentration of SIDS exports in few markets, there can be scope for improving the effectiveness of non-reciprocal preferential market access.

THANK YOU!!!

Any question??

ANALYZING SIDS SPECIFIC NEEDS IN MULTILATERAL LIBERALIZATION IN THE AGRICULTURAL SECTOR

The Indian Ocean Case Study (Comoros, Mauritius, Seychelles)

Jean-Michel SALMON,
Indian Ocean Commission Consultant &
CEREGMIA/French West Indies University
(Martinique)

ANALYZING SIDS SPECIFIC NEEDS IN MULTILATERAL LIBERALIZATION IN THE AGRICULTURAL SECTOR

The Indian Ocean Case Study (Comoros, Mauritius, Seychelles)

Jean-Michel SALMON,
Indian Ocean Commission Consultant &
CEREGMIA/French West Indies University (Martinique)

Introduction

- Smallness, Remoteness, Vulnerability and Proneness to natural disasters in IOC SIDS : a short look at a several fugures
- Scale economies, regional integration and EPA negotiations
- Agriculture diversification efforts towards better P/M ratios

Main domestic Agri. Interests in Mauritius (WTO member)

- **Food import bill and Food balance**
- **8 products (items with an important production volume) ; among which :**
  - **2 with STE & NTB (potato, onion), one clear success (onion), one more ambiguous (potato)**
  - **2 competitive (tomato, carrot), with strong growth (carott) or fluctuation (tomato)**
  - **2 competitive (pineapple, banana), but hard to export (pineapple) or no export (banana)**
  - **1 clear success under protection (poultry)**
  - **1 failure (tea) : bad price-competitiveness? Or rather simply not profitable enough**

Main Agri. Domestic interests in Seychelles (WTO Obs)

- Food import bill doubled during the 90s
- Weak contribution of agriculture (at a very small scale of production) to GDP, but strong fisheries interests (both internal and external);
- STE with multiple, hard (and rather discrete) interventions. Some success in self-sufficiency objectives

Main agri. Domestic interests in Comoros (not WTO member)

- LDC of three main islands, political instability, and production crises (1999-)
- Great importance of agriculture, mainly subsistence/micro farmers (estimates)
- Food import bill doubled 90s, but self sufficiency in fish products
- Open agri import regime (SAP), and local foodcrops face hard competition with rice imports (with STE and 33% duty)

Main export interests in Mauritius and Seychelles

- 2 products highly sensitive to trade preferences:
  - Sugar (Protocol) : complex perspectives
  - canned tuna : margin of 24% (MFN) or 21.5% (GSP)
- Very important contribution :
  - **to the economic take off, the social fabrics and now non-trade concerns (multifonctionality) in Mauritius,**
  - **to the BoP in the Seychelles, a Single Commodity Exporter (and Single Firm) case**
- Other attempts in Mauritius are Anthurium and Pineapple : some limited results

Exports in Comoros

- 3 products (vanilla, ylang, gloves) = 95% of total exports, vanilla = 60%
- Restructuration and reform of the producer price policy: from one tenth of the FOB export price to one half since 2002.
- Diversification projects with many difficulties

WTO Negotiations best modalities : the IOC SIDS viewpoint

- Be cautious with intertwined modalities and complex issues, as in the sugar case:
  - uncertainties as regards the *effectiveness (extent)* and *speed* of the cost adjustment process in Mauritius viz the foreseen reduction of the EU price (liberalization effects Borrell and Unctad studies to be discussed later on)
  - non trade concerns would lead only domestic support issues (green vs amber box measures)? But what for the 'non-rich enough' countries? Doesn't it then concern also market access issues (protection devices)? Or is it a OECD privilege?

Big issues from the analysis (1)

- Market access (SIDS market): STE and NTB in Mauritius and Seychelles, STE and infant industry protection devices in Comoros ; (tariff reduction commitments in non-LDC SIDS to be eased or exempted? No evidence yet in Mauritius and Sey.)
- Market access (EU) : importance of the protocol. Preference margins (tuna) to be eroded? So expand the TRQ system

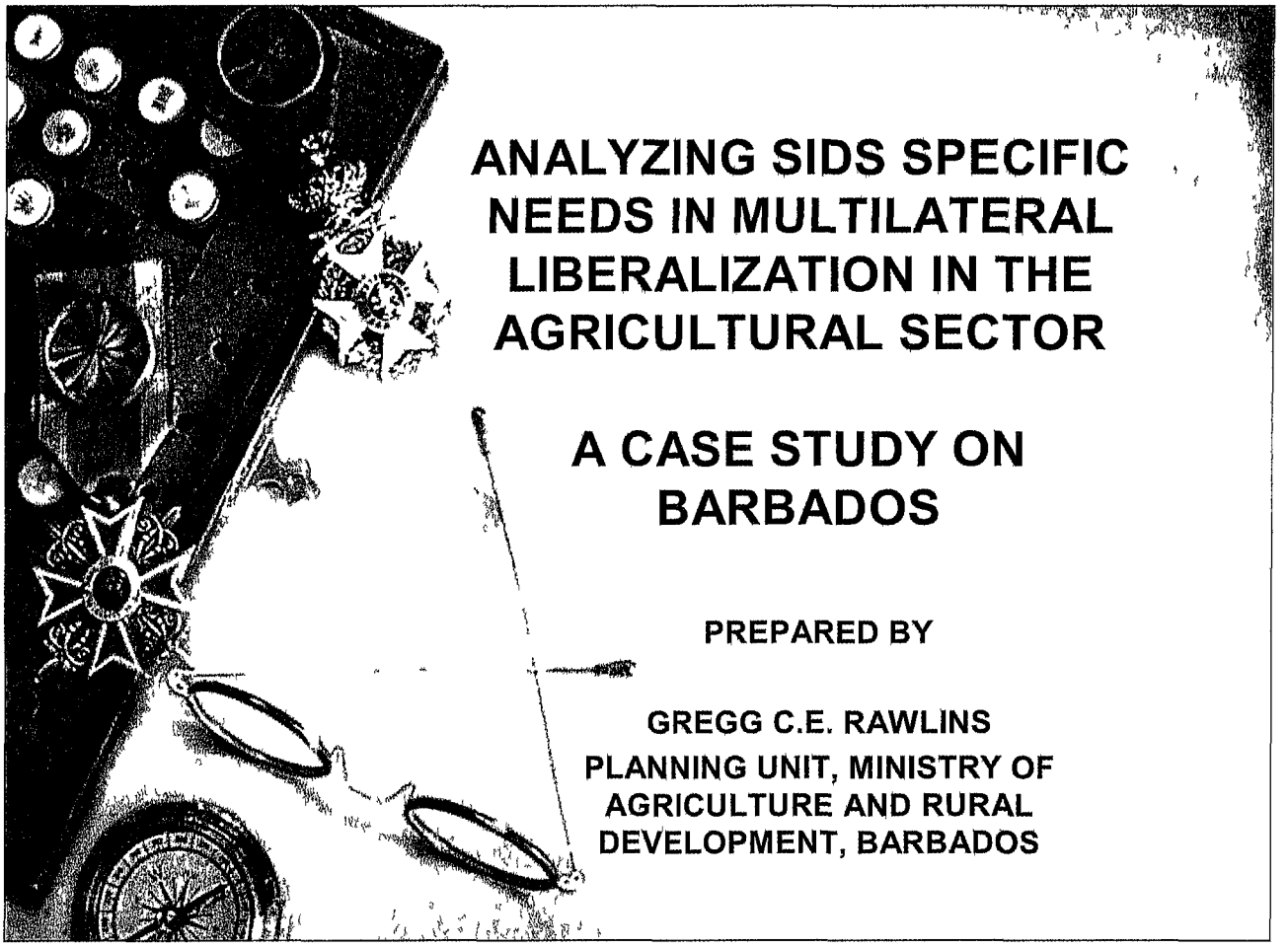
  [NB : and may be build and add a specific price or income support mechanism (such as decoupled aid?) if needed (in case prices plummet)]

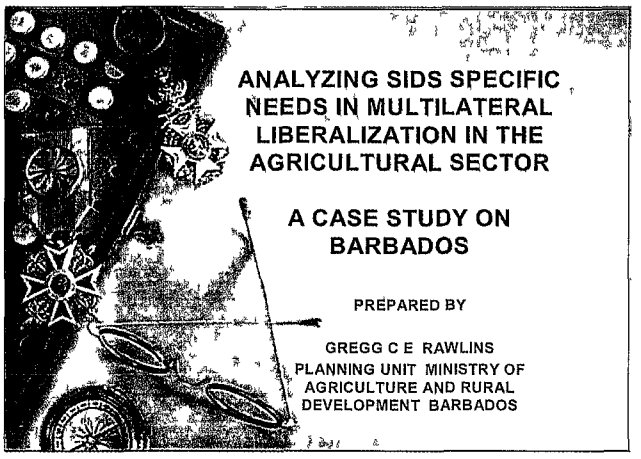
Big issues from the analysis (2)

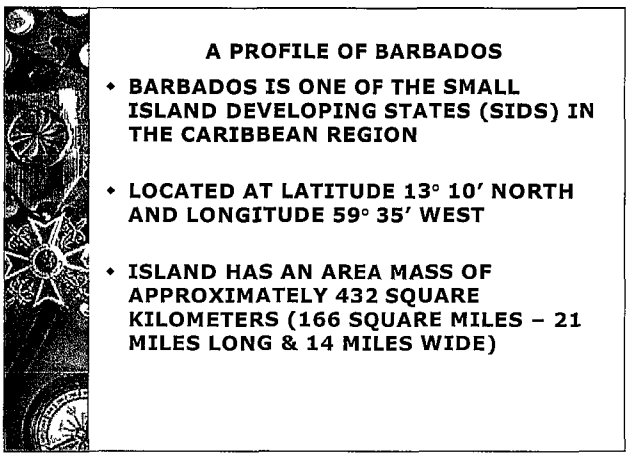
- Domestic support : at present, a SIDS S&D seems less needed, but think of offensive (future) interests, or future needs to stabilize producer prices (which increases AMS). Hence increase the de minimis limit. Also relax the conditions of exceptional support in case of natural disaster
- Export subsidies: extend the period of exemption provided in article 9.4. (permanent basis) ; Avoid a formula which would reduce OECD export subsidies too fast : SIDS hurt twice (quota-rent and NFIDCs). In the context of CAP reform, Think of a new price support mechanism for SIDS exports (within the quota rate), or income support.

