RE3-97-002

Economic and Sector Study Series

REVITALIZING AGRICULTURE IN SURINAME

REGION 3

May 1997

Inter-American Development Bank

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The purpose of the Economic and Sector Study Series is to provide a mechanism for diffusion of selected analytical work undertaken by the Department in support of its operational program at the country or sub-regional level. Studies are selected for inclusion in the Series on the basis of whether they contribute to internal debate on important issues across countries, or facilitate the design of effective responses to key problems or opportunities in particular countries. Opinions and judgements expressed in these studies do not necessarily reflect the view of Bank Management or member countries. This Series is produced under the general supervision of Neville Beharie, Regional Economic Advisor, with the assistance of Ivania Rivas.

REVITALIZING AGRICULTURE

IN SURINAME

May 1997

This report was prepared by Greta Boye (consultant) with the assistance of Winston Ramautarsing (consultant) who was reponsible for Chapters 4, 6 and 7, and contributed comments and translations of material for all the report. Dougal Martin, Country Economist for Suriname in RE3/OD6, planned and supervised the report, and contributed to the macroeconomic and strategy sections. Hugo Cohan, Agriculture Specialist in RE3/EN3, contributed to the strategy section. Moritz Kraemer, OCE, commented on the draft report. The authors kindly acknowledge the contributions of numerous government officials and private sector producers, exporters and importers in the agricultural sector. The original report presented to the Bank has been revised in terms of content, style and layout for inclusion in this Series. Ivania Rivas (RE3), Karen Astudillo and Macarena San Miguel (RE3/OD6) contributed to the production of the final document.

Regional Operations Department 3
Division 6

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Acronyms

ABS	General Bureau of Statistics
ACP	African, Caribbean and Pacific
ACS	Association of Caribbean States
AGB	Agricultural Bank
ASYCUDA	Automated System for Customs Data
BTN	Brussels Tariff Nomenclature
CED	European Committee for Standardization
CELOS	Center for Agricultural Research in Suriname
CET	Common External Tariff
COPANT	Pan-American Standards Commission
CSC	Caribbean Standards Council
cif	Cost, insurance and freight
DRC	Domestic resource costs
DSB	De Surinaamsche Bank
EBS	Energy Company of Suriname
EDF	European Development Fund
EU	European Union
FAO	Food and Agricultural Organization
fob	Free on board
GDP	Gross domestic product
GPOV	Common Vegetable Oils and Fats Companies, Ltd
HS	Harmonized System
IICA	Inter-American Institute for Cooperation on Agriculture
IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
INVESTSUR	Institute for the Promotion of Investments in Suriname
ISO	International Standards Organization
LAIA	Latin American Integration Assocation
L/C	Letter of Credit
LOC	Foundation for Agricultural Development of Commewijne
MADP	Multi-Annual Development Plan
MCP	Multi-Purpose Corantijn Canal Project
MP	Melkcentrale Paramaribo
MOA	Ministry of Agriculture, Fisheries and Livestock
MTI	Ministry of Trade and Industry
NARENA	Natural Resources and Environmental Assessment
NARI	National Agricultural Research Institute
NATIN	Nature Technical Institute
NDB	National Development Bank
NGOs	Non-governmental organizations

Acronyms (cont'd)

NTMs	Non-Tariff Measures
OCT	Overseas Countries and Territories
SAIL	Suriname American Industries Limited
SAOC	Foundation for Agricultural Development of Coronie
SAP	Structural Adjustment Program
SLM	Suriname Airways
SMEs	Small and medium size enterprises
SML	Foundation for the Development of Mechanized Agriculture
SNRI	Suriname National Rice Research Institute
SRMA	Suriname Rice Millers Association
STPO	Suriname Trade Promotion Organization
SUJAFI	Suriname Japan Fisheries Company
SUREXCO	Suriname Rice Exporting Company
TFP	Total factor productivity
UOS	University of Suriname
VSB	Surinamese Entrepreneurs' Association
VPP	Association of Paddy Producers
VPV	Association of Paddy Processors
WRI	Warwick Research Institute
WTO	World Trade Organization

Currency Equivalents

Currency unit	=	**Surinamese Guilder (Sf)**
US$1.00	=	Sf 400
Sf 1.00	=	US$ 0.0025

Currency Unit	=	**Dutch Guilder (Dfl)**
US$1.00	=	Dfl 1.70
Dfl 1.00	=	US$ 0.625

Executive Summary

Suriname faces unprecedented challenges in transforming its agricultural sector to a market-based system, and it will need to offset the deterioration of the sector resulting from the probable loss of its preferential markets in the next decade. The present study seeks to contribute to the understanding of the measures that are necessary to address the constraints on agricultural growth and development. The analysis builds on discussions that took place in May 1996 with government officials, representatives of private sector organizations, and international agencies.

The agricultural sector, which contributed 9 percent of GDP during the 1992-95 period, is the second most important productive sector after mining. Employing 15 percent of the workforce, it is the second largest employer after the government. In 1994, agricultural products accounted for 22 percent of total exports. The most important subsectors are rice (which accounts for 21 percent of agricultural output), fisheries (15 percent) and livestock (13 percent). Other important products include bananas, lumber, citrus and vegetables.

Constraints on Agricultural Growth and Development

Policy Constraints

Policy constraints are one of the principal factors having a negative impact on agriculture. Indeed, much of the responsibility for the poor long-term performance of the agricultural sector can be attributed to inappropriate economic policies and unfavorable macroeconomic conditions. In particular, agricultural performance has suffered because of inappropriate foreign exchange policies and macroeconomic volatility. However, since mid-1994 macroeconomic constraints to the agricultural sector have lessened greatly. The multiple exchange rate system was replaced with a single, much higher, official exchange rate in July 1994, thereby eliminating the distortions associated with multiple and overvalued exchange rates. Furthermore, in mid-1995 the Central Bank was able to stabilize the parallel exchange rate and thereby bring about a sharp deceleration in the rate of inflation.

The dominant role of the state in agriculture also acts as a constraint to the growth and development of agriculture. Through its parastatal enterprises, state-owned foundations and projects financed under its development plans, the Government of Suriname accounts for a large share of agricultural production, is active in the processing of certain products and is involved in the international marketing of others. In particular, parastatals operate in the rice, bananas, palm oil, sugar, milk processing, fruit, and fisheries sub-sectors.

Until recently, price controls were imposed on many agricultural commodities and some basic food imports with the objectives of lowering inflation and protecting consumers. Rice remains the only commodity whose price is controlled and is subject to the conditions set forth in the country's 'rice agreement'. That agreement features a retention scheme and a minimum export price mechanism, although the export taxes and other fees required as part of the agreement are also important measures having a negative impact on the rice sector. Most of the conditions of the rice

agreement have been contentious for private sector producers and exporters, especially the price paid for retained rice which is lower than the price available in the open market, and export taxes.

Agricultural trade has become increasingly liberalized as Suriname first reformed its tariff policies and then joined CARICOM. Accession to the World Trade Organization will reinforce this trend. However, despite the tariff reductions and the duty-free entry of CARICOM products, several agricultural producers have complained that tariffs on inputs used in agricultural production remain high. Moreover, non-tariff barriers have not been reformed. Both exports and imports are subject to licensing, and the numerous and lengthy procedures to obtain licenses impose significant costs on agricultural producers. It takes five steps to obtain an import operating license, nine steps to obtain an import shipment license, and eleven steps to obtain an export shipment license (sixteen for rice exports). In addition, the criteria for obtaining licenses are unclear and the discretionary nature of the system creates uncertainties. The requirement for exporters to surrender foreign exchange earnings reduces the incentive to export and is a strong deterrent to foreign direct investment in Suriname. Moreover, since foreign exchange revenues must be surrender prior to exporting (or even obtaining an export license) the requirement ties up working capital and often results in the exporter having to secure a loan in US dollars or prepayment from his or her clients, which is not the norm in international trade.

The land tenure system is also a major constraint to the development of agriculture in Suriname. The majority of land is owned by the Government and the Government assumes all responsibility for reclaiming and opening fellow land. Access to land is determined by the Government rather than the market, which may lead to a sub-optional allocation of land and which increases costs for farmers and introduces a discretionary element into land development. The lack of information on the location of land available for agricultural production causes delays and raises financial costs in the hiring of land surveyors, who often identify parcels of land as being available, only to later discover that they have already been claimed. An additional constraint presented by the land tenure system is that a title of private land ownership or a long-term lease is required to secure a bank loan. Short-term leases are often used by small producers and processors or by those with limited working capital, and they are usually inadequate as collateral. The impact of the present land tenure system in terms of bank financing is that large producers having title to private-owned land have more access to credit than small-size producers without such land titles. The lack of an adequate mechanism for dispute settlement over land has also surfaced as an important constraint to agricultural activity in Suriname.

Infrastructure Constraints

The deterioration of Suriname's infrastructure during the last decade, which has led to increased production costs for producers and larger transaction costs for exporters and importers, represents a large impediment to agricultural production. This situation has been caused mainly by the recurrent postponement of maintenance activities resulting from inadequate funds, the lack of

clear authority and responsibility over maintenance of existing infrastructure, and the associated difficulties over how maintenance costs should be shared.

Financial and Investment Issues

Real interest rates on bank loans -- the principal source of agricultural credit -- swung from highly negative in 1993 and 1994 to highly positive in 1996 and 1997. In 1996, nominal lending rates for agricultural loans were between 35 and 40 percent while annual inflation was -0.7 percent. The high cost of borrowing has increased costs for agricultural producers and created a big disincentive to investment in rehabilitation and new production, and the sudden and large change in real interest rates has strained many heavily indebted farmers.

An important improvement in the investment climate in Suriname may result from the drafting of an investment law in 1996. The proposed law contains both fiscal and non-fiscal incentives, and sets out guidelines for a 'one-stop shop' where all administrative procedures for investments are to be undertaken. The new law also targets specific sectors, including agriculture.

Key Institutions and Support Services

Key Institutions

The way in which agricultural institutions in Suriname currently operate reflects the problems that have characterized the administration of the entire public sector during the last decade. The budgets of the agriculture-related ministries and institutions have gradually eroded in real terms, thereby reducing development efforts for the sector and undermining its agriculture-related infrastructure. At the same time, the salaries of civil servants have declined significantly in real terms over the last decade.

No actions have been taken when government employees have developed parallel income sources, which have usually become the focus of their efforts in terms of time and energy. Also, a significant part of the young staff has left the Government ranks to emigrate to the Netherlands and elsewhere, while another part has joined the private sector and a smaller portion has joined the parastatal sector. Likewise, the availability of high-level staff officials in the Government has fallen. Against this background, the general opinion in Suriname of agriculture-related institutions is poor. The currently depressed state of the sector, low salaries, and the weak overall image of agriculture have discouraged young people from pursuing a career in this field and have instead acted as major constraints to strengthening agriculture-related institutions.

The Ministry of Agriculture (MOA), the key public sector institution supporting agriculture-related activities, is one of the largest ministries in the country. The ratio of MOA employees to the number of farmers is about 1 to 11. Nearly three-quarters of the staff are considered low-level or unskilled workers, while many of the remaining mid-level employees are given the responsibilities of

technicians and lack the educational background to carry out their assignments. To support its staff, the Ministry of Agriculture allocates nearly one-half of its budget to personnel expenditures, while subsidies and transfers absorb nearly 25 percent. In contrast, funds allocated to research and training are practically insignificant.

Support Services

The research and training institutions in Suriname are critical to the sustainability and international competitiveness of the sector. However, they face numerous constraints that inhibit their effective operation. One of the most important of these is the continuous budget cut-backs for research and training activities which have reduced levels of activity and caused the eventual break-down of equipment as a result of inadequate maintenance. Other constraints include the lack of personnel specialized in research and training, and the lack of an incentive structure to attract newcomers into the field of agriculture.

The Agricultural Experimental Station was once an important support institution and until the 1980s carried out a considerable amount of research in the fields of phytopathology, soil science, crop science, farm mechanization, and food processing. Its professional staff has been reduced dramatically, which has limited its research capacity in terms of both manpower and funding. The lack of trained personnel has prevented the Experimental Station from branching into projects on agricultural diversification and non-traditional exports. Other important research institutions include the Center for Agricultural Research in Suriname (CELOS) and the Suriname National Rice Research Institute (SNRI).

The overall training provided by university and technical institutes involved in agriculture fails to meet the needs of the agricultural sector. The lack of basic agricultural education is striking and earlier attempts to improve the situation failed since agriculture in general is not viewed favorably throughout the country as a career choice. Mid-level agricultural education is provided by the well-regarded Nature Technical Institute (NATIN). Due to its small size, the higher agricultural engineering course at the University of Suriname is restricted to the Bachelor of Science level. There is also a lack of regular vocational training in agriculture which would otherwise enable farmers to improve productivity, quality and safety. In the past, suggestions for this type of training have been widely accepted, especially in the central rice-producing region of Northwest Nickerie. Nonetheless, few actions have been taken to design and implement such a training program, although in 1996-97 the Lower Technical School plans to introduce short courses on agriculture in their curriculum.

Factors Affecting Competitiveness

Determinants of Competitiveness

The competitiveness of Suriname's agricultural sector will be a fundamental determinant of the success in revitalizing the sector. Suriname's natural resource endowment, its low population to

land ratio, tropical climate and access to international markets by sea provide the country with an inherent comparative advantage in agricultural production. However, Suriname has not fully exploited its comparative advantage because of impediments in other areas. Exact measurement of the degree of competitiveness of the agricultural sector and specific agricultural products in Suriname is complex. Nevertheless, it is possible to evaluate broadly the competitiveness of specific products.

Based on the information available on production costs, quality of output, support services and government policies, it appears that rice, bananas, beef, fruits and vegetables and fisheries have the greatest export potential. Palm oil is the only product under review that does not appear to be competitive or to have the capacity to be exported competitively. For rice, which is of highly regarded quality, the most important factors that adversely impact its competitiveness include the high costs of production, complicated and time-consuming export transactions, poor transportation infrastructure, and inadequate drainage and irrigation systems. For bananas, the yield of this fruit compares unfavorably with that of other Latin American producers. Moreover, high transportation costs and an inefficient harvesting system impact negatively on the product's competitive position. Like rice, however, the quality of Surinamese bananas is considered superior to that of other countries. For fisheries, export quality control and product standards are becoming increasingly important. They are currently deficient in Suriname, and regulations on fish landings are inadequate. The competitiveness of fruits and vegetables is also influenced by high production costs, the lack of regulated pesticide and chemical use, and the inadequate marketing skills of producers and exporters that are needed to exploit new market opportunities. The high costs and limited capacity of air transportation, as well as the limited productive capacity of farmers and the lack of uniformity and quality in plant propagations are also important factors impacting on the competitiveness of fruits and vegetables. For livestock and its related sub-sectors, the inadequate quality of feed hinders competitiveness, as do poor slaughterhouse facilities, limited access to foreign markets, and a poor drainage system that impacts on animal health, cattle improvement and the quality of grassland.

The Changing Export Markets

Important changes have occurred during the last decade in the market access conditions of Suriname's major export destinations. As its economy begins to open up, Suriname faces important questions in the integration choices it is pursuing and those that it could consider in the future. To date there is little, if any, empirical work available on the impact of Suriname's accession to the CARICOM, and on its possible future membership in other trade arrangements, such as the Latin American Integration Association (LAIA). To assess the compatibility of Suriname's integration with member countries of those two regional arrangements, so-called trade compatibility indices have been calculated. The results show that there is a low likelihood that Suriname's exports will be diverted from the 'rest of the world' to CARICOM and LAIA. In contrast, the results suggest that Suriname's imports will be diverted from extra-regional sources to those of CARICOM and LAIA member countries. These results further show that Suriname is more likely to gain from membership in CARICOM than in LAIA.

The likely phase-out of the preferential markets for banana and rice exports to the European Union suggests that Suriname could experience large foreign exchange losses in the next decade unless trade and investment policies are adopted to support improved competitiveness and agricultural diversification that would compensate for the predicted fall in rice and banana revenues. Estimates of the anticipated shortfall that would accompany the removal of preferential arrangements illustrate the magnitude of possible foreign exchange shortfalls. The calculations are based on the export supply response to projected price changes, as well as the anticipated earnings decreases resulting from the price changes themselves. In rice, Suriname would suffer an $8.2 million annual shortfall in export earnings from the loss of the EU quota for Suriname in the first half of the decade (2000-2005), which would increase to $18 million a year in the second half of that decade. In bananas, Suriname would also experience a large decrease in export earnings. In the first half of the decade, the shortfall would average $3.1 million a year, and it would then grow to $5.4 million in the second half of the decade. Together, the shortfall in rice and bananas would equal $11.4 million a year during 2000-2005 and $22.7 million a year during the second half of the decade.

Government Plans and Donor Activities

The Development Plan

The current Multi-Annual Development Plan (MADP) for 1994-98 differs from the previous plan's focus on democratization in its emphasis on economic development[1]. Among its major concerns are the marked decline in economic activity, unemployment and the erosion of the value of the Surinamese currency as a consequence of high inflation. The Plan addresses the revitalization of agriculture in Suriname through a two-pronged strategy. During the first half of the Plan, the focus has been on the rehabilitation of agricultural production, the strengthening of agro-industry and improvement in traditional export production. In the second half, the Plan would focus on the modernization of both the agricultural sector and agro-industry, and it would seek to expand non-traditional agricultural production. During the second phase, forestry, mining and industrialization will also be given priority. No quantitative or measurable goals are established in the plan, which hinders the objective evaluation of the MADP's progress.

Other MADP objectives for agriculture include stimulating exports through the enhancement of the country's comparative advantage in selected products and exploiting the anticipated changes in the country's emerging export markets and regional trade agreements. As part of its strategy to achieve these objectives, the MADP provides for the upgrading of infrastructure, the strengthening of research and marketing initiatives, and improving agricultural training and educational facilities. It also calls for the commercial management of parastatal companies, and where possible, their privatization. As a result, the role of the public sector will shift from direct involvement in

[1] A new Administration took office in September 1996. It is likely that the new Administration's economic development priorities and policy thrust towards the agricultural sector will deviate from the 1994-1998 MADP and that this will result in the preparation of a new MADP.

agricultural production to the creation of an environment that fosters investment and private sector development.

Donor Support Activities

The Government of the Netherlands is the largest donor in Suriname's agricultural sector in terms of funding level and is currently involved in four projects. The first is the Smallholders Support Project, which is co-financed with the International Fund for Agricultural Development (IFAD). It aims to reverse the deterioration of production by meeting the needs of marginal and poor rural producers and fishermen. The second project consists of the rehabilitation of two palm oil factories located in the region of Patamacca. The third one provides funds urgently needed for infrastructure in the agricultural sector of the western part of the country. The fourth project provides short-term technical assistance to the Ministry of Agriculture to help formulate agricultural policy.

The European Union is funding two projects in the banana and rice sub-sectors. In the banana sub-sector, a supply contract for equipment is being co-financed by Fyffes and technical assistance is being provided to improve productivity. In the rice sub-sector, a national rice research center is being established to improve production and export capabilities.