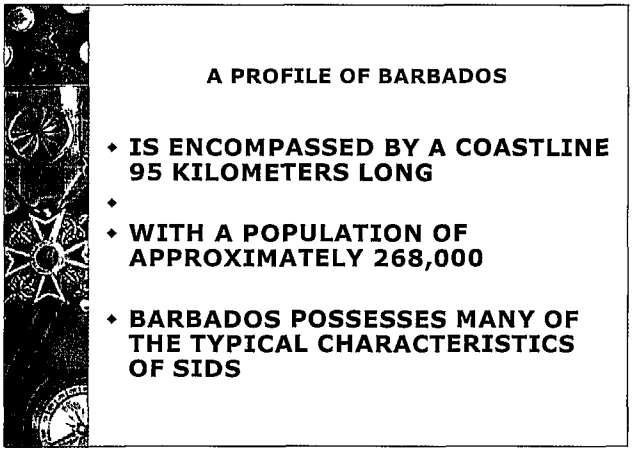
Blank page

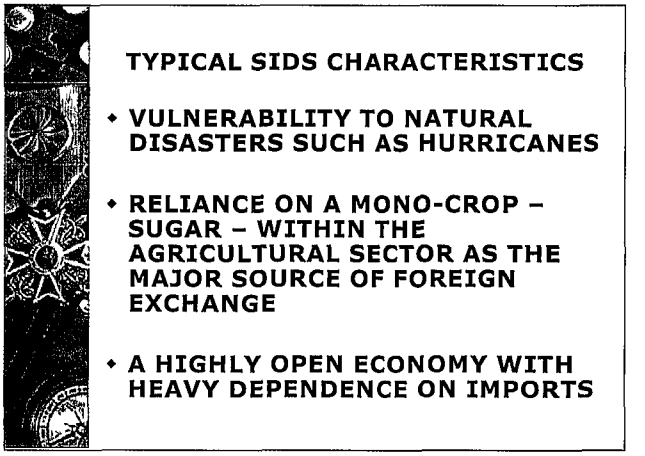
Page blanche

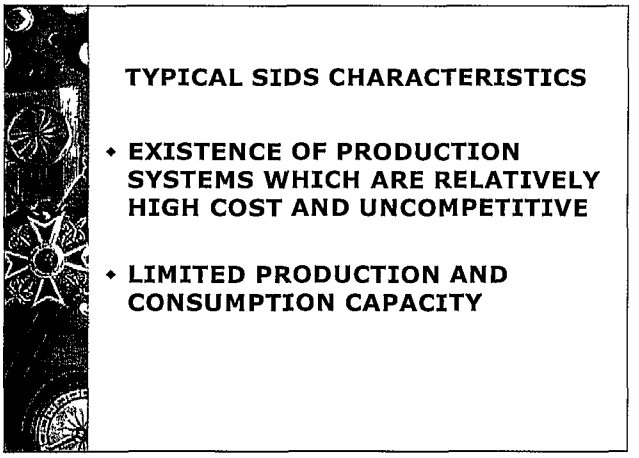

ANALYZING SIDS SPECIFIC NEEDS IN MULTILATERAL LIBERALIZATION IN THE AGRICULTURAL SECTOR
A CASE STUDY ON BARBADOS
PREPARED BY
GREGG C.E. RAWLINS
PLANNING UNIT, MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT, BARBADOS

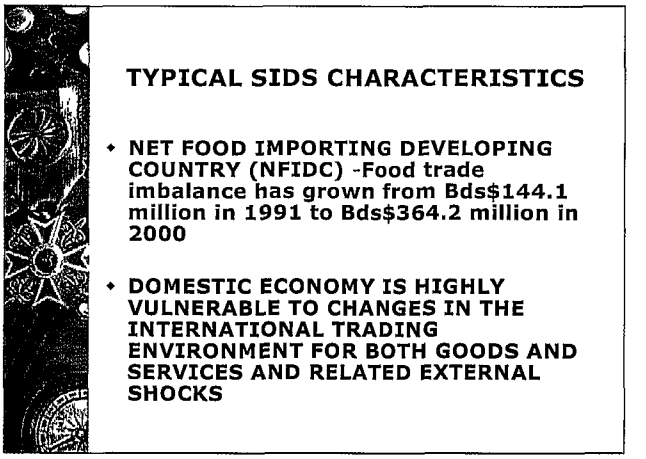

ANALYZING SIDS SPECIFIC NEEDS IN MULTILATERAL LIBERALIZATION IN THE AGRICULTURAL SECTOR
A CASE STUDY ON BARBADOS
PREPARED BY
GREGG C E RAWLINS
PLANNING UNIT MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT BARBADOS

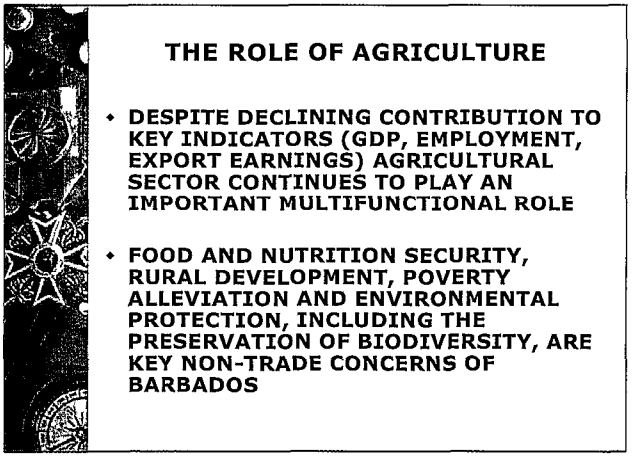

A PROFILE OF BARBADOS
• BARBADOS IS ONE OF THE SMALL ISLAND DEVELOPING STATES (SIDS) IN THE CARIBBEAN REGION
• LOCATED AT LATITUDE 13° 10′ NORTH AND LONGITUDE 59° 35′ WEST
• ISLAND HAS AN AREA MASS OF APPROXIMATELY 432 SQUARE KILOMETERS (166 SQUARE MILES – 21 MILES LONG & 14 MILES WIDE)

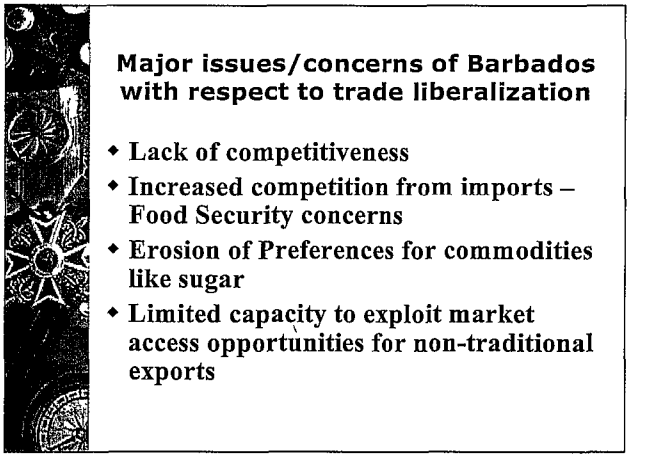

A PROFILE OF BARBADOS
• IS ENCOMPASSED BY A COASTLINE 95 KILOMETERS LONG
•
• WITH A POPULATION OF APPROXIMATELY 268,000
• BARBADOS POSSESSES MANY OF THE TYPICAL CHARACTERISTICS OF SIDS


TYPICAL SIDS CHARACTERISTICS
• VULNERABILITY TO NATURAL DISASTERS SUCH AS HURRICANES
• RELIANCE ON A MONO-CROP – SUGAR – WITHIN THE AGRICULTURAL SECTOR AS THE MAJOR SOURCE OF FOREIGN EXCHANGE
• A HIGHLY OPEN ECONOMY WITH HEAVY DEPENDENCE ON IMPORTS


TYPICAL SIDS CHARACTERISTICS
• EXISTENCE OF PRODUCTION SYSTEMS WHICH ARE RELATIVELY HIGH COST AND UNCOMPETITIVE
• LIMITED PRODUCTION AND CONSUMPTION CAPACITY


TYPICAL SIDS CHARACTERISTICS
• NET FOOD IMPORTING DEVELOPING COUNTRY (NFIDC) -Food trade imbalance has grown from Bds$144.1 million in 1991 to Bds$364.2 million in 2000
• DOMESTIC ECONOMY IS HIGHLY VULNERABLE TO CHANGES IN THE INTERNATIONAL TRADING ENVIRONMENT FOR BOTH GOODS AND SERVICES AND RELATED EXTERNAL SHOCKS