The Government of Belgium is providing technical assistance to the fisheries sector. Resident fisheries biologists and specialists are establishing data bases of fisheries statistics and other information relevant to the fisheries industry. Technical assistance is also being offered in support of fisheries cooperatives. Future projects will focus on quality control, improvements in statistical data bases and the creation of a laboratory to help expand fishery exports. Another project funded by the Government of Belgium was initiated in 1990 to construct and equip an ice factory for the fisheries industry.

IICA is supporting a project to train farmers in selected Hinterland Communities in the field of agro-forestry through demonstration units. That institution is also seeking funding for a second project to promote legumes for use as a fuel source. Several other bilateral and multilateral donor agencies have also contributed to projects designed to improve the agricultural sector in Suriname. The Government of Japan provided a grant to purchase inputs for fishermen. The Governments of Holland and France, and the FAO, IICA and IFAD are discussing a joint regional project to eradicate fruit flies in Suriname, as well as in Brazil, Guyana and French Guiana. The FAO is planning to fund a rice mechanization project in the near future.

A Strategy for Revitalizing the Agricultural Sector

Rationale and objectives of a strategy for revitalizing the agricultural sector

The final chapter of the study proposes a strategy for revitalizing the agricultural sector -- defined as including the fisheries and livestock sub-sectors -- in Suriname. The rationale for

revitalizing the agricultural sector is to increase national income and foster the economic and social development of Suriname. Since agriculture is a sector of vital importance to the Surinamese economy, it provides a good vehicle for achieving these aims.

Key elements of the strategy

The fundamental goal of the strategy is to revitalize the agricultural sector and increase value added in the sector. Any strategy to revitalize the agricultural sector in Suriname should meet at least three criteria:

- It should help the agricultural sector in a manner that does not negatively affect other sectors i.e. it should be non-distortionary.
- It should be realistic in terms of what can feasibly be achieved, and in particular it should be fully cognizant of the severe institutional and budgetary constraints present in Suriname.
- It should help Suriname's agricultural sector adjust to the future loss of preferential trade arrangements.

The proposed strategy, therefore, is conditioned by the above criteria. It is primarily focussed on removing obstacles or constraints to agricultural development rather than trying to intervene directly to stimulate agricultural production. Implicit in this approach is the idea that the state's role would change from that of direct agricultural producer to that of a facilitator of private farmers. In this new role, the state would establish and maintain the appropriate economic, regulatory, infrastructure and institutional environment for agricultural development, leaving actual agricultural production to the private sector. This new division of labor would not only stimulate agricultural production by assimilating the dynamism of private producers but would also leave the state with greater resources and institutional capacity for maintaining an environment that is conducive to agricultural development -- a task that only the state can perform.

Fundamental policies

A *sine qua non* for successful revitalization of the agricultural sector is the maintenance of sound macroeconomic policies. Above all, exchange rate policy will be crucial in determining agricultural sector performance. More generally, a stable macroeconomic environment with low and predictable inflation, and predictable real interest rates would also provide the macroeconomic environment most conducive to investment in the agricultural sector.

Short-Term Actions

For the short term it is proposed that the government focus on deregulating the agricultural sector through policy reforms. Such reforms should be a priority because they improve the overall incentive framework for the agricultural sector and therefore raise the rate of return on all subsequent actions, because they are feasible in a short time, and because they lay the basis for actions and programs that would materialize in the medium and long term. Many policy reforms can be undertaken in a very short period because they require only stroke-of-the-pen actions. In addition, these policy reforms could be undertaken without straining existing institutional and budgetary resources. On the contrary, since most of the reforms would entail deregulation, the reforms would actually lighten the regulatory burden on government and would free up staff time.

Medium-Term Actions

In the medium term, actions could be directed at more substantive changes in the agriculture sector. Some of the actions and programs envisaged for the medium term should be initiated in the short-term phase, but would only be completed in the medium term:

- Changing the role of the state in the agriculture sector.
- Improving agriculture-related infrastructure.
- Reforming agriculture-related administration.
- Overcoming credit constraints.
- Improving quality control.
- Improving marketing, particularly of fresh fruits and vegetables.

Long-Term Actions

For the long term, the key challenges relate to programs and activities that could have a positive impact on the agricultural sector but that have a long gestation period or require certain pre-conditions to be met first. Four major areas that require long-term action are land management, agricultural information and research, legislative matters pertaining to the agricultural sector, and coastal water patrolling:

- Revising the land tenure system.
- Improving information and research on the agricultural sector.
- Developing agriculture-related legislation.
- Improving coastal water patrolling.

PART I

BACKGROUND

1. Introduction

1.1 Aim of the Study

Two major challenges confront Suriname's agricultural sector. The first is how to complete the transformation of the sector to a market-based system; the second is how to offset the anticipated deterioration of the sector resulting from the probable loss of preferential market access in the next decade. Based on its recent performance, the sector is likely to encounter substantial difficulties in meeting these challenges. Agricultural exports contracted an average of 9 percent a year in 1988-91, while production of key commodities such as rice and sea shrimp decreased nearly 3 percent a year in 1988-93. This deterioration is associated with the following factors:

- Poor macroeconomic environment, and in particular, overvalued exchange rates and a multiple exchange rate system.
- The absence of a development plan for the sector and strategy to improve the performance of key products.
- The past shortage of foreign exchange needed to purchase machinery, spare parts, seeds and fertilizers.
- The lack of an export credit and export guarantee scheme.
- Regulatory hindrances.
- The deteriorating infrastructure in the agricultural-producing regions.
- The lack of access to credit at reasonable terms.
- The weak marketing skills of the private sector and the underdeveloped information systems, which have lead to lost production and marketing opportunities and the inability of producers and exporters to respond to changing market needs.
- The lack of interest in agriculture as a career or business choice.

In addition to these factors, the country now faces the prospects of a likely elimination of its preferential trade arrangements with the European Union, which will further worsen the situation for some of the country's major export products. To revitalize the agricultural sector, policy reforms and specific program activities that target key industries and institutions must be implemented to respond to the changing market forces so that private producers and agribusinesses can upgrade technology, diversify into higher value-added products, seek new geographic markets and exploit the country's new membership in CARICOM. These activities suggest the need for a coherent and comprehensive set of policy reforms, projects, programs and institution-building initiatives, as well as a strategy to

effectively implement an action program to revitalize the sector. The present study seeks to contribute to the development of those initiatives by proposing a set of actions to address the major constraints facing the sector. As part of this analysis, field work was undertaken during May 6-23, 1996. A general consensus existed at that time throughout the public and private sectors that the formulation of an overall policy would be critical to the recovery and expansion of agriculture, and that a broad set of actions would be required to encourage and assist the private sector in its agricultural activities.

Based on the field work and subsequent analyses, the present report offers recommendations on actions needed to sustain and enhance the growth of the country's existing export products, promote the emergence of promising new products, and strengthen institutions that support both of those activities. The recommendations are prioritized in terms of their impact on both the agricultural sector and the economy as a whole, as well as their ability to be implemented and monitored, and they are presented in terms of the timing and sequencing that will be needed to maximize their effects.

1.2 Organization of the Study

The study is divided into the following parts:

- *Part I* provides a general introduction and background information on the contribution of agriculture to the economy and the performance of agriculture. The term 'agriculture' is used in a broad sense and includes livestock and fisheries.

- *Part II* identifies the principal constraints on the growth and development of Suriname's agricultural sector. It assesses policy constraints in both the sector and the macro-economy, the role of the state, price distortions, trade regulations, land tenure, and environmental issues that impact on the sector. This part also examines infrastructure in the agricultural sector, and financial and investment issues.

- *Part III* analyzes the role of key institutions in the sector, especially that of the Ministry of Agriculture, and institutions providing research, extension and training.

- *Part IV* analyzes the key factors affecting the competitiveness of Suriname's agriculture. It assesses factors in determining the competitiveness of the sector as a whole, and those of individual products. It also examines the implications of the changing export markets on the sector, including those which are likely to arise from the removal of preferential trade arrangements.

- *Part V* examines the Government of Suriname's plans for the development of the sector, as well as the activities of international donors.

- *Part VI* presents a strategy for the revitalization of agriculture in Suriname.

- The *Statistical Appendix* presents the basic and analytical information on Suriname's agriculture and a list of meetings that were undertaken during the field work are presented in an Annex. *Bibliographic references* are provided at the end of the report.

2. The Economic Importance of Agriculture

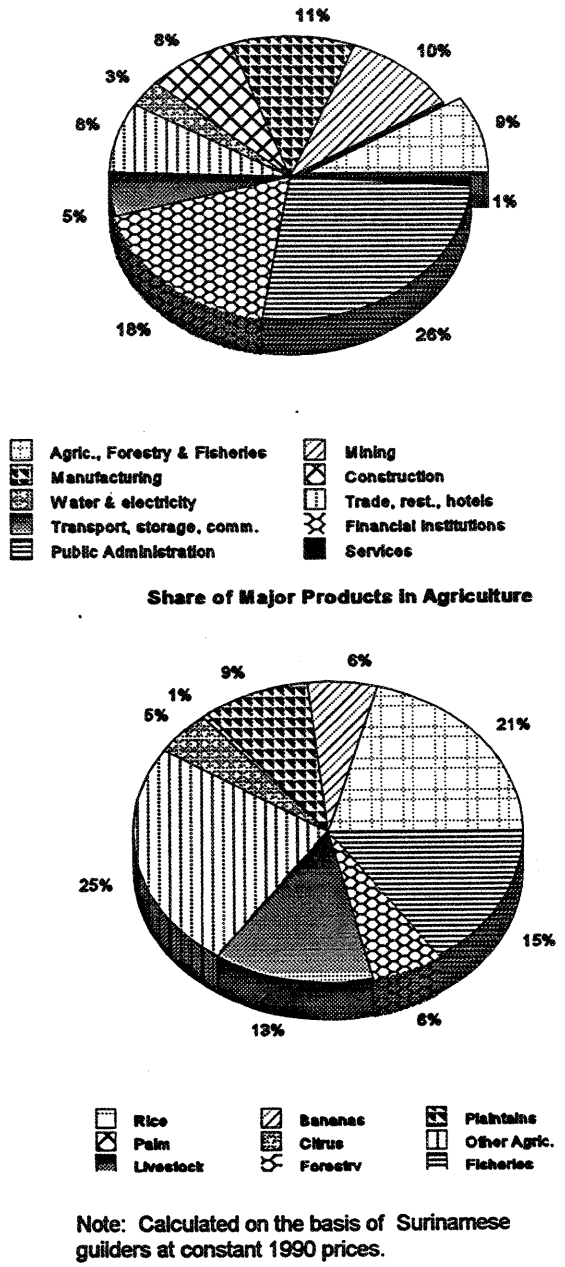
2.1 The Contribution of Agriculture to the Economy

Agriculture is an important component of Suriname's gross domestic product (GDP), contributing an average of 9 percent in 1992-95 (see Figure 2.1). That contribution is about the same as those of mining and construction, but significantly less than those of the financial institutions and public administration sectors. Within the agricultural sector, rice has been the largest contributor during the last few years, followed by bananas. The livestock and fisheries sub-sectors have also been important to agriculture as revenue earners.

Notwithstanding its overall importance, agriculture recorded negative growth rates in 1994-95 after experiencing an expansion in 1993. Downturns were experienced in 1994-95 in palm oil and vegetables, while uneven growth was registered in bananas and plantains. The livestock sub-sector experienced a negative annual average growth rate of 18 percent in 1993-95, while fisheries averaged a negative 5 percent annual growth during that period.

The agricultural sector is also an important source of employment in Suriname. Currently it absorbs an estimated 15 percent of the nation's workforce, second only to the government sector (for details, see Appendix Table A.2). That share of employment, however, has decreased from 18 percent a decade ago. Foreign labor also plays an important role in agriculture, especially in the palm oil and banana industries, and it has been a sustaining factor in agriculture, given the considerable migration of Surinamese workers to the Netherlands during the last 20 years (IICA, 1992). Several factors make it difficult to specify the exact number of persons employed in the sector, including: (i) the large number of unregistered foreign workers; (ii) the increasing importance of part-time workers holding other jobs; and (iii) the sector's inability to attract local labor despite the country's high unemployment rate.

Figure 2.1
Contribution of Agriculture
(1992-95 average)



Note: Calculated on the basis of Surinamese guilders at constant 1990 prices.

2.2 Key Agricultural Exports

2.2.1 Structure and Performance of Exports

Suriname's overall structure of exports has changed considerably in the last several years (see Table 2.1). During 1985-94, the country's mineral exports, composed mainly of alumina, expanded rapidly and in 1995 accounted for nearly two-thirds of the country's exports earnings, compared with about one-half of total exports in 1985. The share of aluminum, also an important commodity, remained stable during that period; in contrast, bauxite exports ceased in 1989.

The strong performance of the leading mineral export occurred at the expense of other sectors, most notably agriculture. In 1985, agricultural exports (including those of fisheries) accounted for 25 percent of total exports; in 1994, they accounted for about 22 percent. The contribution of rice to total exports fell significantly between 1985 and 1994, while that of bananas and plantains fell to a lesser extent. In contrast, the share of shrimp, lumber, crude petroleum and other products grew during that period.

Table 2.1
Structure of Suriname's Exports, 1985 vs. 1994
(US$ millions and percentages)

	Value	Share (%)	
	1994	1985	1994
Bauxite	–	10.7	–
Alumina	214.8	52.3	61.9
Shrimp	33.0	9.3	9.5
Rice	32.5	12.9	9.4
Aluminum	31.8	9.2	9.2
Crude Petroleum & Oil	10.1	–	2.9
Bananas & Plantains	9.8	3.1	2.8
Lumber	6.1	1.1	1.8
Other Products	9.0	1.5	2.6
Total	347.2	100.0	100.0

Source: Statistical Appendix, Table A.4.

2.2.2 Preferential Arrangements

Suriname's rice and banana exports have preferential access to the European and Caribbean markets as a result of the country's participation in the European Union (EU) Lomé Convention and CARICOM, respectively. Shrimp, fish and fish products are directed mainly to the United States and Japan and enjoy no preferential market access.[1] Likewise, vegetables that are exported to Europe are mainly directed to the Dutch market and do not receive special consideration. Like other countries that also benefit from preferential arrangements, Suriname has become dependent on support prices for its products, as well as on the reduced duties and assured demand for the bulk of its agricultural exports. This situation has in turn dampened the desire of producers to search for new markets,

[1] Suriname is not eligible for preferential market access to the United States under the Caribbean Basin Initiative because of the country's intellectual property rights record.

diversify their exports and lower production costs as ways of improving competitiveness. Unless steps are taken to reverse the current situation, the expected removal of the preferential arrangements will further erode the agricultural sector, sharply reduce foreign exchange earnings, and depress activity throughout the economy.

a. The European Union

Rice - As an African, Caribbean and Pacific (ACP) country, Suriname is permitted to export rice to the EU with a 50 percent import tariff reduction under a special ACP quota for all recipient members of 125,000 tons for cargo (brown) rice and a total ACP quota of 20,000 tons for broken rice. The quota system works on a first-come, first-served basis. Until recently, Guyana and Suriname were the major ACP rice suppliers; however, since 1991 Suriname has not taken advantage of the ACP quota system. Suriname has instead directed its rice exports to the European market through the Dutch Antilles, where value is added through the processing of cargo rice into semi-milled white rice (for information on the destination of Suriname's 1995 rice exports, see Table 2.2). The rice then enters the European market free of duties and quantitative restrictions since the Dutch Antilles are considered territories of the Netherlands. The rice shipped through this route, known by its Dutch acronym as the LGO route,[2] usually commands a price that is higher than the world market price. For example, in April 1996 the LGO rice price was US$405 a ton compared with the prevailing world market rice price of US$360 a ton (FAO, 1996). When coupled with the duty exemption, financial advantages of using this route have amounted to at least US$174 a ton (EC, 1995).

Table 2.2
Destination of Suriname's Rice Exports, 1995

Destination	Cargo Rice		White Rice		Broken Rice		Total	
	('000 mt)	('000 US$)	('000 mt)	('000 US$)	('000 mt)	('000 US$)	('000 mt)	('000 US$)
LGO	***84.5***	***$34,212***	***0.8***	***464***	–	–	***85.3***	***$34,676***
of which:								
Curacao	69.9	28,303	0.8	464	–	–	70.7	28,767
Bonaire	14.0	5,682	–	–	–	–	14.0	5,682
Aruba	0.6	227	–	–	–	–	0.6	227
EU and territories	***0.02***	***$7.6***	***1.9***	***$1,027***	***0.48***	***$131.8***	***2.40***	***$1,166***
of which:								
Netherlands	0.02	7.6	–	–	0.41	93.9	0.43	101.5
Italy	–	–	–	–	–	–	–	–
Fr. Guyana	–	–	0.03	13.8	.07	37.8	0.09	51.6
Martinique	–	–	1.88	1,012.8	–	–	1.88	1,012.8
Guadeloupe	–	–	–	–	–	–	–	–
Total	***84.5***	***$34,219***	***2.7***	***$1,491***	***0.48***	***$131.8***	***87.7***	***$35,842***

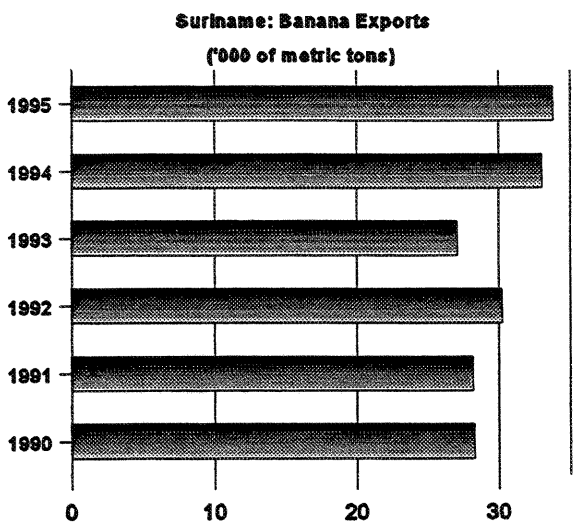
Source: SUREXCO.

[2] The corresponding English acronym is OCT (Overseas Countries and Territories).

The stability of the LGO route for Surinamese rice exports is tenuous since the major EU rice producers (i.e., Spain, Italy and France) are actively opposed to this trade arrangement. Current negotiations are centered on raising the ACP rice quota from 125,000 tons to 175,000 tons and requiring that the quota be fully satisfied before the LGO route is used. Moreover, the advantages of this route could further be eroded from trade liberalization measures being considered under the auspices of the World Trade Organization (WTO).

Bananas - Surinamese banana exports are directed to the EU market under special provisions set forth by the Lomé IV Convention, which covers the period 1990-2000. Under Lomé IV, the duty-free quota for EU and ACP banana producers is set at a level that is equal to or higher than the highest level of shipments over the past five years. Most of the quota is allocated to those producers; a residual quota is allocated to the so-called 'dollar' area countries of Central and South America. Individual country quotas are not transferable. Suriname is allowed to provide up to 38,000 metric tons of bananas to the EU market duty free. Nevertheless, the largest amount exported by Suriname was about 33,800 metric tons in 1995 (see Figure 2.2).[3]

Figure 2.2



Note: Data for 1994-95 are preliminary. Source: ABS.

Suriname and other ACP banana-producing countries are not subject to a tariff on the entry into the EU of quota bananas, which represents a significant financial benefit. According to EC (1996) estimates, duty free access for Surinamese bananas represents about ECU 75 a ton. Latin American producers pay a tariff of green ECU 75 a ton on quota bananas, which is equal to commercial ECU 121 a ton. An over-quota tariff of green ECU 850 a ton (equivalent to commercial ECU 1,025 a ton) on 'dollar' area bananas, and green ECU 750 a ton on ACP bananas make the quota binding.[4] European importers, such as Fyffes, the sole export marketing agent of Surinamese

[3] Due to management and labor problems at SURLAND, Suriname's state-owned banana-producing company, data were unavailable at the time of report preparation on the price received for banana exports. However, the FAO (1996) reported that in May 1996 the EU concessionary price received by SURLAND was US$8 a box (20 kg, fob); in contrast, Ecuadorian producers sell bananas for about US$4 a box, which is about equal to the world market price.

[4] The difference between 'green' ECUs and 'commercial' ECUs is that green ECUs take into account the various exchange rates of the European countries, whereas commercial ECUs do not. 'Green exchange rates', which are used to

bananas, also benefit under this arrangement. For every ton of fruit imported under preferential terms, the importing company is allowed to import an amount of 'dollar' bananas free of import duties. In addition, the importing company is granted tax benefits in the form of tax-free income and/or tax credits.

The European banana import regime has been contested by Latin American producers, who claim discrimination in favor of former European colonies and overseas territories in Africa, the Caribbean and the Pacific. In the 1994 Uruguay Round GATT negotiations, the European Commission modified the banana regime to allow a 25 percent increase in the residual quota and to reduce the tariff rate on the 'dollar' area bananas. In May 1996 the WTO established an independent dispute panel to rule on the EU's banana import regime. Complaints were brought forth by the United States, Ecuador, Guatemala, Honduras and Mexico; several ACP countries asked to join the panel, arguing that guaranteed access to the European banana market is essential for their economic survival.

b. CARICOM

Suriname's membership in CARICOM as of July 1995 and its accession to the Common Market in January 1996 marked the first time that the country had become a member of any regional arrangement. Suriname is the fourteenth member of the group and the first non-English speaking country to join CARICOM. While Suriname had participated earlier in CARICOM with observer status for several years, it had not been encouraged to become a full member of the organization owing to political problems affecting the country. By joining CARICOM, Suriname hopes to develop new markets for its rice, fish, and manufactured products such as glassware. Surinamese exports directed to other member states' markets generally enter duty-free, provided that they meet the rules of origin agreed upon by all CARICOM member states. In May 1996, the following six CARICOM members had not yet implemented legislation providing for duty-free market access: Guyana, Barbados, Antigua, St. Vincent, Dominica and Belize. Although appropriate legislation has been adopted in Trinidad and Tobago, it appears that market access to that country has recently been hindered by the lack of communication about the new tariff structure to customs officials.

During the past year and a half, CARICOM has been primarily concerned with three activities. The first is the implementation of the second phase of the Common External Tariff (CET) that reduces tariffs on non-agricultural products to a maximum of 35 percent, with a target of between 5 and 20 percent by 1998. The second activity is the adoption of measures that will make the region

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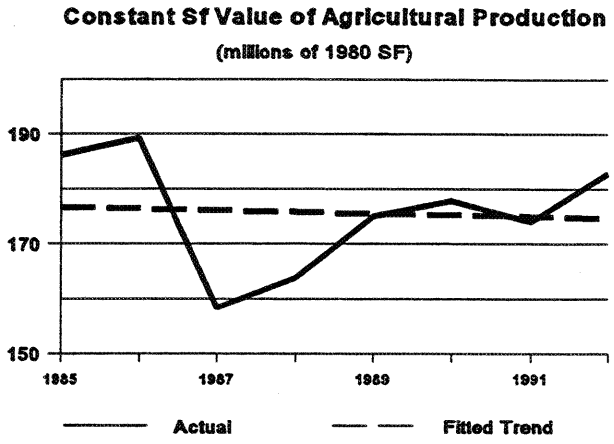
calculate green ECUs, are a set of exchange rates used to translate farm support prices in ECU terms into national currencies. The use of green ECUs is, in effect, a subsidy provided to EU farmers because it guarantees them an exchange rate, rather than subjecting farmers to the uncertainty of ECU movements under the commercial rate. In other words, the use of the ECU green is equivalent to selling forward because the farmer is guaranteed a fixed, foreseeable exchange rate. Needless to say, this type of subsidization is costly to the EU.

more competitive and increase access to new markets and other trading blocs. The final activity is the strengthening of relations with neighboring countries through the creation of the Association of Caribbean States (ACS), which was formed in July 1994 in response to the limitations of its member countries in the area of economic integration. Up to now, trade within CARICOM and intraregional investment has been more beneficial to certain countries than others (for example, Trinidad and Tobago). However, as in the past, CARICOM will likely serve as an effective political instrument in its joint negotiations on trade and investment with large countries such as the United States, Canada, Venezuela, and Colombia, or regional trade blocs such as the European Community, the NAFTA, MERCOSUR, G-3, and the Andean Pact.

2.3 The Performance of Crops, Livestock and Fisheries

Suriname's constant Sf value of total agricultural, livestock and fisheries production has experienced a relatively stable, though lackluster, performance during the last several years (see Figure 2.3). Nonetheless, this overall performance masks important changes that have taken place in the volume of goods produced during the last several years (see Figure 2.4 and Table A.6). For example, the production volumes of all products in the livestock subsector, with the exception of cattle, experienced poor growth in the early 1990s, compared with positive growth a decade earlier. Likewise, the production volumes of maize, peanuts, coconut and grapefruit declined in the early 1990s, compared with those of a decade earlier. In contrast, the production volumes of rice, cassava, plantains, cocoa and all local fishery products experienced high growth rates in 1991-92, while those of urdi, bananas, plantains and palm continued to expand at a moderate rate during the last decade.

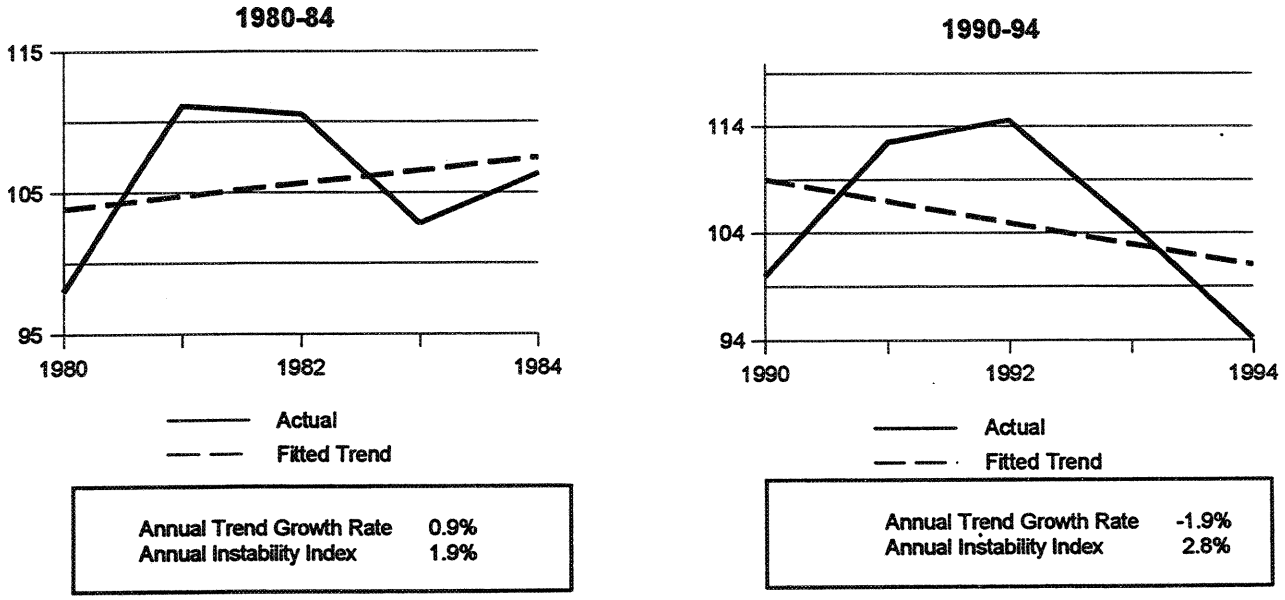
Figure 2.3



Annual Trend Growth Rate	-0.2%
Annual Instability Index	1.0%

Note: Data for 1993-94 were excluded due to their unreliability. The instability index is derived from the standard error of the estimate of the fitted trend.
Source: Ministry of Agriculture.

Figure 2.4
Volume Index of Agricultural Production
(1990=100)



PART II

CONSTRAINTS ON AGRICULTURAL GROWTH AND DEVELOPMENT

3. Policy Constraints

3.1 Macroeconomic Conditions

Much of the responsibility for the weak long-term performance of the agricultural sector can be attributed to poor economic policies and unfavorable macroeconomic conditions. In particular, agricultural performance has suffered because of inappropriate foreign exchange policies and macroeconomic volatility.

Maintenance of a chronically overvalued official exchange rate between 1983 and 1992 discouraged (legitimate) agricultural exports, promoted smuggling, and encouraged agricultural and food imports at the expense of domestic production. Moreover, it favored capital-intensive production and an excessive degree of mechanization, which not only displaced agricultural labor but also made the sector vulnerable to shortages of spare parts. The subsequent application of a multiple exchange rate system from 1992 until mid-1994 further distorted production incentives for agricultural producers. Foreign exchange rationing and an import-licensing system raised costs and often prevented farmers from obtaining necessary inputs when desired, if at all.

After 1992 the above problems were compounded by an increasingly unstable macroeconomic situation. Rapid inflation, which reached a peak of 369% in 1994, confused price signals to agricultural producers and reduced confidence, thereby adversely affecting private investment. In addition, large fluctuations in the inflation rate in combination with an unresponsive banking system created volatile real interest rates, further discouraging private investment in agriculture.

Since mid-1994, however, macroeconomic constraints to the agricultural sector have lessened greatly. The multiple exchange rate system was replaced with a single, much higher, official exchange rate in July 1994, thereby eliminating the distortions associated with multiple and overvalued exchange rates. Furthermore, in mid-1995 the central bank was able to stabilize the parallel exchange rate and thereby bring about a sharp deceleration in the rate of inflation. Although stabilization of the price level caused an abrupt increase in real interest rates, the improvement in macroeconomic conditions greatly boosted confidence in the Surinamese economy and laid the ground for an upturn in private investment in the productive sectors -- including agriculture.

3.2 State Involvement in Agriculture

3.2.1 Overview

During the last 25 years the Government has played a predominant role in initiating certain agricultural activities and as a catalyst for the development of other sectors. Through its parastatal

enterprises, state-owned foundations and projects financed under the Multi-Annual Development Plan (MADP), the Government of Suriname accounts for a large share of agricultural production by cultivating approximately one-fifth of the country's total agricultural land (NEI, 1992). It is also active in the processing of certain products and is involved in the international marketing of others. The exact number of parastatals and their employees is unknown due to the lack of a clear distinction between non-commercial parastatal bodies and enterprises and the absence of a single government agency to monitor the activities of state enterprises. World Bank (1989) and IDB (1990) estimates indicate that there are between 30 and 35 non-financial enterprises, of which approximately 17 are involved in agriculture. Estimates provided by Coopers and Lybrand (1991) indicate that in recent years non-financial state enterprises employed 10,000 persons, of whom more than 30 percent worked in three agricultural parastatals (SML Wageningen, SURLAND and Marienburg).

Parastatals are controlled by sectoral ministries, which appoint general managers and the boards of directors of the enterprises. The Ministry of Finance and the National Planning Office oversee the investments, borrowing and subsidies of all types of parastatals. Because of this ministerial authority, the operations of many parastatals tend to reflect the inefficiencies that characterize the public sector in Suriname and, notwithstanding the constraints and problems specific to sub-sectors and the agricultural sector in general, they are in large part unprofitable. Moreover, polices on prices and tariffs impact negatively on the performance of many parastatals. Between 1984 and 1992, many parastatals were also hampered by an unrealistic foreign exchange rate and foreign exchange rationing.

Management and labor unions have also impacted the performance of agricultural parastatals in a negative way. Upper management is appointed by Cabinet on nomination of the Minister of Agriculture and often lacks the skills required to operate a profitable commercial enterprise. Companies also find it difficult to retain competent technicians, who, because of wage compression, frequently leave for more attractive and encouraging conditions when opportunities arise. High administrative overheads and powerful labor unions, which have often been able to negotiate higher wages and social benefits for workers than those made available in the private sector, also impact on the management of the parastatals. In certain parastatals, such as the palm oil producing company, wages and social benefits were set according to those prevailing in the bauxite sector (Transtec, 1989). In recent years, subsidies to agricultural parastatals have increased for some companies and fallen for others (see Table 3.1).

Table 3.1
Suriname: Government Subsidies Provided to Selected Agricultural Parastatals
(millions of Surinamese guilders)

Parastatal	Activity	1991	1992	1993	1994	1995
SML Wageningen	Rice production, input supply and research.	13.4	10.0	--	--	--
Marienburg	Sugar cane production.	11.1	16.2	13.4	56.4	108.0
Melkcentrale	Fresh milk purchase and process; product distribution to retailers.	6.0	2.5	18.5	273.3	200.0
SUREXCO	Rice export quantity control.	47.1	36.0	21.9	--	--
GPOV	Palm oil fruit production and processing of fruit into oils.	8.1 a/	4.0 a/	--	--	--
SLOC	Agricultural development project in Commewijne.	na	na	na	na	21.4
STIPRIS	Operation of small nursery for fruit plants.	na	na	na	na	9.8
Alliance	Fruit processing.	na	na	na	na	7.5 b/
	Total	**85.7**	**68.7**	**53.8**	**329.7**	**346.7**

a/ Loan, rather than subsidy.
b/ Includes Sf 2.8 million subsidy provided to subsidiary fruit processor, Geyersvlijt Noord.
Source: Ministry of Finance.

3.2.2 Rice

Government involvement extends to nearly all types of agricultural activities that are important to Suriname's economy, and it is especially pervasive in the sub-sectors that have traditionally dominated agriculture. In the rice sub-sector, the government assisted producers in the establishment of commercial rice farming operations in the early 1960s since its pilot scheme to introduce mechanized agriculture in the western part of the country to be farmed by Dutch settlers was unsuccessful. Over the years, the land that was allocated under that scheme was transformed into the largest rice-producing operation in Suriname, SML-Wageningen (Foundation for the Development of Mechanized Agriculture). In addition to producing rice, SML has provided farmers with paddy seeds, has conducted applied research, and has been involved in commercial beef and pork production and small-scale fruit cultivation. SML's own processing facilities, marketing network and access to inputs have strengthened its role in the rice sub-sector, especially in the western region of the country. These advantages, however, have not necessarily made it more efficient. According to the FAO (1996), SML operations have recently been adversely affected by management problems and labor union strikes, as well as by contracting problems with field machine services and delays in

payment for mechanical services. These disruptions have resulted in difficulties in securing financing for capital improvements and the purchase of seed, and they have also increased production costs.

Rice is marketed internationally with the assistance of the Suriname Rice Exporting Company (SUREXCO), which was established in 1986 as the sole exporter of rice. During its initial years of operation the company was also involved in importing agricultural inputs for the rice industry. SUREXCO was established in response to the widespread complaint by small farmers that large rice traders obtained most of the benefits from the industry by offering less than the minimum official farm prices.[5] Accordingly, SUREXCO's initial objective was to increase farmer incomes, especially those of small farmers, as well as the country's revenues from rice exports. SUREXCO maintained its monopoly on rice exports until the harvest of the 1992 Autumn crop when measures were implemented to liberalize the rice sub-sector. At that time, SUREXCO assumed the role it continues to play today, which is to control the quantity and quality of rice exported, collect export taxes and ensure that certain information on export documentation is in order (for example, licensing approvals and export prices).

SUREXCO's major operating constraint is that its financial profitability depends on export taxes, laboratory analyses fees and quality check fees. The collection of these fees, in turn, depends on the export price set by the Ministry of Agriculture which, if too low, encourages rice producers to mill their product for sale on the local market. Even though the company is a joint venture with shares owned by the Government, the millers' association, rice producers and owners of transportation and equipment used in the rice industry, the Government has taken the leading role in the company's operations. In May 1996, 12 persons were employed by SUREXCO.

3.2.3 Bananas

In the early 1900s a special division of the Ministry of Agriculture introduced banana production in Suriname and experimented with several varieties. By 1971 that ministerial division had evolved into the SURLAND banana joint stock company, which today produces approximately 95 percent of the country's banana output. It also controls 95 percent of the country's banana-producing area (Bishay, 1987a). About 90 percent of banana production on SURLAND's two farms located in the Nickerie and Saramacca districts are exported to the United Kingdom by Fyffes, a subsidiary of United Brands; the balance of production is sold on the domestic market. SURLAND's supply arrangements with Fyffes are based on a fixed term contract at an annually negotiated minimum price that also ensures transportation to the European market by Fyffes vessels. The agreement is based on US dollars and provides for bonuses and penalties relating to fruit quality and vessel loading time (Coopers and Lybrand, 1991). Fyffes also provides inputs required for

[5] According to Farquharson (1987), the minimum export price for rice was set for each season at a level to cover paddy production. The Government subsidized this price during periods when the price of rice on the export market was less than the cost of production.

SURLAND operations, an arrangement which has benefitted the company particularly during periods of foreign exchange shortages. SURLAND's contractual arrangements with Fyffes are based on the latter's preferential access to the European market and the small size of the banana industry in Suriname compared with other Latin American countries. That arrangement has discouraged other major banana companies (viz., United States-owned companies) from entering the Surinamese market.

SURLAND attempted to diversify its production base into other exportable fruits (for example, pineapples and papayas) and aquaculture in the early 1980s to minimize possible losses from adverse changes in banana production, or in preferential arrangements in the European market. Nonetheless, the company continues to focus on improving banana production and increasing yields, since it rarely meets the production levels that Fyffes guarantees to purchase. According to the most recent financial information available (Coopers and Lybrand, 1991), SURLAND's financial performance has always been weak.[6] Although a positive cash flow in earlier years of operation allowed the replacement of some assets, much of the equipment, such as the internal cable transport system, is now obsolete. Lack of production inputs, rising costs, fungus disease and continual management and labor problems have caused SURLAND to operate at a loss in recent years.