THE ROLE OF AGRICULTURE
• DESPITE DECLINING CONTRIBUTION TO KEY INDICATORS (GDP, EMPLOYMENT, EXPORT EARNINGS) AGRICULTURAL SECTOR CONTINUES TO PLAY AN IMPORTANT MULTIFUNCTIONAL ROLE
• FOOD AND NUTRITION SECURITY, RURAL DEVELOPMENT, POVERTY ALLEVIATION AND ENVIRONMENTAL PROTECTION, INCLUDING THE PRESERVATION OF BIODIVERSITY, ARE KEY NON-TRADE CONCERNS OF BARBADOS


Major issues/concerns of Barbados with respect to trade liberalization
• Lack of competitiveness
• Increased competition from imports – Food Security concerns
• Erosion of Preferences for commodities like sugar
• Limited capacity to exploit market access opportunities for non-traditional exports

COMPETITIVENESS ISSUES: A MAJOR CHALLENGE

- SEVERAL FACTORS, DIRECTLY RELATED TO BARBADOS' SMALL AREA, LIMITED MARKET SIZE AND OTHER INHERENT STRUCTURAL WEAKNESSES, HAVE HAD PROFOUND NEGATIVE EFFECTS ON THE PRODUCTION AND COMPETITIVENESS OF DOMESTICALLY PRODUCED AGRICULTURAL PRODUCTS

LAND/FARM SIZE ISSUES

- WITH A TOTAL LAND AREA OF 43,176 HECTARES, LAND IS A VERY LIMITED RESOURCE
- TOTAL LAND AREA AVAILABLE TO AGRICULTURE IS NOW ESTIMATED TO BE LESS THAN 20,000 HECTARES
- HIGH DEMAND DUE TO COMPETING USES SUCH AS HOUSING, SOCIAL AND RECREATIONAL FACILITIES, ALTERNATIVE ECONOMIC USES SUCH AS GOLF COURSES AND TOURISM RELATED PROJECTS

LAND/FARM SIZE ISSUES

- AGRICULTURAL LAND BEING HELD FOR SPECULATIVE PURPOSES
- THE SCOTLAND DISTRICT (WHICH EXTENDS TO ONE SEVENTH OF THE TOTAL AREA OF THE ISLAND) – IS PRONE TO SEVERE LAND SLIPPAGE AND EROSION
- UNAVAILABILITY OF ADEQUATELY SIZED TRACTS OF LAND FOR COMMERCIAL FARMING

LAND/FARM SIZE ISSUES

- LAND PRICES ARE AT SUCH A LEVEL THAT IF PURCHASED FOR AGRICULTURAL USE, THE IMPACT ON OVERALL COST OF PRODUCTION OF AGRICULTURAL PRODUCTS WOULD BE SIGNIFICANT
- THE LAST AGRICULTURAL CENSUS ALSO REVEALED THAT APPROXIMATELY 90% OF THE FARMERS IN BARBADOS OPERATE ON HOLDINGS OF 0.5 HECTARE OR LESS

LAND/FARM SIZE ISSUES

- LANDLESS FARMERS, CLASSIFIED AS THOSE WITH HOLDINGS OF LESS THAN 0.025 HECTARE, ACCOUNTED FOR APPROXIMATELY 24% (4,161) OF THE TOTAL NUMBER OF HOLDINGS
- THIS HAS SERIOUS IMPLICATIONS FOR THE CAPACITY OF THESE OPERATIONS TO BENEFIT FROM ECONOMIES OF SCALE WITH OBVIOUS CONSEQUENCES FOR RELATIVE COST OF PRODUCTION LEVELS

WATER CONSTRAINTS

- BARBADOS HAS AN ESTIMATED 300 CUBIC METRES OF WATER PER CITIZEN, AND IS RANKED AMONG THE WORLD'S FIFTEEN MOST WATER SCARCE COUNTRIES
- RAINFALL FOR THE PERIOD 1991 – 2000 AVERAGED AN ANNUAL OF 1360 MILLIMETRES PER PARISH
- MOST OF THIS RAINFALL OCCURS DURING THE LATTER HALF OF THE YEAR

WATER CONSTRAINTS

- GIVEN THE TOPOGRAPHY OF THE ISLAND, AND THE LACK OF RIVERS AND LAKES, A HIGH PROPORTION OF THIS RAINFALL RUNS OFF INTO THE SEA
- SEVERE DRY SPELLS DO OCCUR - forced to make *force majure* claims for sugar exports below quota levels in 1995 and 2002
- BARBADOS WATER RESOURCES STUDY ESTIMATES THAT WATER AVAILABLE FOR IRRIGATION IS SUFFICIENT TO SUPPLY ABOUT 1600 HECTARES OF LAND ANNUALLY

WATER CONSTRAINTS

- WATER RATES FOR THE GOVERNMENT MANAGED SCHEME ARE, 44 CENTS PER CUBIC METER, EXCEPT IN THE SPRING HALL LAND LEASE PROGRAMME, WHICH CARRIES A RATE OF 33 CENTS PER CUBIC METER
- FARMERS OUTSIDE THE SCHEME FACE THE DOMESTIC RATE OF BDS$2.12 PER CUBIC METER, WHICH MAKES AGRICULTURAL PRODUCTION, USING DOMESTIC WATER, MORE COSTLY

LIMITED DOMESTIC MARKET

- TOTAL DOMESTIC CONSUMPTION LEVELS FOR MAJOR AGRICULTURAL COMMODITIES ARE INSIGNIFICANT IN GLOBAL TERMS
- THE SMALL DOMESTIC DEMAND BASE MAKES IT EXTREMELY DIFFICULT TO PRODUCE AT SUFFICIENTLY HIGH LEVELS TO ACHIEVE ECONOMIES OF SCALE

LIMITED DOMESTIC MARKET

- TOTAL CONSUMPTION OF POULTRY MEAT IN BARBADOS IS ESTIMATED AT 15,000 TONNES PER ANNUM, WHICH IS MINISCULE WHEN COMPARED WITH CONSUMPTION IN OTHER COUNTRIES E.G OVER 13 MILLION TONNES IN US
- THE SMALLEST PLANT IN THE USA PROCESSES APPROXIMATELY 600,000 BIRDS PER WEEK, COMPARED TO THE THROUGHPUT IN THE LARGEST PLANT IN BARBADOS, WHICH IS ESTIMATED AT 80,000 BIRDS PER WEEK

LIMITED DOMESTIC MARKET

- SITUATION COMPOUNDED BY LIMITED EXPORT COMPETITIVENESS AND VALUE-ADDED PROCESSING
- SCOPE FOR INVESTING IN LARGE-SCALE PRODUCTION OPERATIONS AND PROCESSING PLANTS IS SEVERELY CONSTRAINED WITH CONSEQUENCES FOR THE TECHNOLOGIES EMPLOYED AND EFFICIENCIES REALIZED

INPUT SUPPLY CONSTRAINTS

- THE RELATIVELY LOW LEVEL OF DOMESTIC PRODUCTION MAKES IT GENERALLY DIFFICULT FOR BARBADIAN FARMERS TO INFLUENCE PRICING POLICIES OF AGRICULTURAL INPUTS EITHER AT THE INTERNATIONAL LEVEL OR AT THE DOMESTIC LEVEL
- THE EXISTENCE OF IMPERFECT AND UNDEVELOPED MARKETS FOR INPUTS AND SERVICES IS A FEATURE CHARACTERISTIC OF SIDS SUCH AS BARBADOS

INPUT SUPPLY CONSTRAINTS

- SMALL DOMESTIC PRODUCTION SECTOR MAKES IT UNATTRACTIVE FOR INVESTORS TO UNDERTAKE PRODUCTION OF KEY AGRICULTURAL INPUTS
- IN THE CASE OF ANIMAL FEEDS, WHERE THERE IS A SINGLE MANUFACTURER IN BARBADOS, THE OPERATION SUFFERS FROM DISECONOMIES OF SCALE
- THE AGRICULTURAL SECTOR IS THEREFORE HEAVILY DEPENDENT ON IMPORTED INPUTS, WHICH MAKES THE SECTOR EXTREMELY VULNERABLE TO EXTERNAL DEVELOPMENTS

COMPETITIVENESS OF DOMESTIC PRODUCTION

- ONLY A FEW SELECT AGRICULTURAL COMMODITIES HAVE A COMPETITIVE ADVANTAGE IN BARBADOS
- FAO COMMISSIONED REPORT REVEALS THAT ONLY OKRAS AND HOT PEPPERS ARE PRODUCED COMPETITIVELY IN BARBADOS
- KEY COMMODITIES ARE ONLY COMPETITIVE WITH THE APPLICATION OF THE BOUND RATES OF DUTY (Appendix 2)

INCREASED IMPORTS - FOOD SECURITY CONCERNS

- THE NEED TO ENSURE AN ACCEPTABLE LEVEL OF FOOD SECURITY, AT THE NATIONAL AND HOUSEHOLD LEVELS, BASED ON AN OPTIMAL COMBINATION OF DOMESTIC PRODUCTION AND IMPORTS, HAS THEREFORE SERVED AS A MAJOR POLICY OBJECTIVE GUIDING THE DEVELOPMENT OF THE AGRICULTURAL SECTOR IN BARBADOS.