3.2.4 Palm Oil

The palm oil industry was developed in Suriname during the 1970s with the objective of creating employment in the interior of the country and meeting the domestic market demands for edible oils. During the first part of the 1980s the Government made additional investments in the industry to promote palm oil as an export product and to reduce the country's dependence on foreign exchange earnings from bauxite. The industry is dominated by three parastatal companies, Victoria (1,650 hectares), Phedra (870 hectares) and Patamacca (3,300 hectares), all of which are part of the Government holding company Common Vegetable Oils and Fats Companies, Ltd (GPOV) that was created in 1987. A fourth estate, Brokopondo, is operated by small farmers (310 hectares) but is considered to be state-owned. Due to spearrot disease the Victoria plantation is now inoperative. Fresh fruit bunches of palm oil are processed at the Victoria processing plant, which consists of an oil factory, a palm oil refinery and a kernel extraction unit.

Until 1985 palm oil output expanded strongly, largely as a result of government transfers and subsidies, price policy and research support through GPOV. In 1986 the industry's overall production began to stagnate and then decline rapidly as a result of the foreign exchange crisis affecting the entire agricultural sector, rebel insurgence and plant disease. As of 1992, the GPOV has received no subsidies. Price interventions on palm oil sold on the domestic market were lifted in 1995. Today, a limited amount of land is being harvested in each estate. According to Cloesen

[6] Management problems and labor union strikes, which took place at the time of report preparation, prevented the gathering of more specific financial information.

(1995), in early 1995 only 35 hectares were under cultivation at Victoria, and the Brokopondo small holders project had been abandoned. The area under cultivation in Patamacca is unknown, although 600 hectares have been rehabilitated since the civil war. As a result of the present situation, the palm oil industry has been unable to attract and maintain the amount of human and capital resources needed for revitalization. All planting activity and agronomic research, especially in breeding for resistance, have been discontinued.

3.2.5 Sugar

The only remaining sugar estate in Suriname is the Marienburg Sugar Company, which was established by a Dutch company in the late 1900s. The other two sugar estates, Alliance and Waterloo, were closed in the 1960s. In 1974 the Government of Suriname purchased Marienburg for a symbolic price of Sf 1 to prevent the unemployment of about 1,700 workers. The Government also absorbed an outstanding debt of Sf 7.2 million (Coopers and Lybrand, 1991). Marienburg's unprofitability continued after the change in ownership and culminated in a standstill of sugar production in 1988. The demise of the industry and the closure of the factory in 1991 are due to the lack of capital improvements. Although sugar cane continues to be cultivated on about 2,400 hectares, the cane is not refined or used for any purpose.

Numerous studies have been undertaken to identify Marienburg's problems and to recommend solutions (Farquharson, 1987; Van Dycke, 1976; Kinsey, 1976; Tate & Lyle, 1976; Upadhiaya, 1978, 1985 and 1987). Despite this research, no actions have been taken to either improve the industry's performance or to terminate its activities. More recently, Coopers and Lybrand (1991) offered two possible alternatives for the industry. Under the first, the estate would be closed, an employment program would be created, and the company's assets, including the land, would be sold. The second possibility envisages the rehabilitation of Marienburg estate by developing new small sugar and alcohol plants. Under that scenario, brown sugar production would meet the demands of the domestic market and alcohol would be exported. Weighing both the economic and social costs and benefits, Coopers and Lybrand concluded that the second alternative would be more beneficial to the country, despite the investment requirements and the likely need for protection from foreign competition. It is possible, however, that this recommendation could be altered under the current situation of the world sugar market. Prices are low and preferential market access provided to ACP countries has eroded and will probably disappear within the next decade. Moreover, the entry of Suriname into CARICOM allows sugar to be traded freely among member states. As in the past, the Government has no firm plans for Marienburg, and will likely continue to subsidize the estate to meet its payroll obligations and operating costs.

Another option to redress the problems facing Suriname's sugar industry is to privatize Marienburg or to introduce a private sector management scheme. Although it is uncertain whether a private buyer would be interested in the estate due to the large capital investment required, the revitalization of the sugar industry might be possible if foreign investment were allowed and new management introduced. Such was the case in Guyana, where the sugar industry has experienced a

remarkable recovery since the introduction of expatriate management in 1990. Since then, area under cultivation has increased, field equipment has been upgraded, replanting schemes have been introduced, and industrial relations between new management and labor have improved. These changes were reflected in a quick turnaround and sugar production grew by 23 percent in 1991 and 52 percent in 1992.

3.2.6 Milk Processing

Pasteurized milk processing is undertaken in Suriname's only plant, Melkcentrale Paramaribo (MP), which was established in 1961 with the primary objective of removing health hazards from the consumption of raw milk by prohibiting its sale by private processors. According to the London Group (1993), this regulation has been relaxed in recent years due to the inability of MP to meet market demand during periods of raw material shortages and also due to the demand by certain consumers for milk with a higher fat content.

Subsidies have been provided to MP because its milk pricing policy maintains consumer prices for pasteurized milk below the cost of production. The need to import powdered milk to meet domestic demand has exacerbated the company's financial losses. The Government has taken little action to replace milk imports through improving the conditions for local production. On the contrary, the Government has compensated producers for production cost increases, rather than implementing measures to improve productivity and reduce costs. Both the retail prices of processed milk and the landed cost of imported powdered milk have been kept artificially low to protect vulnerable income groups (Coopers and Lybrand, 1991). However, in 1995 price restrictions on milk were removed, causing the price to rise from about Sf 55 to Sf 225 a liter, thereby improving the financial position of MP.

The MP processing facilities also suffer from structural deficiences since the factory is more than 35 years old. Rehabilitation efforts were undertaken in 1975, 1980 and 1990 and were financed as a US$4 million grant from Dutch Treaty Funds. Nonetheless, the layout and construction of the factory building remain outdated and fail to meet basic hygienic requirements. Also, the open roof prevents the regulation of room temperature. Another key problem of the milk industry is that the distribution capacity for pasteurized milk is limited because of inadequate cooling, transportation and storage facilities. To alleviate this constraint, an extension of the factory with a sterile production line is planned. These short and medium term improvements are expected to improve the domestic competitiveness of milk and milk products. In the long term, it is envisaged that economies of scale will be developed. Ideally, the Government would like to construct a new milk processing plant and is searching for technical assistance to undertake a feasibility study.

3.2.7 Fruit Industry

Citrus production is carried out by the Alliance estate located in the Commewijne district and the estate has received several loans from the Government in recent years to maintain operations.

Citrus production has nevertheless declined substantially in Suriname mainly because of the decrease in demand from Suriname's major European market and the high cost of production compared with producers from other countries. The Government has no concrete plans for this parastatal, although it has considered its privatization. Tropica, Ltd, another parastatal involved in the fruit industry, processes fruits and vegetables and some meats such as sausages. This company has received subsidies in the past and has requested loans from the Board of Ministers and the Government for the next two to three years.

3.2.8 Fisheries

Two parastatals operate in the fisheries sector, SAIL and CEVIHAS. SAIL was formerly a United States-owned private shrimp company that had become unprofitable as a result of several years of relatively low catches and, perhaps more importantly, severe labor problems (Transtec, 1989). It was taken over by the Government of Suriname in 1984 and improvements were made in its marketing strategy. As a result of improved catches and favorable prices in the Japanese market, the company has been able to record profits in recent years.

CEVIHAS is a state-owned company that operates as a privately-owned one. It has landing facilities and also provides loading and unloading services to both Surinamese and other fishermen (for example, Venezuelans) who have been catching red snapper in recent years. An on-site ice factory also services the fishermen. A ship-building yard is now being constructed with the financial and technical assistance of the Government of Belgium. The lack of direct input from the Government and its subsequent involvement have been viewed by management as one of the reasons why CEVIHAS has been unable to expand. For example, shareholders' meetings are not held and normal salary increases for managing directors and employees have been difficult to obtain. As a result, employee morale and productivity have declined. A proposal to sell shares to the private sector received no response from the Government. CEVIHAS has also experienced problems that are common to other types of firms involved in export operations. For example, the lack of export financing and export insurance guarantee schemes were cited as the main reason in halting exporting operations of this parastatal at the end of 1995.

3.3 Price Distortions

Until recently, price controls were imposed on many agricultural commodities and some basic food imports with the objectives of lowering inflation and protecting consumers. Since the sale price was often held below the cost of production, private agricultural production of affected commodities diminished and state agricultural enterprises made heavy financial losses. In 1993-94 the Government lifted the minimum farmgate and retail control prices on sugar, meat, and other products, including palm oil; in July 1995 price controls were lifted on milk. Rice remains the only commodity whose

price is controlled and is subject to the conditions set forth in the country's 'rice agreement' which is one of the principal administrative responsibilities of SUREXCO.

A retention scheme and minimum export price mechanism are the main features of the rice agreement, although export taxes and other fees required as part of the agreement are also important policy measures impacting on the rice sector. Until the end of July 1996, the retention scheme obliged exporters to retain 20 percent of rice output for sale in the domestic market. The objective of the scheme has been to ensure domestic supplies of rice. As of August 1996, delivery quotas were implemented on an as-needed basis, namely, during times of high prices on the domestic market. Nonetheless, because of the uncertainty of rice prices, the Ministry of Trade and Industry (MTI) plans to advise exporters to retain 20 percent of their rice exports.

The price paid for the rice to be sold on the domestic market is negotiated twice a year between the MTI and the rice millers to correspond to the harvests of the country's Spring and Autumn crops, and is usually considerably below the export value. For example, the price in May 1996 for rice purchased under the retention scheme was Sf 110,000 a ton (about US$275), compared with a world market price of US$362 a ton. The exporter also incurs a fee of Sf 750 a ton for a quality check that is applied to the quantity of rice retained. That fee is paid to the MTI.

The minimum export price for rice is also set by the MTI according to landed prices in the European Union, its territories within the Caribbean and in CARICOM countries. Accordingly, the price varies depending on whether the rice is shipped under the LGO route (destined to Curacao and Bonaire), the EU ACP route or Martinique. The price administered for the Spring 1996 cargo rice crop of B6/70 quality[7] for the LGO route was US$405 free on board (fob) Nickerie or Paramaribo a ton; that for the EU ACP route was US$370 fob Nickerie or Paramaribo a ton; and that for white rice destined to Martinique for 10-15% broken quality was US$550 fob Nickerie or Paramaribo a ton. On exported rice, a tax of US$1 a metric ton is paid to SUREXCO, which can be paid in Surinamese guilders at the official exchange rate; this tax was initiated with the harvest of the Spring 1993 crop. Rice exporters also pay a 'statistical and consent tax' that amounts to 0.51 percent of the shipment value. Surinamese guilders are also accepted for payment of this tax. SUREXCO also ensures that the rice being exported is of acceptable quality and charges Sf 7,500 (about US$18.75) a sample. Also, an export tax of US$15 a ton is paid (in US dollars only); of that fee, US$3 is intended for rice research and US$12 is intended for infrastructure related to agriculture. This tax does not apply to rice exported on the ACP route and that destined to CARICOM member countries.

The export tax of US$15 a ton has been a major source of contention between private sector rice exporters and the Government due to the continued lack of maintenance for agriculture-related infrastructure. In recent years this export tax has undergone several changes: prior to 1993, rice destined to the European Union under the quota system was taxed US$10 a ton; up to May 1996 rice

[7] B6/70 quality indicates 6 percent broken and 70 percent milled yield.

exports destined to all countries were taxed US$25 a ton (of which US$3 was intended for research, US$12 was intended for infrastructure and US$10 was intended for general use). While plans are being made to create an institution that would be responsible for the administration of this tax and for the repair of rice infrastructure, the private sector is skeptical about its possible effectiveness.

3.4 Trade Policies

3.4.1 Import Policies

a. Tariffs

Customs tariffs are an important policy instrument in Suriname and underwent a major change in 1995 with the entry of the country into CARICOM. Prior to the reform, multiple tariffs ranged between 0 and 100 percent under the Brussels Tariff Nomenclature (BTN) tariff classification system. Under the new system, the Harmonized System (HS) was adopted and is used as the basis for duty-free entry of goods originating from CARICOM countries and for the Common External Tariff (CET) that is applied to goods originating from non-CARICOM countries. The current CET ranges from 5 to 40 percent and is based on four categories that are generally applied as follows: (i) raw materials, 5 percent; (ii) intermediate goods, 10 percent; (iii) final goods, 20 percent; (iv) luxury goods, 40 percent. The adoption of the HS nomenclature and the simplification of the tariff structure have resulted in an increased transparency of the domestic protection system in Suriname.

The CARICOM Treaty provides for exceptions to both the duty-free and CET regulations. According to Rajapatirana (1995), about 78 items are exempted from duty-free status, most of which are itemized in terms of industry or user that will be the beneficiary of the exemption, rather than by the specific goods to be exempted. Also, the CARICOM Treaty (Article 29A) provides a safeguard clause for agricultural products that can be invoked upon approval from the CARICOM Secretariat to protect domestically-produced goods that have been adversely affected by CARICOM member imports. In contrast, products originating from non-CARICOM countries that are exempted from the CET and to which a country is permitted to apply its national tariffs are enumerated in the so-called List A and List C. The difference between the lists is that List C includes luxury goods and requires that a minimum tariff be applied. Also, the tariffs that Suriname and other CARICOM countries apply to List A products are usually less than the CET rate (for example, the CET rate applied to fresh meat is 40 percent; the rate that Suriname applies to this product is 20 percent) while those that it applies to List C products are usually equal to or higher than the CET rate (for example, the CET rate applied to sparkling wine is 20 percent whereas the tariff applied by Suriname to this product is 50 percent). In addition to tariffs, all imports are subject to a 'consent tax' equal to 2 percent of the cost, insurance and freight (cif) value and a 'statistical tax' equal to 0.5 percent of the cif value.

Despite the tariff reductions and the duty-free entry of CARICOM products, several agricultural producers have complained that tariffs on inputs used in agricultural production remain high. In response to lobbying efforts, the Government has put forth a draft law to reduce existing tariffs on certain products used in agricultural production and agroindustry to 5 percent (for example, fertilizers, plant materials and possibly packaging materials); tariffs on imports of machinery, which ranged from 0 to 5 percent in mid-1996, will likely remain unchanged. It is not known whether the Government has plans to implement tariff-related policy measures included in the SAP, such as establishing a temporary import duty surcharge of 100 percent, introducing a basic import duty of 20 percent, and commissioning a study to determine the need for further protection of selected industries. However, the SAP measure on applying higher rates to luxury goods was adopted with the tariff reform at the end of 1995.

b. Non-Tariff Measures

Trade control measures are generally classified into the following categories:[8]

- Measures to control the volume of imports.
- Measures to control the price of imported goods.
- Technical barriers.
- Monitoring measures, including price and volume investigations and surveillance.
- Subsidies on domestic production (encouraging the replacement of imports in the domestic market) and export subsidies.

In Suriname, several types of non-tariff measures (NTMs) are used extensively as part of the country's import substitution strategy. NTMs protect both agriculture and industry mainly through import prohibitions, the application of prior authorization to import and the requirement of a letter of credit for imports.

Prohibited Imports - An extensive list of prohibited imports that affects nearly every good produced in Suriname was instituted in 1982. In practice, according to Ministry of Trade and Industry (MTI) officials, all goods are permitted into the country with prior authorization to import. This authorization is provided by the signature of the Minister of Trade and Industry during the import licensing process. To date, no concrete steps have been taken to reduce this type of

[8] The classification is used by UNCTAD, especially for its TRAINS information system classification of trade control measures adopted by Laird and Guzman (1996).

protection, in spite of the two measures on NTMs contained in the SAP as part of its deregulation program to eliminate import prohibitions and eliminate quantitative restrictions.

Quantitative Restrictions - Quantitative restrictions are also used to control imports in Suriname and are currently in effect for fruits and vegetables, wood and rice. While details on the permitted levels of imports were not available for wood and rice at the time of report preparation, according to MTI officials an importer is permitted to bring into Suriname US$1,000 (valued at fob at the official exchange rate) of fruits and vegetables on a weekly basis.

Import Licensing - Import licenses are required for all international trade transactions in Suriname. Despite the fact that the licenses are considered to be 'automatic' under WTO trade rules, the numerous and lengthy procedures required of businesses impose costs in terms of time, financial resources and productivity. As shown below in the narrative summary of the steps involved in the import licensing process, the degree of complexity in obtaining import licenses for products used in agriculture does not depend as much on the fact that the products are agricultural in nature or are used in agriculture-related activities, but rather on the licensing system itself that applies to products of all types. The system also appears to be more problematic for start-up operations than for those businesses that are established in the international marketplace.

(1) Two types of import licenses are required in Suriname. The first is an *import operating license,* which is prescribed in the Government Decree (1981 nr. 145/147) on licensing requirements for companies and professionals acting as private enterprises. The granting of licenses is limited to Surinamese citizens or local corporations. In practice, companies and individuals applying for the import operating license are allowed to initiate import operations while the license is being processed. The required documentation and procedures to be followed to obtain the import operating license are shown in Box 3.1. Once the application is submitted to the Company Licensing Department in the Ministry of Trade and Industry located in downtown Paramaribo, the flow of activities is as follows: (i) an internal check of information is made; (ii) the license form is typed; (iii) arrangements are made to publish the notice of application in the newspaper (which can take place several months later, despite being required by law to take place within one week); (iv) the application is submitted to the Director of Trade, who verifies the information; (v) the application is signed by the Minister of Trade and Industry; and (vi) the license is returned to the Company Licensing Department and is held there until it is collected by the importer. The license is valid for three years and is renewable.

Box 3.1
Documentation Required to Obtain an Import Operating License

Individual Entrepreneurs		Companies	
Step	**Procedure**	**Step**	**Procedure**
1	Obtain statement of nationality from Registrar's Office.	1	Obtain copy of corporate by-laws or notary statement if company is being established.
2	Obtain statement from Population Administration.	2	Obtain Chamber of Commerce statement for Sf 1,030 (US$2.60) for assistance and Sf 30 (US$0.08) for form.
3	Pay legal fees, if any, and stamp costs of Sf 513.5 (US$1.28).	3	Pay legal fees, if any, and stamp costs (SF 513.5 or US$1.28).
4	Complete application form.	4	Complete application form.

The only problem in obtaining the operating license that was reported by importers interviewed as part of this study was that in many cases approval is denied without justification. There appears to be no criteria set out in writing or that could be given verbally to the applicant which would help foster transparency in the licensing process. Other than this one drawback, which is important to increasing the number of licenses granted and thereby increasing trade, the approval time for licensing is quick and the cost is low. For example, while legislation dictates that once an application is made, the license must be issued within six months, in practice the approval process generally requires only one to two months. The total cost for the import operating license is reasonable and amounts to Sf 1,043.50 (US$2.60).

(2) The second type of license is an *import shipment license*, commonly known as the 'import license'. It is required of every shipment of goods entering Suriname (for details on procedures required to obtain this license, see Box 3.2). Once the application form is purchased and completed by the importer, the approval process begins by seeking a signature and approval stamp from the Plant Protection Department of the Ministry of Agriculture if the shipment is for agricultural products. If a 'special' prohibited product is listed on the license application (for example, plant propagations or certain types of seeds), an additional signature is required from the Minister of Agriculture. If the shipment excludes agricultural products, the importer first arranges payment terms (i.e., letter of credit, cash against documents or payment after receipt of goods), which are finalized by the commercial bank with a stamp on the application form. The importer then takes the application to the MTI, where it is verified that the imports are allowed into the country. After a minimum of five days and seven signatures and stamps from various offices within the MTI, the importer receives the license for the shipment. Eight copies of the license are distributed to the importer and exporter, the commercial bank, the Central Bank, Customs and MTI (which receives three copies). Import procedures are the same for parastatals as for non-parastatals. An import

licenses is valid for six months, and must be reissued if any changes are made to the information provided on the application form.

Box 3.2
Import Shipment Licensing Procedures

Stage of Licensing Process	Procedure	Responsible Party
Step 1: Purchase import license form and complete.	1. Purchase form E82 from bookstore in Paramaribo for Sf 250 (US$0.60).	Importer
	2. Complete information required: name and address of importer; method of transport; name and address of exporter; payment terms; quantity of goods; description of goods and corresponding HS codes; and fob value of goods.	Importer
	3. Submit form to Division of Import-Export and Foreign Currency Control in the Ministry of Trade and Industry.	Importer
Step 2: Verify value of goods to be imported.	4. Value of goods is verified and form is stamped.	Ministry of Trade and Industry in conjunction with respective ministry a/
Step 3: Receive approval from respective ministry.	5. Respective ministry stamps import license form.	Respective ministry
Step 4: For banned imports, receive approval from Minister of Trade and Industry.	6. Minister of Trade and Industry signs form.	Minister of Trade and Industry
Step 5: Obtain commercial bank approval.	7. Choose payment options: letter of credit (L/C), cash against documents, payment after receipt of goods.	Importer
	8. Obtain bank approval and form is stamped.	Importer
Step 6: Obtain final approval from Ministry of Trade and Industry.	9. Obtain final signature and stamp on import form.	Ministry of Trade and Industry

a/ The Ministry of Agriculture and the Ministry of Natural Resources are usually the two ministries whose approval is required for agricultural products, livestock and fisheries.

The bottleneck in the import licensing system appears to be within the MTI. The office responsible for licensing in the MTI processes between 80 to 90 import licenses a day, and estimates that a minimum of five days are required to receive final approval of a license. According to private sector importers who are active in agriculture and who were contacted as part of this study, between one and two weeks are required to process an import shipment. In the view of those importers, this

amount of time represents a considerable delay in business operations, especially when trying to import spare parts that are urgently needed in the production process. In contrast, a complaint voiced by the MTI is that many importers often attempt to declare goods without a license. No publication is available stating that import licenses are required, nor one that outlines the steps necessary to effect an import shipment.

Box 3.3
WTO Guidelines for the Adoption of Quality Control and Standards Measures

Agreement on Product Standards

- Most-favored-nation principle must be followed.
- Technical regulations are not permitted to be more trade-restrictive than necessary to fulfill a legitimate objective.
- International standards, where they exist or their completion is imminent, should be used as a basis for technical regulations.
- Technical regulations based on product requirements should be worded in terms of performance rather than design or descriptive characteristics.
- All technical regulations that have been adopted must be published promptly.
- At least once every six months, the Standardization Committee must notify the WTO Information Center of its work program and report standards currently under preparation and those adopted in the preceding period.
- GATT members are to adopt, wherever practicable, international systems for conformity assessment.

Agreement on Sanitary and Phytosanitary Measures

- Sanitary or phytosanitary measures are permitted to be applied only to the extent necessary to protect human, animal or plant life or health and must be based on scientific principles.
- Such measures are not permitted to be applied in a manner which would constitute a disguised restriction on international trade.
- Such measures are not permitted to arbitrarily or unjustifiably discriminate between WTO members.
- The measures employed are to be based on international standards, guidelines, or recommendations where they exist.

Source: Adapted from World Bank (1995a).

Other NTMs - Quality controls and standards, anti-dumping measures and countervailing duties are other types of NTMs that are frequently used to protect domestic industries and agriculture in both developing and industrialized countries, none of which are currently employed in Suriname. Customs procedures, which are often applied as a NTM, appear to be trouble-free in Suriname. However, caution should be exercised as further trade reforms take place to avoid substituting current NTMs for new ones. Such a situation occurred in Egypt when several products were removed from the list of prohibited products and placed on a quality control inspection list (for other examples of trade reform measures adopted in Egypt, see Boye and Lord (1994) and Boye (1996).

Assistance in establishing *quality control and standards* is available to Suriname from two important sources. First, the Caribbean Standards Council (CSC) is active in promoting awareness of the Caribbean Standards Program. Initial steps were taken to establish a Bureau of Standards in March 1996 when Suriname hosted a CSC meeting. The CSC also provides training abroad for which Suriname is also eligible. Second, as a member of the WTO, it can adopt measures under the two standards-related agreements that would ensure transparency (see Box 3.3) and also request technical assistance in developing product standards.

WTO rules stipulate that countries can impose *anti-dumping measures and countervailing duties* to protect their industries from injury resulting from the dumping of goods by foreign suppliers or from the effects of trade-distorting subsidies.[9] Other countries that have undergone structural adjustment have dealt with the issue of dumping in a variety of ways. Mexico imposed specific and variable duties with high ad valorem equivalents. That country, along with Morocco, the Ivory Coast and Jamaica reintroduced the import price reference system, which in addition to curbing the practice of under-invoicing, was also used to reduce external competition and provide protection (World Bank, 1991b: 68; for other experiences, see World Bank, 1988). As Suriname begins to explore anti-dumping legislation and specific measures to protect its market from unfair competition, there will be a natural tendency for foreign suppliers to increase their exports to markets whose barriers are being reduced as part of liberalization efforts, and for importing countries to increase their use of anti-dumping and countervailing measures.

Customs procedures are distinct from import licensing procedures in Suriname and, according to private sector importers involved in agriculture, do not currently present a significant obstacle to trade. The lack of complaint is due to the adoption of the Automated System for Customs Data (ASYCUDA) that was adopted in January 1996 as part of the accession process to CARICOM. The ASYCUDA system allows for the computerized entry and manipulation of customs data that is provided by the importer on a standardized form.

3.4.2 Export Policies

Suriname's recent changes in trade policies have focused less on export policy than on import policy. This approach differs from the experiences of countries such as Mexico, Pakistan, Turkey, Ghana and Jamaica, which strengthened their export sectors before introducing import reforms (World Bank, 1992). However, the time lag between export and import reforms in those countries was short since import liberalization was essential in reducing the anti-export bias. The initial emphasis of their export reform programs was the reduction in adjustment costs, such as lost output and unemployment in inefficient import-substituting industries since export expansion facilitated the employment of those released resources.

a. Export Measures

A limited number of restrictive trade practices are in effect in Suriname, including export taxes and export licenses. Export taxes are imposed in a manner similar to import taxes: there is a 'consent tax' of 0.01 percent on fob value (compared with 2 percent cif for imports) and a 'statistical tax' of 0.5 percent of the fob value (which is the same for imports valued at cif). No export quotas are in

[9] Dumping occurs when a foreign supplier sells a product to a country at below-cost prices in order to gain market share. Anti-dumping measures and countervailing duties usually take the form of import quotas, an import price reference system, or specific and variable duties with high advalorem tariff equivalent rates.

effect, except for those products exported under the Lomé Convention, and no export prohibitions are operative. Of these export measures, the export licensing system is particularly problematic.

Export Licensing - Like imports, licenses are required for all exports shipped from Suriname and are also considered to be 'automatic' under WTO trade rules. Similarly, two types of licenses are required that are detailed below: the export operating license and the export shipment license, commonly known as the export license.

(1) All exporters, regardless of their activity, are required to obtain an export license to operate, and that *operating license* is valid for three years. The procedures required to obtain an export operating license are the same as those for obtaining the import operating license shown in Box 3.2 above.

(2) An *export shipment license* is required of every shipment leaving Suriname; prior to 1995 an export license was required for every product leaving Suriname. Despite this improvement, export licensing remains an impediment to trade mainly in terms of time and productivity since the approval involves several visits to the MTI and the Ministry of Agriculture or the Ministry of Natural Resources, depending on the type of product being exported (see Box 3.4). The overall bottleneck for all products in obtaining an export license is that numerous approvals are required within the same ministry, that is, the Ministry of Trade and Industry, which not only delay the export shipment but also require a considerable amount of manpower within the Ministry. The overall bottleneck for *rice* is the requirement of the signature of the Minister of Trade and Industry. Rice exports are subject to additional steps that are not needed by other agricultural products, such as undergoing and paying for quality control checks by the Customs Administration and the Ministry of Agriculture before the shipment leaves Nickerie, approval by SUREXCO and payment of export taxes to that organization. Nonetheless, other agricultural export products require several approvals. As an example, a completed export license for a shipment of fresh vegetables that was provided by the MTI contained no less than seven stamps and signatures, six of which originated in the MTI. Between 30 and 40 licenses a day were reported to receive final approval, and copies of each license are distributed to five different entities (Customs Administration, the exporter, MTI, a commercial bank and the Central Bank).

A more specific constraint that is inherent in the licensing system is the way in which the value of the shipment is verified (Step 3). The result is used to calculate the amount of foreign exchange to be surrendered before shipment takes place. This procedure is the responsibility of the MTI. Before 1990 an extensive list of prices was maintained for individual products; no verification was made with the prevailing market price. To determine the appropriate values, the MTI often requested assistance from the Ministry of Foreign Affairs, chambers of commerce located abroad and embassies. This verification often added weeks to the licensing process. In 1995 a 'general' list was generated that contains prices for groups of products. For example, rather than using a price for 'papayas', the price for 'fruit' is used. The prices maintained are not computerized and are not updated on a regular basis. Therefore, the gap between reported prices and prices prevailing in the

world market continues to widen. Price differences are especially prevalent in the case of fish exports where, according to Charlier (1996), more and more types of fish exports are reported as 'n.a.g.' (unidentified fish), for which just 50 cents a kilogram is required in foreign exchange. Despite the recognition that the prices are not representative of the world price for the product, MTI officials believe that the current system is an important improvement. From the point of view of exporters, the valuation system is inaccurate, although its proves to be in their favor when the price of the product to be shipped is lower than the overall price for product type; conversely, the system proves to be against their favor when the price of the product is higher than the overall price for the product type.

Box 3.4
Export Shipment Licensing Procedures

Stage of Export	Procedures for All Exports	Additional Procedures for Rice Exports	Responsible Party
Step 1: For rice exports, perform quality checks in Nickerie.	--	1. Pay Customs Administration Sf 100 (US$0.25) a ton for quality check fee.	Customs Administration
	--	2. Pay Ministry of Agriculture representative quality check fee of Sf 750 (US$1.88)/ton.	Ministry of Agriculture
Step 1 or 2: For all exports, purchase export license form and complete.	1. Purchase form from bookstore in Paramaribo for Sf 850 (US$2.25).	3. Same as for all exports.	Exporter
	2. Complete information required: name and address of exporter; method of transport; name and address of importer; quantity, description and value (US$) of goods. a/	4. Same as for all exports.	Exporter
	--	5. Attach buyers contract and pro forma invoice.	Exporter
	3. For agricultural products, obtain approval from Plant Protection Agency in the Ministry of Agriculture.	6. Same as for all exports.	Ministry of Agriculture
	4. Submit form to Division of Import-Export and Foreign Currency Control in the Ministry of Trade and Industry.	7. Same as for all exports.	Exporter
Step 2 or 3: Verify value of goods to be exported.	5. Verify value of goods and stamp form.	8. Send documents to SUREXCO to determine shipment value.	Ministry of Trade and Industry in conjunction with respective ministry, SUREXCO b/
Step 3 or 4: Receive approval from respective ministry.	6. Respective ministry stamps export license form.	9. Same as for all exports.	Respective ministry
Step 5: For rice exports, pay export fee.	--	10. Pay fee of US$1/ton to SUREXCO and receive stamp of approval.	SUREXCO
Step 6: For rice exports, receive approval from Minister of Trade and Industry.	--	11. Minister of Trade and Industry stamps export license for rice exports once confirmation is made that 20% white rice delivery requirement is met.	Ministry of Trade and Industry
Step 4 or 7: Obtain commercial bank approval.	7. Pay foreign exchange surrender requirement.	12. Same as for all exports.	Exporter
	8. Choose payment options: irrevocable letter of credit (L/C) or prepayment.	13. Same as for all exports.	Exporter
	9. If L/C chosen, process paperwork; if prepayment chosen, deposit amount of shipment value in US dollars.	14. Same as for all exports.	Exporter
	10. Obtain bank approval and stamp on export form.	15. Same as for all exports.	Exporter
Step 5 or 8: Obtain final approval from Ministry of Trade and Industry.	11. Obtain final signature and stamp on export form.	16. Same as for all exports.	Ministry of Trade and Industry

Total time for licensing: For non-rice exports, approximately between 2 days and 1 week; for rice exports, approximately 1 month.
Total costs for licensing: Sf 850 (US$2.25); rice exporters incur additional fees according to shipment weight.

a/ For fishery products, a description of the species and type of processing is also required.
b/ The Ministry of Agriculture and the Ministry of Natural Resources are usually the two ministries whose approval is required for agricultural products, livestock and fisheries; for rice, approval is required by the Ministry of Agriculture and SUREXCO.

The foreign exchange surrender requirement (Step 7) specifies payment in advance to a local commercial bank of the export value in foreign currency (US dollars) against the equivalent in Surinamese guilders. It creates both an obstacle and a disincentive to export. The foreign exchange surrender requirement is used in about 85 percent of export shipments as the method of pre-payment; letters of credit (L/C), the other prepayment option, are used mainly by wood and rice exporters due to large shipment values. Parastatals are subject to the same foreign exchange requirement as private sector firms, although the MTI often makes exceptions such as in the case of the state oil company that is permitted to complete its prepayment requirements 30 days after the product is exported. Small or new exporters are also permitted to request exceptions and, according to several interviewed exporters, permission to delay payment is often granted. Approval for the exception requires an additional signature, that of the Minister of Trade and Industry. Nonetheless, the foreign exchange surrender requirement ties up working capital and often results in the exporter having to incur a loan in US dollars. It also encourages underestimation of the declared export values by exporters trying to minimize either the declared quantities or unit prices (Charlier, 1996). Moreover, many exporters are forced to request prepayment from their clients, which is not the norm in international trade, especially for those who are initiating business operations.

An export license is valid for three months from the time that final approval is granted. While an exporter is permitted to make partial shipments against a particular license, if the quantity of the shipment changes the entire approval process must be reinitiated. This requirement limits the flexibility that is especially important for agricultural products due to their perishability and effects on harvest of weather conditions, pests and disease. Because a minimum of two days are required to process an export license, exporters of agricultural products often spend additional time in processing licenses if shipment quantities change.

Despite recent improvements, Suriname's licensing system continues to act as a significant disincentive to trade, especially for agricultural exports. The costs in terms of time and productivity that are involved in the licensing system and associated export taxes appear to be the highest for rice exporters, who are required to pay the Customs Administration a quality inspection fee of Sf 100 a ton, in addition to paying SUREXCO a fee of US$1 a ton and an export tax of US$15 a ton.[10] The foreign exchange surrender requirement for exporters is also burdensome, especially for new exporters. In addition to acting as a barrier to trade for the private sector, the licensing system causes a great deal of unnecessary work within the Ministry of Trade and Industry. Even though the proposed Investment Law has put forth the concept of a 'one-stop shop', it is doubtful that such a location would significantly improve the time required to process licenses.

With the introduction of the ASYCUDA system in the Customs Administration, extensive records that are currently maintained in a non-computerized format by the MTI are simply

[10] It is interesting to note that the cost of an export license application form is nearly four times higher than that of an import application form (Sf 850 or US$4.10 for an export license compared with Sf 250 or US$0.60 for an import license).

unnecessary to maintain accurate trade statistics or information on exporters and importers. In short, it is difficult to provide any type of valid justification for maintaining the licensing system for both exports and imports and to identify the value that this system offers. The negative effects of such a system are abundant while the value of such a system is low. It is overly restrictive in that licenses are required for every shipment, it uses an inadequate price valuation system, its foreign exchange surrender requirements financially bind exporters and actively encourage them to under-invoice shipments, it binds importers to payment which is usually arranged between the buyer and seller without government intervention, it provides no flexibility in shipment changes which are especially important for agricultural products, it contributes to inefficient operation of MTI, and most importantly, it restricts trade of all types which impacts on the overall performance of the economy.

Other Export Measures - Export customs procedures, like import customs procedures, do not appear to hinder international trade transactions in Suriname. More flexibility was recently introduced into procedures for air cargo exports by allowing exports to be processed directly at the airport rather than in Paramaribo (45 km away). However, complaints were voiced by Customs officials, who suggested that an x-ray inspection system, which is currently lacking in Suriname, would eliminate the need to open boxes. Apparently, Customs officials are required to open boxes to comply with narcotics inspections and often damage packaging material, which can be particularly problematic for agricultural exports.

b. Export Promotion Policies

With the exception of a newly-launched export promotion agency, there is an absence of export promotion policies in effect in Suriname. Duty drawback and temporary admission schemes are not permitted under CARICOM trade rules; an export insurance scheme is also non-existent and few sources of export financing are available. A site has been identified for an export free zone, but no concrete plans have been developed to use this zone to promote exports. Nonetheless, the Government's Structural Adjustment Program includes several measures to promote exports in general and also to promote agricultural exports in particular. These include establishing an export insurance scheme, making seed readily available to producers, assisting the private sector in establishing refrigeration units at the airport, and providing technical assistance to promote non-traditional exports. The time-table to implement these measures is unknown.

The new export promotion agency, the Suriname Trade Promotion Organization (STPO), initiated operations in May 1996 with the main objective of developing and promoting exports. It has a seven-member board of directors comprised of four private sector representatives, one Suriname Chamber of Commerce representative, and two public sector representatives. Plans are currently underway to develop a computerized trade information system and an advisory and technical assistance program that will target key sectors, including agriculture, and then target key companies. The first phase of STPO operations will be funded under the Lomé Convention and will involve initial organizational establishment. During the second phase, charges for services offered will be implemented so that the institution will become self-supporting. Thus far, the STPO appears to have

many of the components of a foundation that are characteristic of an effective trade promotion agency (see Box 3.5).

The Internet recently became available in Suriname and will provide a valuable source of information to promote exports, once exporters and producers become aware of the service and the benefits that can be derived from its use. As such, the STPO, the Ministry of Agriculture or the Ministry of Trade and Industry could develop and implement a simple marketing campaign to promote the use of the Internet. Also, the possibility of establishing a Suriname Trade Point on the Global Trade Point Network would offer the country an opportunity to penetrate an international network of trade and trade-related information, including the ability to: (i) cooperate with local non-governmental organizations to promote the commercial activity of small and medium size enterprises; (ii) collaborate with trade promotion and trade facilitation bodies worldwide; (iii) promote local products; (iv) identify potential clients and suppliers; and (v) obtain details on trade regulations and requirements in potential or existing markets. The mechanics of establishing a Suriname Trade Point would require the electronic linking of all entities involved with trade-related matters in both the public and private sectors and could be undertaken with technical assistance provided by UNCTAD.