FOOD SECURITY

- OVER 70% OF FOOD IS IMPORTED
- IMPORTS ARE INCREASING AND AMOUNTED TO BDS$478.6 MILLION IN 2000 (CHANGING COMPOSITION OF IMPORTS ASSOCIATED WITH HIGHER DISPOSABLE INCOMES)
- TOURIST DEMAND OFTEN OVERESTIMATED
- DOMESTIC PRODUCTION FOR MANY COMMODITIES IS IN DECLINE

FOOD SECURITY

- GOVERNMENT OF BARBADOS RECOGNIZES THAT TOTAL SELF-SUFFICIENCY IN FOOD PRODUCTION IS UNATTAINABLE AND THAT BARBADOS WILL ALWAYS BE RELIANT ON REGIONAL AND INTERNATIONAL MARKETS TO PROCURE A SIGNIFICANT PROPORTION OF FOOD SUPPLIES

FOOD SECURITY

- IMMEDIATELY AFTER THE EVENTS OF 11TH SEPTEMBER 2001, THE ISSUE OF FOOD AVAILABILITY TOOK PARTICULAR IMPORTANCE IN BARBADOS
- BARBADOS THEREFORE CONSIDERS FOOD SECURITY TO EXTEND BEYOND THE CAPACITY TO MERELY SOURCE FOOD THROUGH IMPORTS

THE IMPACT OF RECENT MARKET LIBERALIZATION

- BARBADOS IMPLEMENTED ITS WTO COMPLIANT TARIFF ONLY REGIME IN APRIL 2000
- HAS NEGATIVELY IMPACTED ON DOMESTIC PRODUCTION IN A NUMBER OF KEY INDUSTRIES – poultry, pork, selected vegetables (e.g cabbages, carrots etc), onions

THE IMPACT OF RECENT MARKET LIBERALIZATION

- THE RATIO OF IMPORTS TO DOMESTIC PRODUCTION HAS INCREASED SINCE 2000, PLACING DOMESTIC PRODUCTION, FARM INCOME AND FOOD SECURITY AT RISK
- THIS HAS OCCURRED DESPITE APPLICATION OF BOUND RATES
- SSG IMPLEMENTED RECENTLY WITH MIXED RESULTS

EXPERIENCE WITH THE SSG

- PROVED TO BE EXTREMELY DIFFICULT TO IMPLEMENT ADMINISTRATIVELY/TECHNICALLY
- PRICE BASED SSG CHOSEN OVER VOLUME BASED DUE TO HIGH VOLUMES AND LIMITED TARIFF PROTECTION
- PRICE BASED SSG HOWEVER TO MUCH DEPENDENT ON ABSOLUTE LEVEL OF TRIGGER PRICES (E.G ONIONS)

EXPERIENCE WITH THE SSG

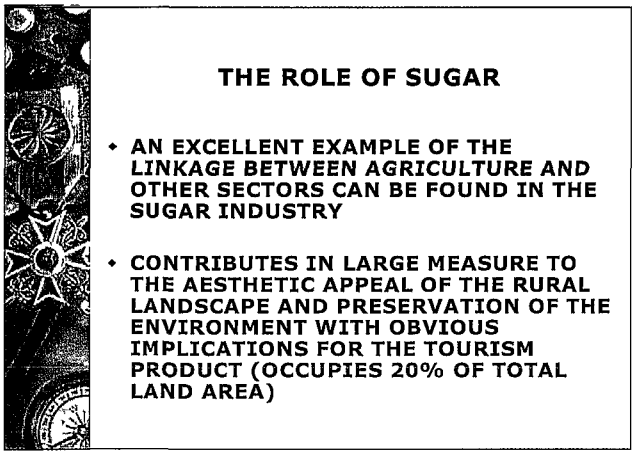
- EVEN WHERE TRIGGER PRICES ARE RELATIVELY HIGH, SSG INEFFECTIVE WHERE IMPORT PRICES ARE ARTIFICIALLY LOW (POULTRY LEG QUARTERS)
- SSG TYPE INSTRUMENT WILL HOWEVER BE CRTICAL FOR SAFEGUARDING SENSITIVE COMMODITIES IN THE FUTURE

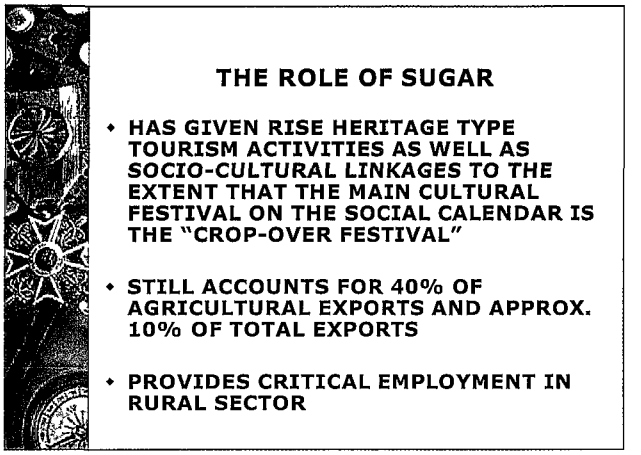
LESSONS FROM THE LIBERALIZATION EXPERIENCE

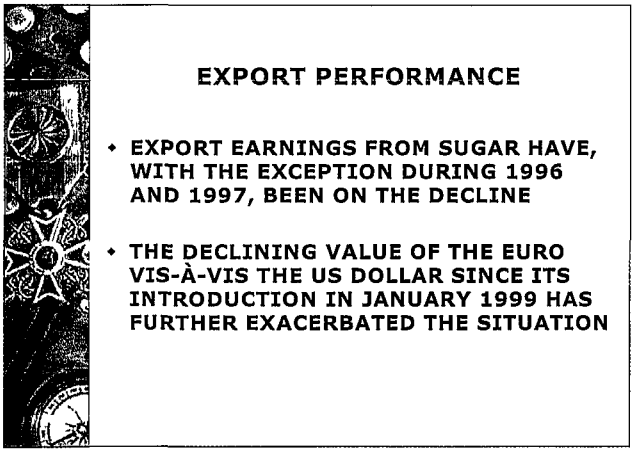
- FURTHER LIBERALIZATION IN THE ABSENCE OF MEASURES WHICH ALLOW SIDS TO SAFEGUARD SENSITIVE COMMODITIES WILL THREATEN DOMESTIC PRODUCTION AND FOOD SECURITY

EXPORT CONCERNS – EROSION OF PREFERENCES

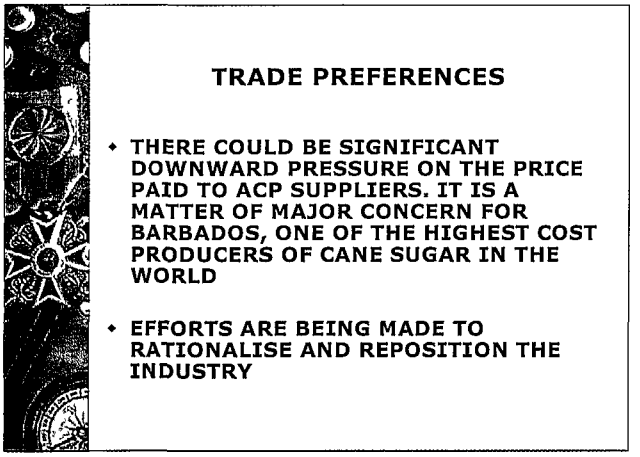
- SUGAR HAS TRADITIONALLY BEEN, AND CONTINUES TO BE, THE PREDOMINANT AGRICULTURAL EXPORT CROP
- SUGAR EXPORTS OVER THE PERIOD HAVE BEEN MIXED, WITH A PERIOD HIGH OF 65.7 THOUSAND TONNES IN 1991 AND A PERIOD LOW OF 38.5 THOUSAND TONNES IN 1995

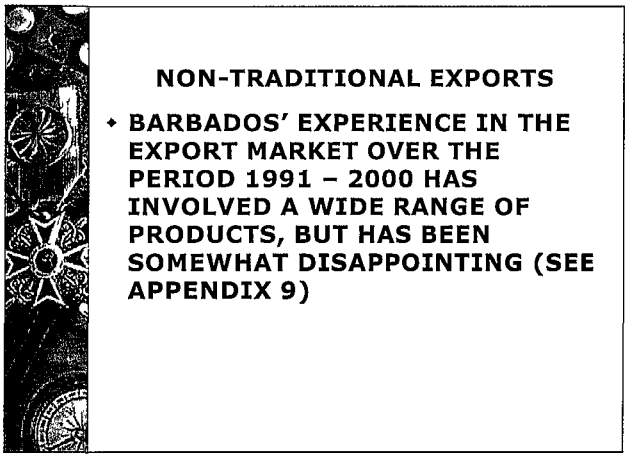

THE ROLE OF SUGAR
• AN EXCELLENT EXAMPLE OF THE LINKAGE BETWEEN AGRICULTURE AND OTHER SECTORS CAN BE FOUND IN THE SUGAR INDUSTRY
• CONTRIBUTES IN LARGE MEASURE TO THE AESTHETIC APPEAL OF THE RURAL LANDSCAPE AND PRESERVATION OF THE ENVIRONMENT WITH OBVIOUS IMPLICATIONS FOR THE TOURISM PRODUCT (OCCUPIES 20% OF TOTAL LAND AREA)