Box 3.5
Profile of an Effective Trade Promotion Agency

Origins

- Established as a result of demand from exporters, most often with private sector funds, rather than as a result of donor funding.

Planning and Objectives

- Established corporate planning, individual targets, and measurable departmental objectives.
- Role is to expand exports, rather than to provide policy advice or carry out a national export strategy.
- Displays consistency in focus on specific industries in short and medium-term strategies.
- Conducts, using own resources, competent, formal sub-sector studies of industries with export potential.

Relationship with Government

- Provides link between business community and government.
- Involved in government policy to the fullest extent possible.

Relationship with Business Community

- Maintains and creates strong ties with exporters; faces little resistance in increasing participation in export trade promotion.
- Maintains diverse channels of communication and immediately distributes new information widely to exporters.

Relationship with Donor Agencies

- Organization is effective in soliciting donor funds in order to obtain technical assistance.
- Reviews of organization are positive.
- When necessary, organization has complied with major reform proposals.

Box 3.5 (Continued...)

Missions and Trade Fairs

- Missions and trade fairs form one component of the agency's portfolio of export promotion techniques.
- Missions are dominated by private exporters, rather than by agency staff.
- Selection of mission participants based on need, rather than on non-commercial considerations, such as maintaining regional balance, favoring indigenous entrepreneurs, or by drawing lots.
- Objective of mission and fairs is to make concrete business contacts and generate orders.
- Follow-up to assess impact is considered essential.

Management

- Chief executive officer is appointed by an independent board of directors, rather than by a government ministry.
- Top managers have commercial expertise.
- Top managers have extensive management experience with proven successful track records.

Staff

- Staff are paid at commercially competitive rates.
- Many spend most of their time calling on firms to promote exporting or their services.
- Staff structure is streamlined to ensure efficiency, rather than being overloaded with unmotivated clerical staff and top managers who are actively looking for a way out.

Source: Keesing and Singer (1992), as reported in Boye and Lord (1994).

3.5 Land Tenure

3.5.1 Land Potential

Suriname has a total area of 16.4 million hectares, of which only 1.5 million hectares are considered suitable for agriculture. Approximately 106,000 hectares are classified as cultivated, with 87,000 hectares farmed under regular arable land; 60 percent of the amount under cultivation is used for rice production. Agricultural activities are concentrated along the coastal plain of the country. Inland soil is poor, and there is a high incidence of malaria in the interior regions, and access is difficult. The coastal plain area is characterized by low-lying land (0-4 meters above sea level) with a level topography and fertile heavy clay soils that are interspersed with sand and shell ridges. When drained, the soil is suitable for agricultural production. Some agricultural production, especially that of fruits and vegetables, also occurs in the less fertile but well-drained sandy ridges, an area known as the 'old coastal plain' (NEI, 1992).

3.5.2 Land Tenure Policy

The constitution of the Republic of Suriname sets out the basic framework for land policy. It states that all land is owned by the government for public use. The Government of Suriname is the sole authority permitted to allocate land to private persons or institutions, and it distributes land to persons or private institutions according to four different types of titles set out by the Charter for

Land Allocation for Agrarian Purposes: (i) formal, or 'allodial' property; (ii) long lease; (iii) land lease; and (iv) land rented. Table 3.2 summarizes the distribution of land.

Table 3.2
Land Tenure, by Ownership Type

Ownership	Area (ha)	Percent of total
Allodial (Private)	37,000	21.7
Rented from private	3,600	2.1
Long Lease	46,500	27.4
Rented from Gov't	26,200	15.4
Other forms a/	56,700	33.4
Total	170,000	100.0

a/ Government-owned land and communal ownership.
Source: Based on 1981 Agricultural Census and adjusted in 1985 by the Ministry of Agriculture.

'Allodial property' originates in colonial times and served as a means of promoting the cultivation of fallow land (NEI, 1992). Land was usually granted to settlers from abroad to establish plantations. Today, this type of title is used to transfer Government land to private parties in Suriname, and it accounts for 22 percent of the total land allocation. Private parties who have this type of land title are entitled to divide the land as they wish and to transfer it from one party to another. According to Lahmeyer International (1992), these transfers only have legal validity to the extent that the transfer proceedings have taken place and are recorded under the rules prescribed by the Government.

The greatest area of land (46,500 hectares, or 27 percent of total allocated land) is cultivated under 'long lease' titles, which are renewable after 75 years. Private holders of this type of land title can use the land as collateral during the period of the lease. They are also able to divide the land with Government approval, and parts of the land can be freely transferred to other private parties who then acquire the land under the same terms and conditions.

The 'land lease' title, was introduced in Suriname in 1981. It is valid for 40 years and is renewable. Land rented from the Government accounts for 15 percent of land ownership in Suriname and falls into two categories. While holders of this type of title are entitled to use the land as collateral, they are not permitted to divide the land or transfer it without Government approval. 'Land rented' is a title usually granted for a period of one year with a provision for implicit extension of rent at the time of expiration of the lease. Land obtained under this type of lease cannot be transferred to other private parties without explicit permission by the Government, nor does it provide the holder with any type of collateral.

According to the Ministry of Agriculture, traditional forms of land ownership are found in the interior where the poorest segment of Suriname's rural population resides. Officially, the Government allows Amerindians and Bushnegroes, who live mainly in the interior, to make use of the land and forest in their territories. However, they have no legal possession of the land. To date, the Government has not granted land titles to residents of the interior.

3.5.3 Land Size Distribution

The 1981 Agricultural Census identified 20,328 holdings in the agricultural sector. No recent estimates have been made by the Ministry of Agriculture or the Ministry of Natural Resources. The majority of land holdings (93 percent) is made up of less than 10 hectares (see Table 3.3). The remaining holdings cover nearly 70 percent of the total farmed area. According to the Ministry of Agriculture, there are two main categories of land that exceed 10 hectares: (i) government-controlled estates that produce rice, bananas, sugar, palm oil, cattle and citrus; and (ii) privately-controlled farms, mainly concentrated in the rice growing areas of the country.

Table 3.3
Distribution of Farms, by Size

Size (ha)	Farms		Cultured Area	
	No.	% of total	ha	% of total
< 5	16,825	82.8	21,590	20.3
5-10	2,123	10.4	11,270	10.6
11-20	836	4.1	8,070	7.6
21-100	414	2.0	10,270	9.7
> 100	130	0.6	55,090	51.8
Total	20,328	100.0	106,290	100.0

Source: Ministry of Agriculture, 1981 Agricultural Census

3.5.4 Land Allocation Procedures

In general, the Government assumes all responsibility for reclaiming and opening fallow land that can be granted to applicants for use in agricultural production. In most cases, the Government first divides the land into parcels; private parties then apply for the allotment of one or more parcels. The selection of applicants considered eligible for the parcels is made by the Ministry of Agriculture in cooperation with local authorities of the district in which the land reclamation project is located.

According to Lahmeyer International (1992), the land ownership candidate must follow specific procedures to obtain land outside the special land reclamation agricultural projects. An application must first be submitted to the Ministry of Natural Resources, accompanied by a map of the requested parcel which is drafted and registered in the Land Tenure Center by an authorized land surveyor. A fully documented 'farm plan' indicating financial feasibility and technical viability of the intended agricultural production and a time schedule for the realization of the investment must also be attached to the application. The farm plan is then evaluated by the Ministry of Agriculture (MOA) according to criteria based on the overall agricultural development policies of the Government that have been in effect during the five years preceding the application date.

According to MOA officials, the criteria used in applications for land leases (leases for 40 years) include: financial resources of applicants, experience of applicant in agricultural production, the region of the country in which land is requested, export potential of the project, local demand, and infrastructural facilities. Final approval of applications for less than 25 hectares is processed by a separate office within the MOA, while that of applications for more than 25 hectares is the

responsibility of the Ministry of Planning. If the land is to be used for fisheries or aquaculture activities, the application is sent to the Fisheries Department for approval. Based on the outcome of the evaluation, the Ministry of Agriculture makes a recommendation to the Ministry of Natural Resources.

3.5.5 Main Issues and Constraints in Land Tenure System

One of the main issues and constraints of Suriname's land tenure system concerns the poor quality of information on the location of land available for agricultural production that is maintained by both the Ministry of Agriculture and the Ministry of Natural Resources. The lack of information has important repercussions when producers attempt to identify a parcel of land to initiate or expand production. The information currently used is based on the 1981 Agricultural Census which, according to Government officials, is characterized as being problematic both in design and data collection. This fundamental constraint also causes delays and raises financial costs in the hiring of land surveyors, who often identify parcels of land as being available, only to later discover that they have already been claimed. MOA officials reported that they are currently discussing a 1997 Agricultural Census with the Food and Agricultural Organization (FAO). However, no concrete plans have been finalized.

Another important issue of the land tenure system is the necessity of submitting farm projects for bureaucratic approval. In general, approval is based on agricultural production policy that has been in effect during the five years preceding the date of project application, but information on such a policy is not readily available. Since farm projects will eventually face the judgement of the market, the approval process is redundant at best, and distortionary if the resulting vector of approved projects differs from that which would have occurred without the process. In addition, the process increases costs for farmers, and since the criteria for approval are unclear, it encourages subjectivity in the approval process.

The issue of the time required to process a land application also presents a significant obstacle to agricultural production in Suriname. The length of time reported by private sector producers and government officials who were interviewed as part of this study varied from four months to two years, which in part is attributed not only to the lack of updated information, but also to the numerous approvals required at both the district and national levels. An additional constraint presented by the land tenure system is that a title of private land ownership or a lease of 75 or 40 years is required to secure a bank loan. Rent leases are often used by small producers and processors or by those with limited working capital. This type of lease is usually inadequate as collateral. The impact of the present land tenure system in terms of bank financing is that large producers having title to privately-owned land have more access to credit than small-size producers without such land titles. Additionally, the need to establish one's own infrastructure on leased land further discourages agricultural activity by small landholders.

The lack of an adequate mechanism for dispute settlement over land use also appears to be an important constraint to agricultural activities in Suriname. In recent months, situations have been reported whereby descendants of private landholders who secured 'allodial land' have returned to Suriname and requested that farmers vacate the land so that it could be sold or used for other purposes. This situation is particularly problematic for small producers who typically rent land and who would encounter difficulties in finding parcels where their production could be transferred.

3.6 Environmental Considerations

The relationship between agriculture and the environment in Suriname is focused on pesticide use, deforestation and water pollution. An inter-Ministerial Pesticide Working Group was established in the early 1980s to formulate the Pesticide Law, with the aim of regulating the use of pesticides. Under the Law, a Pesticide Bureau would also be created to advise the Ministry of Agriculture on pesticide use. No concrete plans have been formulated to implement the Law. Regulations on the clearing of land for agricultural production do not appear to be a constraint to agricultural activities. In the interior of the country, producers are permitted to clear land, and this process is usually undertaken by the slash and burn method. The Inter-American Institute for Cooperation on Agriculture (IICA) is currently funding a project to encourage alternative land-clearing methods, and to re-using land rather than clearing it. At the present time, it is not known whether water pollution resulting from agricultural production, mining or other activities is a significant environmental problem. However, in 1995 testing was undertaken in Suriname's rivers to record mercury levels. According to officials from the Ministry of Agriculture, the levels appeared to be within internationally acceptable ranges.

One of the major drawbacks of assessing the environmental impact of agriculture in Suriname is that no overall environmental policy exists, and few regulations are in effect to protect the environment. Several years ago the Government of the Netherlands provided technical assistance to formulate an overall strategy to improve institutional capacity, formulate policy and design environmental educational and awareness programs. Despite this assistance, few actions have been taken to implement a policy framework. In addition to the need for an overall policy, the Ministry of Agriculture also lacks funding and technicians with the skills required to undertake research on the impact of agriculture on the environment.

4. Infrastructure Constraints

4.1 Overall Constraints

Infrastructure plays a major role in the development of most crops and livestock, especially for commercial purposes. In Suriname, agriculture-related infrastructure is usually addressed in terms of (a) roads and bridges, (b) drainage and irrigation, and (c) air transportation. The deterioration of Suriname's infrastructure during the last decade represents a large impediment to efficient agricultural production, and has increased production costs for producers, exporters and importers.

The deterioration has been caused predominantly by the following factors:

- The lack of funds available to the public sector, which has led to the recurrent postponement of maintenance activities.
- The absence of authorized institutions capable of managing existing infrastructure.
- The division of responsibility for maintenance within the Government administration.
- The unresolved issue of how maintenance costs should be shared among different government ministries and between the public and private sectors.

One of the most important constraints relates to the lack of clear responsibilities and accountability in the institutional structure of the government agencies involved in infrastructure. In general, the Ministry of Works is responsible for primary roads and waterways, the Ministry of Regional Development is responsible for secondary roads and waterways, and the Ministry of Agriculture is responsible for tertiary roads and waterways. Because infrastructure is linked throughout the country, especially in the case of waterways, overlapping responsibilities have prevented action from being taken by any agency to maintain or upgrade existing facilities. Moreover, when operations are undertaken, they often fail to meet the requirements of producers.

The Government of Suriname recognizes the need for rehabilitating the country's infrastructure and assigned a high priority in the current Multi-Annual Development Plan to this task. Three projects comprise the infrastructure core program of the Plan, which together amount to US$181 million of committed funds and which include the improvement of the road, water carriage and water management systems. The road system project is made up of two components, the first of which has a budget of US$65 million to rehabilitate about 5,000 km of roads and six bridges. The targeted areas include the East-West connection, the Berg en Dal Pokigron North-South connection, and Nickerie and Paramaribo. The second component has a total budget of US$56 million and aims to restore parts of the road system that support export-oriented production, such as the East-West

connection including the Meerzorg-Albina and Prins Bernhardpolder-NW Nickerie Harbor area. This component also aims to repair major roads such as the Paramaribo-Garnizoenspad road and Commissaris Weytinghweg and it includes technical assistance support to strengthen the government administrative organizations responsible for infrastructure.

With its budget of US$46 million, the water carriage system broadly aims to improve the navigability of the Suriname and Nickerie rivers for shipping and to institutionally reinforce the government agencies responsible for the maintenance of those rivers. Specifically, this project intends to restore channel waterways, including the Saramacca waterway, by dredging and installing new buoys, and reconditioning the harbor facilities in Nickerie and Paramaribo, and proposes to study the possibilities of building a container port. This project also aims to privatize the Shipping Department. A budget of US$14 million has been allocated to the water management program, which focuses on the rehabilitation of locks, pumping stations, discharge points and sea walls that are located mainly in the agricultural areas of the country. The improvement of residential sewage systems is also a component of this project.

4.2 Irrigation and Drainage

Irrigation and drainage works are an essential part of agricultural infrastructure in Suriname and their need is determined to a large extent by the rainfall pattern that occurs over four seasons: the short dry season, the long rainy season, the long dry season and the short rainy season. For rice in particular, the large volumes of water intake and discharge are striking, but proper water management is also important for vegetables, perennial fruit crops and dairy farming.

In 1980 the Multi-Purpose Corantijn Canal Project (MCP) was developed to meet the growing demands of agricultural land and to provide sufficient irrigation water for the existing and projected new areas. The project was financed from Dutch Treaty funds until 1982, at which point funding was suspended; thereafter, the Government budget funded project activities. One of the principal accomplishments of the project was the construction of a 66 km irrigation canal connecting Nickerie to the Wakay pumping station in Western Suriname. The Wakay station pumps fresh water from the Corantijn River into the canal to supplement the irrigation water supply for the rice polders on the left bank of the Nickerie River. These polders were traditionally irrigated by the Nickerie River and the Nanni conservancy. The new MCP polder consists of 12,500 hectares, of which about 9,000 hectares are suitable for paddy cultivation. The completion of the secondary infrastructure for this acreage was interrupted because of financial and institutional problems and the overall lack of commitment to support the rice sector. A feasibility study of the van Wouw canal project funded by the IDB recommended the resettling of farmers currently operating on small farms to the new MCP polder, while converting the existing plots into efficient family farms. The IDB also expressed interest in funding the distribution works. However, the institutional conditions that would have permitted the project were not met by the Government of Suriname.

In recent years, the Government has approved the establishment of a 'waterschapswet' or a modern water management institute as part of its plan to improve the irrigation and drainage situation in the country. However, the project has yet to be implemented. The establishment of such a water management institute for each region is a pre-condition for the sustainable improvement of the agricultural infrastructure. It would not only involve producers in the responsibility of maintaining infrastructure, but would also ensure their financial participation in maintenance costs. In Nickerie a MCP-Authority has existed since 1984 to undertake certain as-yet unspecified activities. Authority to that agency has yet to be delegated. A similar situation exists in Coronie, where the Foundation for Agricultural Development (SAOC), whose responsibilities include the maintenance of infrastructure, has also been legally established, but never implemented.

Specific problems in irrigation and drainage according to agricultural region are as follows.

Nickerie - The Nickerie district, has 42,000 hectares of rice land and is currently experiencing a structural irrigation water deficit. The MCP project would alleviate this constraint and is pending completion. Even though the Corantijn channel and the pumping station at Wakay have been constructed, the regulations governing the distribution of the irrigation water from the Corantijn channel and the Nanni swamp have yet to be executed. The existing Eastern and Western polders, including the Autonomous Area, continue to experience a shortage of irrigation water during the dry season. When water surpluses occur, as during the rainy season, the swamp control dams are too low and the discharge capacity of the Nanni swamp is insufficient. This sub-optimization of existing infrastructure leads to periodical flooding of cultivated lands, resulting in serious crop losses.

Coronie - The agricultural development of the Coronie district, with about 3,500 hectares of rice land, is constrained by a non-functioning swamp control dam in the eastern polders. The dam is too low and has several leakages, thereby making all water control measures ineffective.

Saramacca - The key constraint in the Saramacca district lies with the drainage channels, which in all cases directly or indirectly connect to the Saramacca River and are mostly overgrown with grass and weed, causing the capacity of water discharge to be seriously reduced. Moreover, the original design of the drainage system was either inadequate or was altered from the originally intended plan. For example, in some cases of serious flooding the waterways were enlarged as part of maintenance, while in other cases, producers placed culverts under public roads or dams to connect waterways without prior Government approval.

Wanica/Para - The drainage system is inadequate, resulting in flooding of large parts of the Pad van Wanica /Reeberg and Rijsdijk area.

Commewijne - The deterioration of agricultural production and increased out-migration in the 1970s was intended to be countered by a regional agricultural development program managed by the Foundation for Agricultural Development of Commewijne (SLOC). Unfortunately, the rice component of the program failed and the dry crops development component is now stagnant.

Nonetheless, the private sector slowly adopted some of the project's initiatives, and a modest autonomous development of livestock is currently taking place. However, this development is constrained by periodic flooding of the land.

4.3 Road Network

Table 4.1 shows details on Suriname's road network, which has a length of 4,171 km and a 1:2 ratio of paved access. The Paramaribo region has the greatest number of paved roads due to the high concentration of the country's population, while the interior districts of Brokopondo and Sipaliwini have the fewest paved roads. The roads that have the greatest impact on the agricultural sector are located in Nickerie and these roads have suffered due to their structural inability to support the heavy and often overloaded truckloads of rice. This situation is exacerbated during the rainy season when frequent flooding occurs. Road conditions also impact negatively on the dairy sub-sector in the transport of milk. Like the roads used to transport rice, those that transport milk are particularly affected during the rainy season.

Table 4.1
Road Network in Suriname, 1994
(kilometers)

	Asphalt	Brick	Sand	Clay	Laterite	Total
Paramaribo	403	108	317	-	-	828
Nickerie	57	42	30	134	-	263
Coronie	82	-	18	-	-	100
Saramacca	84	5	212	-	-	301
Commewijne	74	11	210	-	-	295
Wanica	68	18	521	-	-	607
Para	57	42	300		532	931
Sipaliwini	-	-	-	-	371	371
Brokopondo	-	-	-	-	206	206
Marowijne	111	2	30	-	126	269
Total	**936**	**228**	**1,638**	**134**	**1,235**	**4,171**

Source: Ministry of Public Works.

Lack of budgetary resources is one of the main reasons for inadequate road maintenance in Suriname. According to the World Bank (1989), the only user-charge generated from the system is the vehicle license fee, which is inadequate in generating revenue. Although a portion of the export tax applied to rice is destined to improve agriculture-related infrastructure little, if any, improvement,

has been made to road maintenance. As previously mentioned, one of the other reasons for lack of road maintenance is the shared ministerial responsibility and the operational ambiguity that this situation causes.

4.4 Other Infrastructure

Several comments on other types of infrastructure that were made by exporters interviewed as part of this study focused on the high cost and unreliable supply of electricity and air transportation. For electricity, a flat rate is currently in effect for energy in Suriname that prevents variations based on the level of consumption (see Box 4.1). The monthly connection charges appear equal to those in certain Asian countries such as in Brunei, and the kilowatt rate of about US$0.05 in Suriname is equal to that of the Philippines' public sector electric company and lower than that for Malaysia at US$0.08 a kilowatt (Lord, 1996). No plans to revise the rate structure appear to be underway.

Box 4.1
Electricity Tariffs

	Category A	Category B
Monthly Connection	1,595.89 Sf	2,268.91 Sf
Per kWh	–	–
Per kWh (HT)	20.6463 Sf	20.4109 Sf
Per kWh (LT)	18.1221 Sf	17.9458 Sf
Per kVA	2,042.96 Sf	–
Per kVA (HT)	–	1,265.29 Sf
Per kVA (LT)	–	305.64 Sf

Notes: (i) Category A comprises commercial and industrial consumers connected to the low voltage net of 25 kVA and over; (ii) category B comprises high voltage customers; (iii) special subsidized rates apply to households.

Suriname's air transport sector is dominated by Suriname Airways (SLM) and KLM, which provide service to the United States, Europe and the Caribbean. Irregular air services in terms of the number of flights, cargo space, and frequent changes to flight schedules and routings create difficulties for exporters of fresh fish, fruits and vegetables and horticultural products.

The costs of air freight from Suriname were reported to be higher to the Netherlands and to Miami than they were from other countries located at about the same distance or farther. For example, exporters indicated that freight rates from Suriname to the Netherlands were approxi-mately $1.80 a kg, compared with $0.80 a kg from Santo Domingo (Dominican Republic) to the Netherlands. Rates from Suriname to Curacao were about $0.80 a kg from Suriname, and to Miami they were $0.72 a kg, almost double the distance. There also appears to be discrimination in the freight rates offered by different products. An example was provided by an exporter who paid $1.80 a kg for vegetables and fruits, compared with another who paid $1.40 a kg for flowers (which often require more volume). The demonopolization of the air cargo industry, coupled with the introduction of an air cargo rate structure by SLM and KLM that would be equal for all products, would help to decrease costs for exporters and encourage the use of air cargo as a means of transport.

5. Financial and Investment Constraints

5.1 Financial Issues

5.1.1 Banking Structure

Suriname's financial and capital markets are underdeveloped in terms of diversity of financial instruments, active competition among banks, and access to credit at affordable terms. Notwithstanding the current situation, an important change that will favorably impact on agriculture in the future was recently introduced. In 1994 a modest stock exchange was established by a group of entrepreneurs supported by a large insurance company that recognized the need for the economy's more efficient allocation of funds. This initiation should eventually have an overall positive macroeconomic effect on the Surinamese economy and on the agricultural sector.

The supply of funds available for lending by commercial banks is currently tight. This situation is due in part to current lending regulations. Commercial banks are unable to use increases in demand deposits as a lending source, although they are able to use as lending sources the following: (a) 90 percent of increased deposits in savings accounts, (b) 75 percent of increases in time deposits with maturities of less than one year, and (c) 100 percent of increases in time deposits with maturities of greater than one year. Another regulation implemented in May 1996 allows lending of foreign exchange by commercial banks only to companies or individuals that generate income in foreign exchange; additionally, the foreign exchange funds generated from those loans are not permitted to be used in the domestic banking system. These new regulations were imposed to decrease the risk of foreign exchange shortages and to discourage the pricing of goods in US dollars.

One of the effects of the limited sourcing of funds for lending is that, although competition for deposits exists among the commercial banks, the competition does not appear to be overtly active. Another effect is that the spread between lending and deposit rates is large and has been growing over the last two years. Had the spread been small, the market would likely be characterized by increased competition and greater bank efficiency in sourcing funds. Bank licensing is now authorized by the Central Bank of Suriname, which bases its judgement on the advice of the Bankers Association. The criteria used to approve new licenses are unclear. For example, a recent request to set up the FINABANK was rejected due to negative advice provided by the Bankers Association.

In mid-1996 nominal interest rates for agricultural loans were between 35 and 40 percent, while nominal interest rates for consumer loans were around 45 percent. These rates were considered by most producers, exporters and importers interviewed as part of this study to be excessively high and to have risen dramatically during the last few years. Information on the differences between interest rates for loans and deposits provided by the Agricultural Bank support this viewpoint (see Table 5.1). For example, in October 1993 the nominal interest rate on new agricultural loans was 11 percent; seven months later, it had risen to 45 percent. Concurrently, in June 1994 the

average nominal interest rate on a 1-year term deposit offered by the Agricultural Bank was 7.6 percent, while that on a regular savings account was 3 percent. Taking into consideration the nominal interest rate data for May and June 1994, the spread between lending and deposit rates varied from 2 to 42 percent. Interest rates calculated in real terms also support the viewpoint of the borrowers, to a certain extent. In May 1994 the real interest rate was -583 percent; one year later it was -217 percent, and in May and June of 1996, real interest rates averaged 27 percent. On the one hand, the producers' concerns are validated by differences in the real interest rates; on the other, they do not take into account the distortionary effects on the economy of the negative real interest rates that prevailed in 1994 and 1995.[11]

Table 5.1
Recent Nominal Lending and Deposit Rates of the Agricultural Bank

LOAN			DEPOSIT					
Period Beginning	Type of Loan	Annual Interest Rate (%)	Period Beginning	Deposit Amount (Sf)	Term/Annual Interest Rate (%)			
Oct 1993	New agricultural loan Existing agricultural loan Agricultural machinery New loans (general) Personal loans Automobile loans Home loans	11 10 12 12 15 15 13	na	na	na			
					5-yr	*3-yr*	*1-yr*	*Savings Account*
May 1994	Consumer credit (general) Non-seasonal consumer credit New loans (general) Seasonal credit	40 45 45 25	Jun 1994	1,000,000 500,000 250,000 100,000	12 11 10 9.5	11 10 9 8.5	9 8 7 6.5	3 3 3 3
			Oct 1994	10,000-250,000 250,000+	20 22	16 18	12 14	10 10
					6-mo	*4-mo*	*2-mo*	*Savings Account*
Apr 1995	New loans (general)	60	Apr 1995	All amounts	20	18	16	10 a/

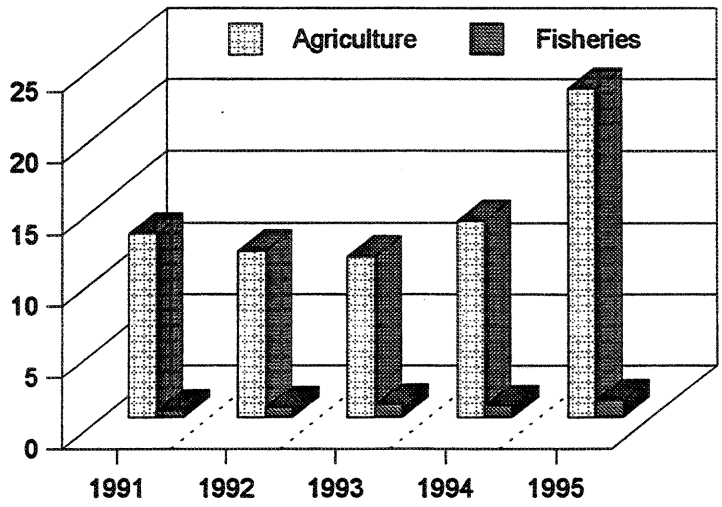
a/ Maximum annual yield.
Source: Agricultural Bank.

[11] Real interest rates were calculated using nominal interest rates presented in Table 5.1 and annualized monthly inflation rates presented in Appendix Table A.3.

5.1.2 Agricultural Lending

The percentage of commercial loans directed to agriculture has remained fairly even in recent years with the exception of 1995 (see Figure 5.1), averaging about 14 percent of total commercial bank loans a year between 1991 and 1995. Likewise, the share of loans made to the fisheries sub-sector also remained steady during 1991-94 and, like loans destined for agricultural projects, they increased in 1995.

Figure 5.1
Share of Commercial Loans to Agriculture & Fisheries



Loans for agricultural and fisheries projects in Suriname are funded by six commercial banks, four of which are owned by the public sector: the Agricultural Bank, the Post Office Saving Bank, the People's Credit Bank, and the Hakrinbank. The remaining banks, the ABN-AMRO Bank and De Surinaamshe Bank are privately owned. The National Development Bank is the only development bank that finances projects, including agro-industry projects. Suriname lacks a rural banking system, although most of the commercial banks have branch offices in the country's agricultural districts; several cooperatives exist that provide small loans to producers to finance inputs such as seeds, chemicals and fertilizers. Export financing is usually provided to large rice producers on a case-by-case basis.

a. Agricultural Bank

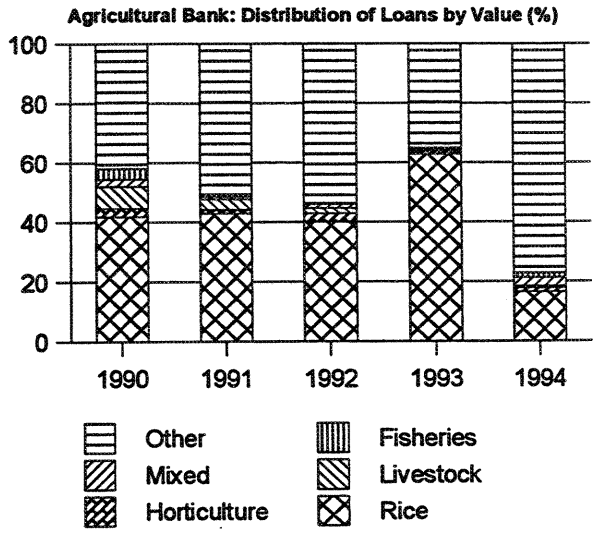
The Agricultural Bank (AGB) was established in 1972 to develop agricultural, fisheries and forestry activities in Suriname. In 1977 the AGB shifted its focus away from primary sector lending and became a commercial bank for all types of lending. The AGB headquarters are located in Paramaribo, with branch offices in Nickerie, Coronie, and Commewijne. Saramacca has no branch office, although two AGB employees visit that region twice a week. All AGB shares are owned by the Government of Suriname; the Bank's share capital amounts to US$250,000, which is allocated into 80,000 shares of preferred stock and 320,000 shares of common stock, each valued at US$0.06. One-half of all shares have been issued. The seven-member Board of Directors is comprised of representatives from the Ministries of Agriculture, Finance, and Planning, and the Workers' Trade Union.

The AGB's operations are funded by its clients' term deposits, Dutch Treaty Funds, and two loans consisting of a credit line from the European Development Fund (EDF) and an IFAD loan for the implementation of the Smallholder Support Project. Dutch Treaty funds in the amount of Sf 31.6 million were channeled to the AGB through the Government of Suriname between 1978 and 1981

with the following terms: an annual interest rate of 4 percent, a grace period of three years and repayment in five years. The majority of these loans has been repaid by the bank. The terms under which the EDF funds were granted were somewhat more favorable than those for the Dutch treaty funds, having an annual interest rate of 1 percent, a grace period of ten years and repayment in 30 years. However, EDF funds can only be disbursed under specific conditions. To date, the Agricultural Bank has received two credit lines from the EDF, the first in 1980 amounting to Sf 4.2 million and the second in 1983 for Sf 12 million.

Figure 5.2 illustrates the composition of the AGB's loans disbursed during the last few years. The rice sub-sector received the greatest amount of funding of all agricultural sub-sectors during 1990-94 (namely, 36 percent of all funds), compared with a fraction of that amount made to the remaining agricultural sub-sectors. For example, loans made to mixed agricultural activities represented 1.7 percent of the total AGB loan portfolio, while those made to the horticulture and livestock sub-sectors each represented 1.5 percent of total AGB loans; 1.2 percent of all AGB loans during 1990-94 were made to the fisheries sub-sector. Nearly 60 percent of all AGB loans were directed to non-agricultural loans during 1990-94, such as those made to purchase consumer goods and homes. Financing is also available for parastatals in the agricultural sector, and in the past the AGB modestly participated in the share capital of manufacturing businesses that are particularly stimulated by the Government, such as the Suriname Cardboard Manufacturing Company and the Suriname State Oil Company.

Figure 5.2



Important changes took place in the composition of AGB lending during the period under review. For example, while the number and value of loans made to the *rice* sub-sector were the greatest of all loan types, the share of loans directed to this sub-sector decreased over the five-year period. In contrast, the share of AGB loans directed to *non-agricultural* activities generally increased. Like loans directed to rice, those made to the *livestock* sub-sector also decreased markedly. Funding amounts for *horticultural* and *mixed agricultural* activities fluctuated somewhat during 1990-94, while that for *fisheries* decreased substantially during 1991-93 and increased in 1994. No loans were made by the AGB to finance forestry activities.

Most of the AGB's clients involved in agriculture are small farmers (defined as having between 2 and 12 hectares of productive land), although loans have been made in the past to large rice producers having between 400 and 500 hectares of land. AGB agricultural loans are made on

a project-by-project basis and usually contain two components, investment and crop loans. Inputs such as chemicals, fertilizers and seeds are rarely financed. The terms of the loans vary according to crop and type of investment: most loans made for heavy equipment such as combines are for 24 to 36 months, while loans made for rice production average about six months. Those for livestock production are for about one year; those for fruit and vegetable production, which are the shortest term loans, are usually made for three or six months. Experimental crops and non-traditional products are usually financed only under special circumstances. The main criteria for agricultural loan approval is that the client demonstrate an ability to repay the loan. The client must also have land with a transferable title to be used as collateral, along with funds currently deposited at the bank. A business plan is required for loan proposals covering 50 acres or more; it appears that the preparation of such a plan does not pose a constraint to loan requests.

b. National Development Bank

The National Development Bank (NDB) was established in 1963 with the objective of promoting industrial development in Suriname, and provides project financing for agro-industry, food and beverage manufacturing, textile industry, mining, wood processing, paper processing, chemical processing, and non-metallic mineral products manufacturing. Traditionally owned by the public sector, the NDB offered 49 percent of its shares to the private sector in 1989. However, the private sector showed little interest in buying shares and the public sector continues to own nearly 100 percent of the shares. In 1992 the NDB's objectives were further defined to promote the establishment of small and medium-size industries and service companies, and to expand existing industries including those related to services. NDB's current plans focus on moving towards investment banking operations. As part of those plans, steps were recently taken to improve management and the NDB's financial position. For example, a new deputy managing director was recently appointed and the computerized system was updated to more efficiently track loan repayments.

Table 5.2
National Development Bank: 1990-95 and Pipeline Loans
(number of Loans and Current Sf '000)

Activity	1990		1991		1992		1993		1994		1995		Total 1990-95		Pipeline	
	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
Agriculture, Forestry & Fisheries	1	1,562	1	375	0	0	0	0	0	0	0	0	2	1,937	8	10,072
Food, Beverages & Tobacco Manuf.	2	624	1	1,948	2	400	2	12,422	2	2,300	0	0	9	17,694	1	4,500
Textiles Manuf.	0	0	3	3,066	1	300	3	228	2	14,914	0	0	9	18,508	0	0
Wood Processing	0	0	2	663	3	934	2	660	4	20,304	1	1,016	12	23,577	4	2,806
Paper Manuf.	4	615	2	105	1	30	2	8,868	0	0	1	350	10	9,968	1	11,140
Chemical, Coal & Plastic Processing	3	3,436	1	150	0	0	1	25,982	0	0	0	0	5	29,568	1	1,100
Non-metallic Mineral Products Processing	6	7,326	1	250	2	1,875	3	1,207	4	8,700	0	0	16	19,358	0	0
Machine & Equipment Manuf.	3	905	7	2,131	5	1,905	6	30,810	5	20,648	2	4,718	28	61,117	0	0
Other Manuf.	3	165	2	1,623	1	2,088	4	23,378	6	5,333	0	0	16	32,587	0	0
Other Industries	13	404	16	236	24	891	7	617	8	94,571	13	94,309	81	191,028	0	0
Total	35	15,037	36	10,547	39	8,423	30	104,172	31	166,770	17	100,393	188	405,342	15	29,618

Source: NDB (1996).

During the last few years, a limited amount of NDB's funds were channeled to the agricultural and agro-industry sectors and the funds that were allocated to those sectors steadily decreased (see Table 5.2). For example, in 1990-95 two loans were made to the agricultural sector that represented 0.5 percent of total loan approvals. On a year-to-year basis, loans for agricultural projects represented more than 10 percent of total loan approvals in 1990, compared with approximately 4 percent in 1991, the last year in which loans for this type of project were approved. Projects for food, beverages and tobacco manufacturing fared better than those for agriculture during the last six years, receiving about 4 percent of total loan approvals for nine loans. Nonetheless, like projects for agriculture, funds allocated to food, beverage and tobacco manufacturing activities have also steadily decreased during the last few years, dropping from 18 percent of total loan approvals in 1991 to approximately 1 percent in 1994. It appears that the recent trend in NDB lending has been to finance manufacturing activities, and in particular those involved in machine and equipment manufacturing and other manufacturing activities. The greatest number of loans (excluding the miscellaneous category of 'other loans') were approved during 1994-95 for machinery and equipment manufacturing projects, that number being seven, followed by six loans made to other manufacturing projects.