THE ROLE OF SUGAR
• HAS GIVEN RISE HERITAGE TYPE TOURISM ACTIVITIES AS WELL AS SOCIO-CULTURAL LINKAGES TO THE EXTENT THAT THE MAIN CULTURAL FESTIVAL ON THE SOCIAL CALENDAR IS THE "CROP-OVER FESTIVAL"
• STILL ACCOUNTS FOR 40% OF AGRICULTURAL EXPORTS AND APPROX. 10% OF TOTAL EXPORTS
• PROVIDES CRITICAL EMPLOYMENT IN RURAL SECTOR


EXPORT PERFORMANCE
• EXPORT EARNINGS FROM SUGAR HAVE, WITH THE EXCEPTION DURING 1996 AND 1997, BEEN ON THE DECLINE
• THE DECLINING VALUE OF THE EURO VIS-À-VIS THE US DOLLAR SINCE ITS INTRODUCTION IN JANUARY 1999 HAS FURTHER EXACERBATED THE SITUATION


TRADE PREFERENCES
• PREFERENTIAL MARKET ACCESS ARRANGEMENTS CONTINUE TO BE EXTREMELY IMPORTANT AND RELEVANT
• THERE ARE A NUMBER OF FACTORS THAT COULD RESULT IN SIGNIFICANT REFORM OF EU'S SUGAR REGIME WITH NEGATIVE CONSEQUENCES FOR TRADITIONAL ACP SUPPLIERS LIKE BARBADOS


TRADE PREFERENCES
• THERE COULD BE SIGNIFICANT DOWNWARD PRESSURE ON THE PRICE PAID TO ACP SUPPLIERS. IT IS A MATTER OF MAJOR CONCERN FOR BARBADOS, ONE OF THE HIGHEST COST PRODUCERS OF CANE SUGAR IN THE WORLD
• EFFORTS ARE BEING MADE TO RATIONALISE AND REPOSITION THE INDUSTRY


NON-TRADITIONAL EXPORTS
• BARBADOS' EXPERIENCE IN THE EXPORT MARKET OVER THE PERIOD 1991 – 2000 HAS INVOLVED A WIDE RANGE OF PRODUCTS, BUT HAS BEEN SOMEWHAT DISAPPOINTING (SEE APPENDIX 9)


NON-TRADITIONAL EXPORTS
• BENEFIT FROM PREFERENTIAL ACCESS THROUGH ACP/EU TRADE ARRANGEMENTS, CBI AND CARIBCAN
• HAVE NOT CAPITALIZED ON THE OPPORTUNITY DUE TO SUPPLY SIDE CONSTRAINTS, LIMITED EXPORT CAPACITY AND UNCOMPETITIVE NATURE OF PRODUCTION
• NEED FOR TECHNICAL AND FINANCIAL ASSISTANCE


Issues of concern in relation to WTO agricultural negotiations
• The one size fits all approach in relation to S&DT for developing countries – failure to recognise special requirements of SIDS/SDEs
• The need for a more integrated approach which links market access, domestic support and export competition commitments to provide for greater equity and balance

Issues of concern

- Inadequate attention being given to building productive capacity in smallest and most vulnerable economies to facilitate their participation in global trade- need for technical and financial assistance
- Market access negotiations within the AoA will not address major difficulty facing SIDS – SPS and TBT measures since these fall outside the scope

Issues of concern

- Negotiations need to take into account both negative and positive effects of liberalization on SIDS – e.g erosion of preferences, elimination of export subsidies on NFIDCs
- Market access commitments need to offer flexibility to SIDS/SDEs – apparent focus on substantial tariff reduction
- Current flexibility in the area of domestic support too great – need for strict disciplines

ECONOMIC ADJUSTMENT PROCESS GOVERNMENT POLICIES AND PROGRAMMES

- Land for landless Programme
- Agricultural Development and Rural Enterprise Funds
- General Services – Research and development, training, extension, pest and disease control, market research and information
- Integrated Rural Development Scheme – Irrigation
- Revamped Incentive Scheme

GOVERNMENT POLICIES AND PROGRAMMES

- Up-front duty free concessions on inputs
- Input and investment subsidies of a product-specific and non-product specific nature
- Rationalization of sugar industry
- Cane replanting Incentive Scheme and deficiency payments for sugar cane producers
- Buy local campaign
- Procurement by Government Institutions
- Agricultural Plan for the Scotland District

GOVERNMENT POLICIES AND PROGRAMMES

- Supportive Trade Policy Regime – bound rates, SSG
- Promotion of inter-sectoral linkages (ago-industry, agro-tourism, craft, etc)
- Development and promotion of unique high quality products e.g Barbados Blackbelly Sheep, West Sea Island Cotton.
- Export Incentives – rebates on freight costs, export credit

Necessary conditions

- **HAVING FLEXIBILITY IN THE AREA OF MARKET ACCESS TO SAFEGUARD SENSITIVE COMMODITIES FOR FOOD SECURITY AND RURAL DEVELOPMENT PURPOSES**
- **Product exemptions, effective Special Safeguard Mechanism, effective tariff levels and implementation periods etc**

Necessary Conditions

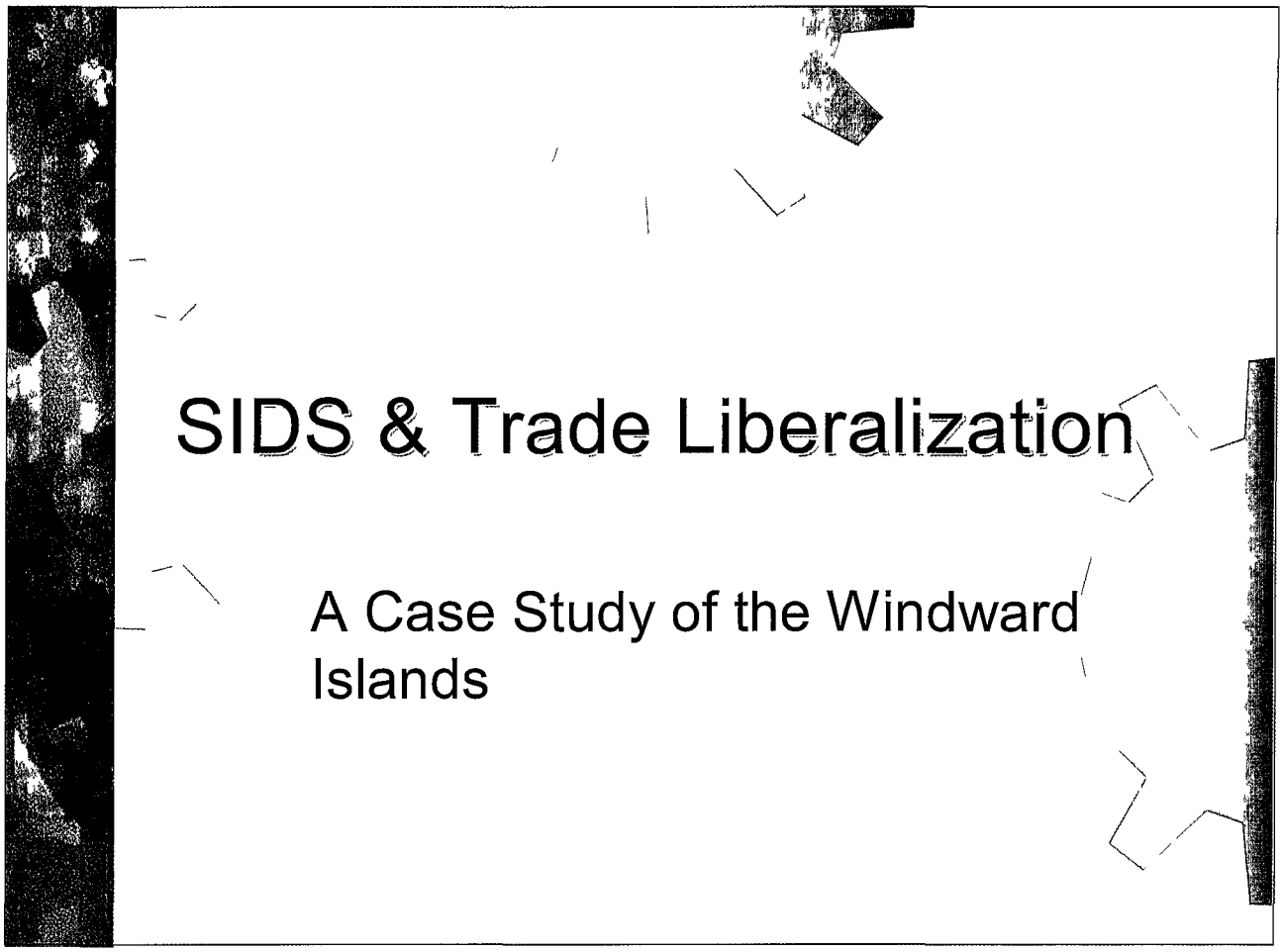
- DOMESTIC SUPPORT BECOMING MORE IMPORTANT TOOL TO BUILD DOMESTIC PRODUCTION CAPACITY in SIDS. NEED FOR INCREASED FLEXIBILITY IN THIS AREA
- Article 6.2 expansion, review de minimis, Annex 2
- Greater discipline for Developed countries – tightening green box

Necessary Conditions

- RENDER PREFERENCES STABLE AND PREDICTABLE
- Need to be preserved and incorporated into multilateral trading arrangements
- Adequate transition periods where there is phasing out
- Compensation to SIDS/SDEs for losses
- Provision of resources to support diversification

Blank page

Page blanche


SIDS & Trade Liberalization
A Case Study of the Windward Islands

SIDS & Trade Liberalization

A Case Study of the Windward Islands

"Small Islandness"

- Steep and difficult topography
- Narrow domestic market - pop 437,000
- Small skill pool
- High vulnerability
- Lack of economies of scale
- Net food importers (< .01 % of world trade)

Vulnerability

- 21 tropical storms in 20 years
- Losses in production & infrastructure
- 44% drop – drought in 2001
- 40-50% destruction of banana crop in 2002

Characteristics of production & trade

- Bananas – 50% land use,
- Small farm size, > 60% - 1 ha or less
- Low technological, high labour input
- High cost (US$ 520 *vs* $168-$240)
- Poor transportation arrangements (regional market)

Characteristics of production & trade

- Entry & exit of farmers (49% since 1994)
- Dependence on import tariffs for fiscal revenue

Agriculture & Trade Policy

- Banana recovery: quality, increased productivity, market development (WIBDECO)
- Agricultural Diversification: import substitution, food security, export diversification
- Environmental preservation

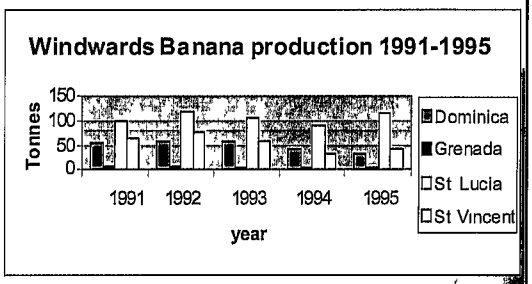
Agric & Trade Policy

- Social recovery; training, entrepreneurial development, social services & infrastructure
- Taxes & fiscal concessions

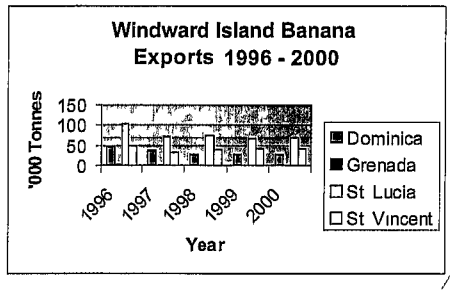
Importance of banana production & exports

- Major source of employment in rural areas (20 – 40%)
- 5% -14% of GDP (10 – 20% prior)
- Regular cash flows (US$ 1M per week)
- High multiplier effect (consumption, investment & savings)
- 60%-80% of export revenue

Export performance 1991-95



Export performance 1996 - 2000



Negotiating objectives

- Continued preferential access for traditional exports/ longer transitional period
- Secure market openings in new trade related areas
- Non reciprocity in new trade obligations

Market Access

- Tariff binding reductions
- Tariff Rate Quotas
- Special Safeguards
- Non trade concerns

Tariff Reductions

- Lack fiscal resources for domestic support
- Quantitative restrictions dismantled
- Applied rates 0-40%, bound at 100%
- 30% cost differential between imports & domestic for meats

Tariff reduction

- Flexible tariffs = safeguard for food security & R.Dev commodities
- Maintain UR bindings
- Any reductions in bindings < developing countries

Tariff Preferences

- Technology will improvements will still leave 20-40% cost disadvantage
- Cost disadvantage will exist for other commodities
- High preferential tariffs may not be tenable in EU

Loss of tariff preferences

- Annual Revenue loss of US$65M to US$85M & multiplier
- Increases in household poverty (18- 30 %) and unemployment (18 – 22%)
- Loss of > 50,000 jobs
- Decline in overall economic growth

Options for tariff preferences

- Compensate with technical and marketing assistance:
  - Organic Production
  - Fair Trade
  - Market Promotion

Tariff Rate Quotas

- Windward production < 1% of world exports
- Historical quotas too low to cause market distortion
- Compensation by developing countries for loss of preferences

Special Safeguards

- Few traded products, un diversified revenue base
- Use flexible tariffs as safeguard measure
- Require assistance in developing administrative systems & guidelines

Domestic support

- Domestic support in developed countries = cheap food = food security
- Domestic support also = cheap competition for domestic producers
- Development/food security box for SIDS who cannot meet *de minimis* level

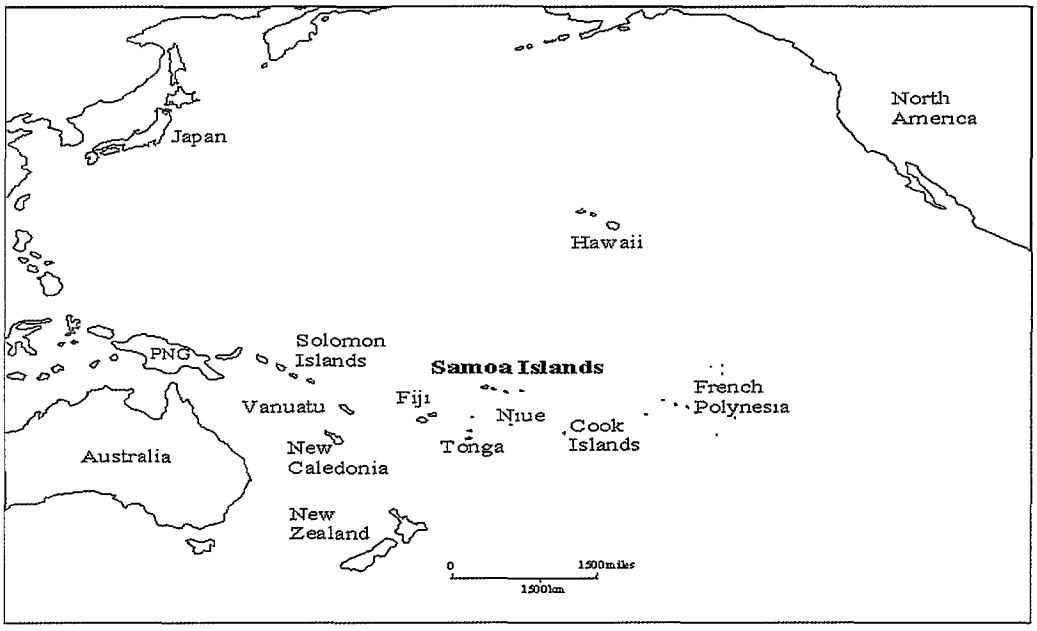
Export Competition

- Similar to domestic support

Special & Differential Treatment

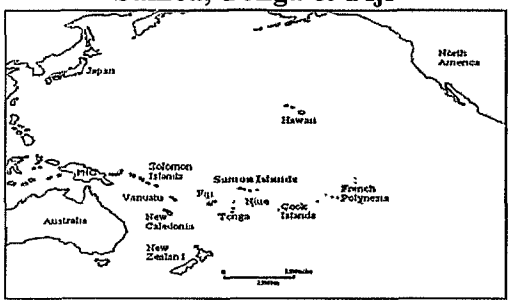
- longer periods for compliance
- easier market access to major trading partners
- exemption from certain obligations and lower levels of commitments
- recognition of the need to enhance food security through tariffs and safeguards

PACIFIC ISLAND CASE STUDY
Samoa, Tonga & Fiji



KVA Consult Ltd

PACIFIC ISLAND CASE STUDY
Samoa, Tonga & Fiji



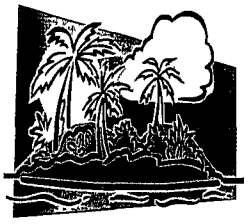
KVA Consult Ltd

Introduction

- Pacific made up of a group of islands with relatively small populations
- Agriculture the backbone of the economy (making up a two thirds of the total GDP)
- Islandness, smallness and remoteness of PICs has hindered the economic development of these countries in the world economy

KVA Consult Ltd

Smallness



- limited land available for agriculture producing little supplies for consumption, and domestic and export markets
- Access to finance very limited
- Traditional methods of production still being used

KVA Consult Ltd

Remoteness

- location of the PICS from major international markets
- High transportation costs-freight costs from Samoa for 20ftcontainer
  - US$1500 to NZ
  - US$2000 to Aust
  - US$2200 to LA,USA
  - US$3500 to Europe
- PIC exporters end up being price takers

KVA Consult Ltd

Vulnerability

- external shocks in the world markets
- Natural calamities

  Such as, cyclones, droughts, rising sea level etc.

Examples:

two cyclones set back the Samoan economy in 1990 & 1991, 2002 cyclone which devastated Tonga's economy. Drought affected Fiji's sugar cane industry,

Disease (taro leaf blight) devastated the taro industry in Samoa

KVA Consult Ltd

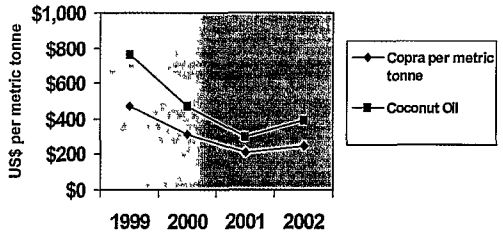
Economic and political vulnerability

- Low world prices greatly impacted the agricultural sector
- Main agricultural commodities included copra, sugar vanilla

KVA Consult Ltd

Copra World Prices

Average International Prices Copra



KVA Consult Ltd

Case : Fiji Sugar

- Slow growth from 1997 due to;
- low world prices
- Expiring land lease disputes
- Adverse weather conditions
- Transportation problems
- Industrial disputes
- Forecast a further downturn in sugar production

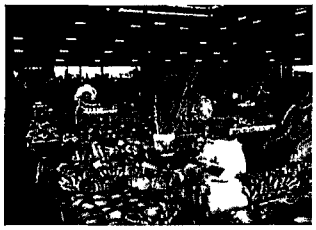
KVA Consult Ltd

Economic Performance of the Agricultural Sector - Samoa

- Contribution to the GDP dropped from 21% to 14% then in 2001 only accounted for 5.9%
- Main agricultural stables include taro, bananas, yams
- Commodities – copra, cocoa and sugar

KVA Consult Ltd

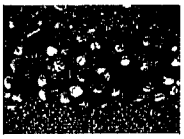
Basic Food Items



- Meat
- Fish
- Pork
- Chicken
- Tropical Fruits and Vegetables

KVA Consult Ltd

Main Exports



Samoa

- Fish, coconut based products, taro, kava, bananas, noni

Fiji

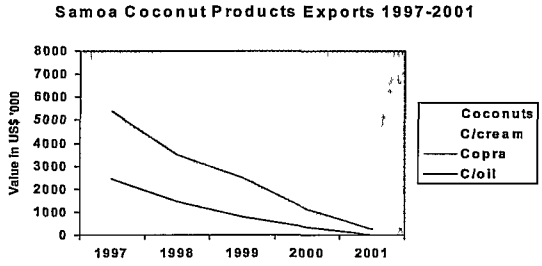
Sugar, dalo, fish, tropical fruits and vegetables

Tonga

Squash & vanilla

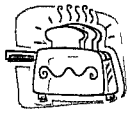
KVA Consult Ltd

Export Performance of coconut based products 1997-2001



KVA Consult Ltd

Main Imports



- Food Items such as rice, flour, meat cuts, and chicken
- Main markets for imports are New Zealand, Australia, USA, Fiji
- Import Duty for food products

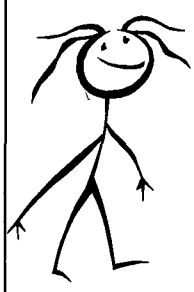
KVA Consult Ltd

Import Duty for Agricultural Food Items

Product	Duty CIF (*ad valorem*)	Source
Rice	0%	Australia, USA
Potatoes	20%	New Zealand
Chicken	0%	USA
Lamb flaps	8%	NZ, Australia
Flour	0%	NZ, Fiji, Australia
Eggs	20%	USA
Meat	8%	NZ and Australia
Cocoa	20%	PNG, Fiji

KVA Consult Ltd

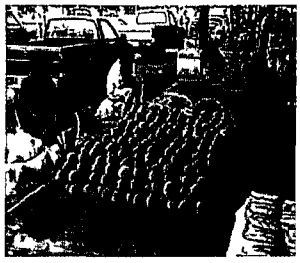
Import issues



- Heavy dependency on imported foods
- Shrinking local producer industry due to cheaper imports – eg. Shrinking egg industry
- Increasing trade deficit
- Lifestyle diseases

KVA Consult Ltd

Market access Issues

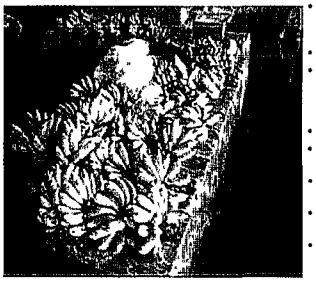


Australia and NZ Markets

- Erosion of preferences
- Eg. Coconut cream duty in NZ reduced
- Quarantine Requirements
- Supply constraints

KVA Consult Ltd

Case: Exports of Bananas to NZ Market



- Bananas were required by NZ quarantine to reach NZ green due to the threat of the fruit fly
- Bananas had to be air freighted
- Exporters argued for justification that bananas are shipped green so there would not be any fruit fly upon arrival
- Bilateral quarantine Agreement
- New packaging requirements meant more investment in bananas
- Organic bananas also subject to fumigations
- New problems and issues faced by exporters
- Samoa investing in heat treatment facility as one option to meeting the requirements

KVA Consult Ltd

EU Markets

- Supply constraints
- Erosion of Preferences
- Administrative requirements
- Technical Standards
- Competitiveness
- Transportation costs
- Case Study - kava

KVA Consult Ltd

Case: Kava to the EU market

- EU Pharmaceutical Industry banned the kava due to the threats to the liver
- Pacific kava exporters seeking more scientific justification to prove this
- Kava consumption in Pacific is many times the recommended dose in a herbal preparation
- Great loss in export sales
- Small vulnerable economies need all the export income that they can earn

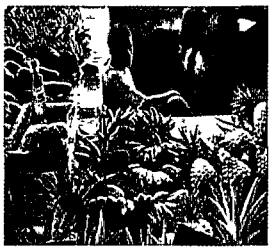
KVA Consult Ltd

USA Market

- Supply Constraints
- Standards of USDA
- Competitive market

KVA Consult Ltd

Multilateral Issues



- Accession process to become members of the WTO
- Lack of capacity know-how on WTO Agreements
- LDC transitional periods do not apply to acceding countries

KVA Consult Ltd

Agreement on Agriculture - issues

- Limited capacity and knowledge on the Agreement
- Small island economies vulnerability means Government support is still needed
- Domestic support in terms of dollar values is very small
- Government must assist agriculture sector as it is the backbone of the economy and poverty reduction means more Government support to this sector
- Pacific Governments nevertheless are implementing non subsidized policies

KVA Consult Ltd

Government Assistance in Agri

- Reduction in world prices for copra led to Samoan Government reintroducing price stabilization for copra
- Sudden ban in kava exports from Europe led to introduction of an export guarantee scheme which provides a form of insurance and guarantee on export orders
- Continous need for Governments to provide the infrastructure to support agricultural development

KVA Consult Ltd

Future Outlook

- In the course of the WTO negotiations on agriculture, the PICs are far behind in terms of benefits and have the most problems due to their smallness, remoteness, and vulnerability which have made it more difficult for them to access international markets successfully.
- The future of the Pacific requires substantial attention from the developed world particularly in the development of the agricultural sector which is the backbone of many Pacific Island economies

KVA Consult Ltd

What is needed?

- Enhance supply capacity by *improving access to land &* finance, (also subsidized planting materials)
- Strengthen agricultural sector infrastructure
- Reduced duties on raw materials and packaging materials,
- Continuous domestic support on specific sectors requiring support
- Non-trade concerns – analyse and building awareness on non-trade concerns
- Improved knowledge and *capacity on multilateral trading* system and Agreement on Agriculture
- Trade facilitation measures – meeting the requirements of *markets*
- Market information access
- Increased participation in the multilateral negotiations especially pushing the real issues faced by small island economies
- Improved market access

KVA Consult Ltd

THANK YOU

KVA Consult Ltd

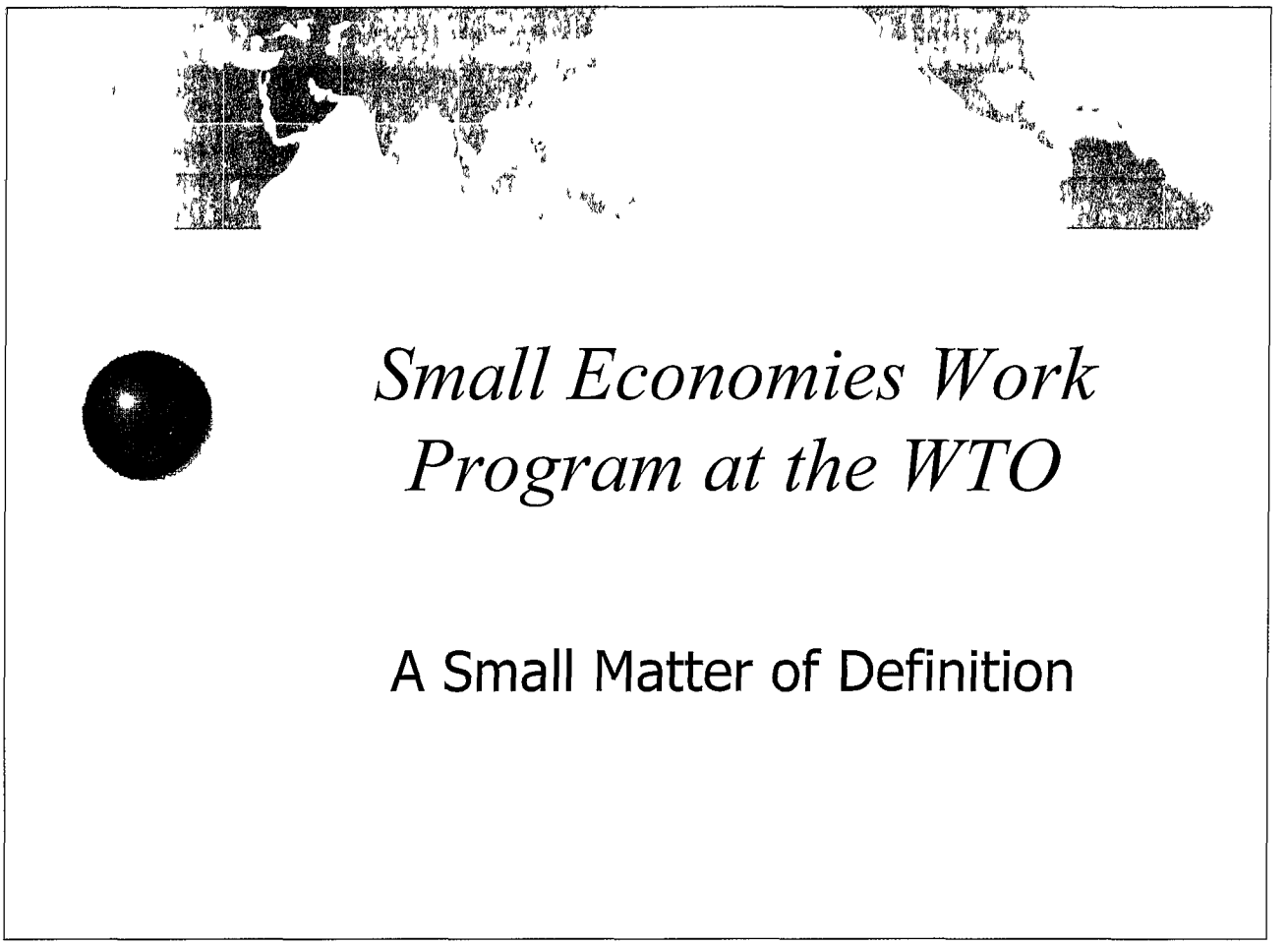
Blank page

Page blanche

PRESENTATIONS: SEGMENT 2

Blank page

Page blanche



Mr Roman Grynberg (Commonwealth Secretariat)

Small Economies Work Program at the WTO

A Small Matter of Definition

Doha Small Economies Mandate

- Doha Ministerial Declaration para 35:

We agree to a work programme, under the auspices of General Council, to examine issues relating to the trade of small economies The objective of this work program is to frame responses to the trade related issues identified for the fuller integration of small,vulnerable economies into the multilateral trading system, and not to create a sub-category of WTO members

- The WTO mandate raises a logical problem. It recognises that small economies have a problem but excludes the framing of proposals that solve the problem of the group because this would involve defining the group

Doha Small Economies Mandate & the Doha Round

- While the Work Programme cannot define Small Economies , they may define themselves in individual negotiating demands however they see fit
- Thus the Work Programme will have very limited impact in terms of solving the problems of small economies

The WTO's Many definitions of "Small"

- Doha Ministerial Declaration forbids the creation of new category but the WTO agreements contain at least five implied categories.
  - 0 015% of world trade (Finance Committee)
  - 3 25% of trade in a particular commodity (ASCM Article 27 6)
  - de minimis threshold of 4% of imports for removal of countervailing duties (ASCM27 10)
  - De Minimis dumping of 3% of imports(Article 5 8 Agreement on Article VI)
  - Just as the ministerial declaration was prohibiting the definition of small it created a new threshold of 0 1% of world merchandise exports(&20 billion GNI) to grant ASCM extensions(G/SCM/39- para 10 6)

Work Programme &Negotiations

- Small Economy Ambassadors are working on demands with IGOs in 3 areas:
  - Threats to existing preference arrangements
  - Economic concerns pertaining to smallness
  - Administrative limitations of small economies to implement new and increasing WTO obligations.
- Early harvest seems unlikely except administrative problems though demands are being formulated for individual negotiating groups. Substantive success will depend upon political commitment.

WTO Work Programme

- WTO has begun important and useful analytical work on small economies – Trade and Economic performance the role of Economic Size (WT/COMTD/SE/W/5)
- Study considers the question of adjustment to globalisation as the main problem facing small economies.

Panos Konandreas, FAO[1]

I will structure my comments along the following lines:

First, some observations on the nature of the problems faced by SIDS in the export market of agricultural commodities. Some of these have already been highlighted in the background papers and in the comments made by others so far.

Second, I will comment on the particular problems that further trade liberalization in agriculture may pose for SIDS, in view of their particular circumstances.

Finally, I will make some comments on some issues that may be desirable for SIDS to pursue in the context of the current agricultural negotiations or bilaterally as the case may be.

First on the nature of the problem of SIDS,

As the case studies show, a prominent characteristic of agricultural commodity exports of SIDS is that they depend on a few commodities for a large share of their export earnings. In fact, several of these countries have high dependence on a single agricultural commodity.

Over the last two decades, two features dominated world agricultural primary commodity markets: relatively high price volatility and a generally declining trend of real prices. Price volatility in agricultural commodity markets is largely due to the relative rigidity of short-term supply and the low price elasticity of demand in importing countries. Overall, instability tends to be higher for agricultural raw materials and beverages compared with processed and temperate-zone products. Long term decline in real prices is due to a sluggish world demand for primary commodities as a result of low income elasticity of demand declining intensity of raw materials use in manufacturing. FAO analysis show that in 2000 the price index of agricultural commodities deflated by the price index of manufactured exports of industrial economies was one half of the average for 1980. For tropical beverages, sugar and cotton, the decline was even steeper and the long-term forecasts are also not encouraging.

It is clear that for countries that depend heavily on such primary agricultural commodities for the bulk of their export earnings, such as the SIDS, these trends can have highly unfavourable effects for their economies.

The same trends have not been experienced for value-added processed products. These products represent the engine of growth in world agricultural trade and have not been subject to neither the same decline in real prices nor are they subject to the same degree of price fluctuations. The implication of these trends is that to the extent possible, it would make good sense for SIDS to diversify their export base to processed products taking advantage of the availability of the raw material and cheaper labour they have at their disposal. I will return to this issue later.

The second problem for many SIDS is that the prospects for their agricultural exports are very much tied to preferences in a few developed countries. In turn, these preferences are very much linked to domestic agricultural policies pursued in these countries. Reforms in the developed countries necessarily imply erosion of preference margins. Hence the value of SIDS agricultural exports will suffer. At the same time, the price of temperate products which these countries import is expected to increase somewhat from trade lideralization, resulting in a deterioration of their terms of trade.

[1] This paper was independently submitted by the author during the SIDS Forum and it was not commissioned by the Project

It is clear that, by and large, the interests of SIDS in the negotiations are very much tied to the reforms that may take place in their key developed country partners. It is not by accident that several SIDS have taken a position which may be described as one of defending certain policies presently pursued by some developed countries.

Aside from the fact that such a position by SIDS is at odds with the position of the majority of developing countries (non of them defend export subsidies, for example), it is also relevant to ask whether this approach would help in the long term. Reduction of production and trade distorting policies is the agreed objective of the reform process and it will happen, sooner or later. That implies that the fate of preferences is also known. Yet, it is unlikely that this reform will happen overnight and hence, fortunately, there is time for all parties to adjust to the new realities.

This brings me to the third part of my comments on some adjustments that may be desirable for SIDS and how could these be taken into account in the on-going process.

With declining overall preference margins, one way of prolonging the benefits to SIDS is to make sure that a greater share of the margin is captured by them and not by importing enterprises in the preference giving country. The situation on this issue varies by commodity and country but overall there is plenty of room for the preference receiving countries to get a greater share of the margin. With continuing shrinking overall preference margins, this is very important, although not strictly a WTO issue and has to be arranged bilaterally between the preference-giving and the preference-receiving countries.

Second, it is also time to talk seriously about compensation for preference losses. If the reasons of providing the preferences in the first place are still valid then there is need for compensating the preference receiving countries for the loss of such transfers. What is important here is not only to transfer resources to the preference receiving countries but to make sure that such resources reach the target population. It is easy to transfer funds to governments but it is another matter of transferring them efficiently to the farmer. Mechanisms are needed to effect such transfers to farmers. If there is one positive aspect of the present system is that that transfer to the farmers is more or less automatic.

Third, a related issue of particular importance to SIDS is financial and technical assistance. Such assistance is necessary to help them increase productivity in their traditional exports so that they can compete in a world increasingly without preferences as well as in order to diversify their production base. This is particularly the case for moving into processed value-added products where product quality and product standards are critical in order to penetrate highly competitive markets.

Fourth, it is imperative that SIDS make all necessary efforts to diversify, including to value-added processed products. Although this is not an easy task, it would easier to be done now than later. Now that resources are available, as a result of the preferences, some of these resources could be used towards diversification. Reduction in tariff escalation is a key issue here and it is an essential precondition for the development of processing industries in these countries.

It is also necessary to acknowledge that diversification should be seen in a broader context and not strictly within the product presently receiving preferences or even within agriculture. The objective should not always be to diversify to activities that would necessarily lead to making up the losses in export earnings as a result of preference erosion but to activities that would help rural households to earn a living. Import substitution, especially in food production, could be the most effective diversification activity in many cases. Also, it has been the experience from other countries that growth in rural employment often comes not only from agriculture itself but, more importantly, from non-agricultural activities, as well as investment in education and vocational training to increase employability outside agriculture. Thus, it is essential to think more broadly about diversification. It is not simply alternative means of generating foreign exchange but ways and means to increase the employment opportunities of rural households.

Finally, in view of the expected deterioration of the terms of trade for SIDS between the products they export and the food commodities they import, an important consideration is mechanisms to assist them in years of high world prices of basic foodstuffs. In this connection, the Marrakesh *Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-Developed and Net Food-Importing Developing Countries* is long overdue and it is one area in the negotiations on agriculture that SIDS could join forces with other interested developing countries to ensure that the Decision is effectively implemented without further delay.