According to the projects that are in the NDB's current pipeline, it appears that the recent trend in lending is being reversed. One-third of the total pipeline of Sf 30 million is destined to finance eight agriculture-related export projects, of which most are related to fisheries. An export project to finance particle board has been allocated the greatest portion of funds (Sf 11.1 million). Other pipeline projects include wood processing and soybean processing. No projects are in the pipeline for manufacturing activities.

c. De Surinaamsche Bank

Established in 1865, De Surinaamsche Bank (DSB) is a large commercial bank with seven branches concentrated in Paramaribo and surrounding areas, Nickerie and the mining town of Moengo. Its share structure is as follows: 10 percent is owned by the Government of Suriname, 41 percent is owned by about 4,300 private shareholders, and 49 percent is owned by ABN-AMRO Bank (a private Dutch bank).

Agricultural loans currently make up an important share of DSB's total loan portfolio. For example, in 1995 nearly 10 percent of total loans valued at Sf 748 million was allocated to the agricultural sector. There were fewer loans made in 1994 for agricultural activities, amounting to only about 3 percent of DSB's total loans, or Sf 65 million. Nearly 90 percent of all agricultural loans are made to finance *rice* production and related activities. Non-rice lending has recently included *palm oil* and *small vegetable farming*. The DSB makes two types of loans for agricultural projects: a working capital loan which functions as a revolving loan, and an investment type of loan that is made for approximately three years. According to DSB management, nearly all loan requests lack the support of a business plan. To increase the success of a project and decrease loan defaults,

DSB staff takes a 'hands-on approach' and directly assists producers in designing plans. This strategy has reportedly resulted in a low rate of loan foreclosures. The collateral required to secure a loan includes mortgages, financial assets, and in the case of loans to finance equipment, the equipment itself. Land titling appears to be problematic in terms of providing land as collateral, especially for small producers who usually lease or rent land.

5.2 Investment Constraints

The Investment Code that is currently in place in Suriname originated in 1960 and is essentially structured according to Dutch guidelines. As such, it reflects Dutch investment regulations, tax benefits and other types of incentives for investments in Suriname. Legislation has been drafted to replace the outdated code and ratification is expected in 1997. The general objective of the Investment Law would be to provide the appropriate framework for an investor-friendly climate in Suriname. The law contains both non-fiscal and fiscal incentives, the latter forming the core. Several incentives contained in the Investment Law of 1960 will be maintained, however, and will be made available to investors qualifying for accelerated depreciation, income tax exemptions, and exemption of import duty on certain items, including equipment.

A summary of the draft Investment Law is provided in Box 5.1. Articles 4-13 relate to fiscal incentives while Articles 14-25 relate to non-fiscal incentives. Fiscal incentives introduced in the new law include additional tax deductions on investment, parent-subsidiary corporations, interest on own capital and wage taxes. The new non-fiscal incentives include the ability to transfer foreign exchange through licenses, the establishment and implementation of rights for foreign workers, revised procedures for the import and export of goods, and assistance in obtaining exploration and exploitation concessions and land rights. To facilitate the rebuilding of the productive capacity of the country, no discrimination is made between new, expansion or replacement investments.

The Investment Law also sets out guidelines for the Institute for the Promotion of Investments in Suriname (INVESTSUR). Once established, INVESTSUR is intended to operate as a 'one-stop shop' where investors can undertake all administrative procedures required to operate in Suriname. In addition to its coordinating task in the administrative handling of requests of investors, it will also coordinate the settlement of disputes. INVESTSUR is also intended to play an advisory role to the various ministries involved in approving investments in Suriname with regard to new and existing facilities. Furthermore, it provides information on investment opportunities and facilities to promote investments in Suriname. INVESTSUR responds directly to the Minister of Finance. Its Supervisory Board consists of the following seven members: representatives of the ministries of Finance, Trade and Industries, Agriculture, Natural Resources, two employers organizations and the trade unions. INVESTSUR replaces the existing Investment Commission which was not able to function effectively due to its limited scope of work.

An additional important feature of the Investment Law is that specific sectors - including agriculture - are targeted for investment. Activities within specific sectors are not targeted. The law lacks certain provisions that are key to international investors and that would impact favorably on the Surinamese economy. For example, it omits the establishment of bonded warehouses and export processing zones where companies could be offered special incentives. These incentives could include permission for the companies to lend their own machinery and equipment to sub-contractors located outside the zones, or exemption from sales taxes on products delivered for further processing in bonded manufacturing warehouses.

Box 5.1
Summary of the draft Investment Law

Article 1	The Minister of Finance is responsible for the investment policy and will coordinate with other relevant ministers.
Article 2	The general conditions for eligibility are: an investment in an asset by an entrepreneur who maintains regular bookkeeping activities in one of the selected sectors.
Article 3	The selected sectors include agriculture, animal husbandry, fisheries, aquaculture, mining, forestry, tourism, industry and commercial transportation. Commercial services are also included in the selected sectors, as long as they are provided by companies owned by non-residents of Suriname.
Article 4	Accelerated depreciation is allowed for all investments greater than $5,000. This incentive allows depreciation to take place within one year, which will provide liquidity and interest advantages to the entrepreneur. Accelerated depreciation is also allowed in investments to upgrade land, where land is used as a depreciable asset.
Article 5	Interest deduction on income tax is allowed in cases where the investor's own capital is used up to a maximum period of five years. In those cases in which the value of the investment exceeds $100,000 and no request is made for accelerated depreciation, the interest deduction will equal six per cent. In those cases where 80 percent of the goods to be produced by the investment will be exported, the deduction will amount to 10 per cent. The entrepreneur is required to elect either accelerated tax deductions on the use of his own capital.
Article 6	Deductions will be made from taxable income according to the following manner: 20% for investments greater than $20,000 made in targeted regions, and 10% for investments greater than $10,000 and less than $20,000 that are considered to protect targeted areas of the environment.

(cont'd)

Box 5.1 ***(cont'd)***

Summary of the draft Investment Law

Article 7	A divestiture surcharge will be applied for income tax purposes in cases of misappropriation, and will be applied for a maximum of five years.
Article 8	Parent-subsidiary corporations are permitted to combine their income/loss results and pay tax as if the two companies were one taxpayer for a maximum period of 5 years.
Article 9	Income tax exemption is granted for 10 years for new companies operating in the mining sectors, except for small-scale mining and building materials operations; agriculture; sea fisheries; aquaculture; other types of industries; tourism and commercial services. No tax exemption request will be accepted for those companies taking advantage of Articles 4,5,6,8 and 13. This incentive will be terminated as soon as cumulated net profits reach a level of more than twice that of the original invested capital.
Article 10 & Article 11	Import tax exemption will be granted for capital goods valued at more than $10,000 and inputs to manufacture capital goods valued at more than $5,000.
Article 12	The statistical tax exemption is granted where Article 10 applies.
Article 13	Newly-established companies operating in the targeted regions are granted a deduction on wage tax amounting to 10% of the paid wages for a maximum period of 5 years. The wage tax deduction, which is a form of employment subsidy, is set at the maximum amount of the wage tax which would have to be paid to the Tax Department.
Article 14	Licenses for the transfer of foreign exchange can be provided in cases of: (i) repayment of own invested capital; (ii) profit and/or dividend transfer; (iii) interest and capital repayment; (iv) payment for management fees, technical assistance, know-how and licenses.
Article 15	Residence and work permits will be provided for foreign workers to establish a foreign firm, provided that the proposed investment is approved and that the import and export of goods and services can be provided, in cases where imports and exports are required.
Articles 16-24	Definitions are provided for the role of the new Institute for the Promotion of Investments in Suriname (INVESTSUR), the terms for membership application and dispute settlement.
Article 25	A provision is made for investments in the exploitation and processing of bauxite, crude oil, gold and radioactive minerals provided that investments exceed $50 million. Such investments are subject to special incentives not contained in this Law.

PART III

KEY INSTITUTIONS AND SUPPORT SERVICES

6. Key Institutions

6.1 Introduction

The way in which agricultural institutions in Suriname currently operate reflects the problems that have characterized the administration of the entire public sector during the last decade. The budgets of the agriculture-related ministries and institutions in real terms have gradually eroded, thereby reducing development efforts for the sector and undermining its agriculture-related infrastructure. At the same time, the salaries of civil servants have declined in real terms over the last decade.

Government employees have developed parallel income sources that have usually become the focus of their efforts in terms of time and energy. Also, a significant part of the young staff has left the Government ranks to emigrate to the Netherlands and elsewhere, while another part has joined the private sector and a smaller portion joined the parastatal sector. Likewise, the availability of high-level staff officials in the Government has fallen. Against this background, the general opinion in Suriname of agriculture-related institutions is poor. The currently depressed state of the sector, low salaries, and the weak overall image of agriculture discouraged young people from pursuing a career in this field and have acted as major constraints to strengthening agriculture-related institutions.

6.2 Public Sector Institutions

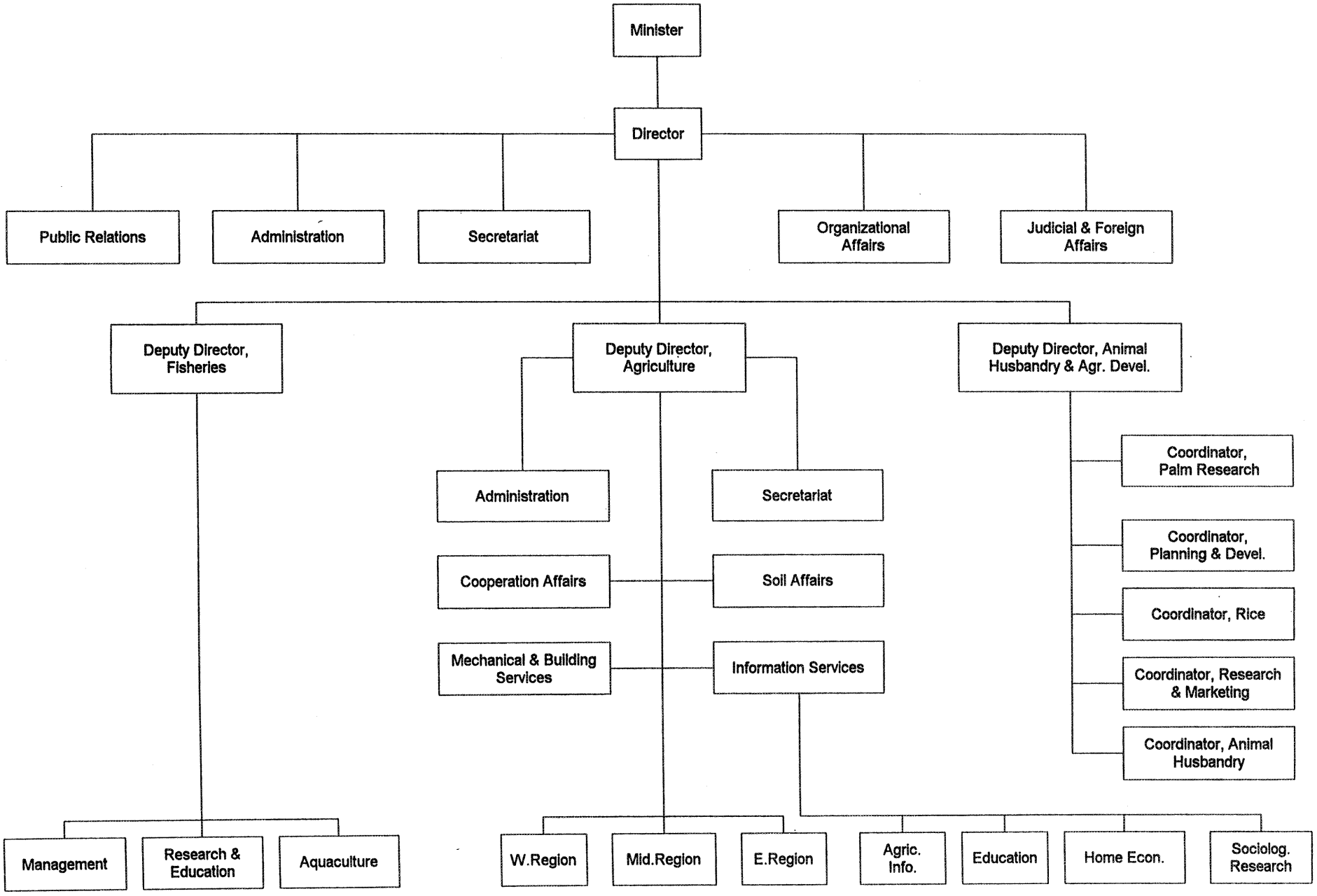
The Ministry of Agriculture, Fisheries and Livestock (MOA) is the main public sector institution involved in agriculture. Other ministries that play important roles in providing direct or indirect support to the sector include the Ministry of Planning and Development Cooperation, the Ministry of Trade and Industry, the Ministry of Public Works, the Ministry of Finance, the Ministry of Regional Development and the Ministry of Natural Resources.

6.2.1 Ministry of Agriculture, Fisheries and Livestock

a. Structural Organization and Staffing

The principal functions of the MOA are to formulate, monitor and implement the Government's agricultural policy, undertake agricultural research, and provide technical assistance to farmers through extension. It is one of the largest ministries in the country, employing 1,370 persons in its three main departments and a few staff units. Figure 6.1 presents a diagram of the Ministry, whose structure has undergone little, if any, changes in the last ten years. The Department of Agriculture is the largest unit in the ministry, followed by that of the Livestock Department and

Figure 6.1
Institutional Structure of the
Ministry of Agriculture, Livestock and Fisheries



the Fisheries Department. The Department of Agriculture comprises three divisions that are distributed across the West, Middle and East Regions of Suriname. Each division is directed by a coordinator who is assisted by a team leader. Together, the three regional divisions have a work force equal to about 40 percent of the total number of employees of the Ministry. The remaining 60 percent of the work force of the Ministry is stationed in or around the capital of Paramaribo. The Western Region employs only 23 percent of the staff entrusted to the divisions, in spite of the fact that it generates the bulk of the country's agricultural production. The ratio of MOA employees to the number of farmers is about 1 to 11.

The qualifications of MOA employees can be classified as follows:

- 3 percent of the staff is made up of high level employees who are in management positions ("Hoofdambtenaar") and who usually hold university degrees or technical institute diplomas.

- 21 percent of the staff is considered to be mid-level ("Stafambtenaar").

- 76 percent of the staff is considered low-level or unskilled workers ("Ambtenaar en Assistent ambtenaar").

The Ministry faces two important constraints in terms of staffing: (i) the high concentration of low-level employees, and (ii) many of the employees who are given the responsibilities of technicians lack the educational background to carry out their assigned duties. Given the current training level of staff, there is a need to reorganize the Department's personnel to better reflect the agricultural sector's needs, especially in the areas of agricultural research, rural extension and irrigation and drainage.

b. Budget

The 1996 budget of the MOA equals about US$3 million, which corresponds to about 2 percent of the total government spending planned for the year (see Table 6.1). Nearly one-half (46 percent) of the budget is for personnel expenditures, while subsidies and transfers absorb nearly 25 percent. In contrast, funds allocated to research only amount to 0.5 percent of the total budget, while that for training is insignificant. Since 1994, actual expenditures have been below budgeted expenditures. Most savings have been incurred in the categories of miscellaneous costs, supplies, external services and research.

Table 6.1
Ministry of Agriculture Budget Allocations, 1991-96
(Thousands of Surinamese Guilders)

Description	1991			1992			1993			1994			1995			1996		
	Budget	Actual	Difference	Budget	Actual	Difference	Budget	Actual	Difference	Budget	Actual	Difference	Budget	Actual	Difference	Budget	Actual a/	Difference
General Ministerial Costs	269	443	174	265	419	154	687	670	(17)	2,172	1,483	(689)	4,272	2,473	(1,799)	3,871	783	(3,088)
Personnel Costs	17,045	21,011	3,966	22,333	25,844	3,511	33,270	31,687	(1,583)	114,404	104,868	(9,536)	546,485	453,441	(93,044)	552,204	115,609	(436,595)
Equipment Costs	857	875	18	921	899	(22)	1,629	1,600	(29)	9,933	8,144	(1,789)	27,663	24,291	(3,372)	19,719	4,908	(14,811)
Transportation Costs	1,318	902	(416)	1,484	835	(649)	2,940	1,555	(1,385)	25,071	4,842	(20,229)	36,649	22,115	(14,534)	41,524	3,037	(38,487)
Supplies	3,385	2,004	(1,381)	3,763	2,587	(1,176)	8,087	4,152	(3,935)	41,361	13,810	(27,551)	132,525	56,225	(76,300)	139,087	6,155	(132,932)
Maintenance (Capital Expenditures)	2,439	2,229	(210)	3,411	3,079	(332)	11,545	8,401	(3,144)	77,096	29,469	(47,627)	144,475	86,717	(57,758)	96,736	20,172	(76,564)
External Services	40	0	(40)	50	70	20	770	224	(546)	2,510	815	(1,695)	6,400	2,733	(3,667)	9,450	70	(9,380)
Research Costs	171	108	(63)	197	124	(73)	359	129	(230)	717	448	(269)	2,760	1,388	(1,372)	5,726	274	(5,452)
Training Costs	56	5	(51)	49	5	(44)	145	95	(50)	97	34	(63)	477	311	(166)	901	63	(838)
Subsidies and Transfers	24,068	22,684	(1,384)	31,373	27,202	(4,171)	43,657	48,874	5,217	478,023	340,592	(137,431)	1,315,712	408,871	(906,841)	282,182	41,595	(240,587)
Miscellaneous Costs	352	214	(138)	354	210	(144)	941	441	(500)	2,770	1,442	(1,328)	13,325	6,101	(7,224)	22,503	259	(22,244)
Total Ordinary Costs	50,000	50,475	475	64,200	61,274	(2,926)	104,030	97,828	(6,202)	754,154	505,947	(248,207)	2,230,743	1,064,666	(1,166,077)	1,173,903	192,925	(980,978)
Total Extraordinary Costs	2,820	753	2,067	500	0	500	5,670	140	5,530	8,300	0	8,300	93,595	5,628	87,967	13,750	0	13,750
Grand Total Costs	2,820	51,228	48,408	500	61,274	60,774	5,670	97,968	92,298	762,454	505,947	(256,507)	2,324,338	1,070,294	(1,254,044)	1,187,653	192,925	(994,728)

a/ Through end-March.

Source: Ministry of Finance.

c. The Statistics Department

The Statistics Office of the MOA merits attention due to the importance of statistics in agricultural policy planning, and the dependence of other government ministries, the Central Bank and international development organizations on the information provided by this office as a principal data source. The main function of the Statistics Office is to gather, compile and process agricultural statistics on Suriname, a task which is initially carried out by MOA's branch offices in 10 districts and finalized by the MOA's main office in Paramaribo. Approximately 150 data collectors and extension workers are responsible for the data collection, which is manually gathered through field visits and farmer interviews. Data are collected semi-annually, although in past years they were collected on a quarterly basis. Once gathered, the district offices channel the data to the Statistics Office in Paramaribo, where they are compiled by a staff of eight persons. Individuals are assigned to statistics on the agricultural sector, the animal husbandry sub-sector, the fisheries sub-sector, prices and trade statistics. Box 6.1 presents the details on the types of statistics collected and the systems on which they are maintained.

Box 6.1
Ministry of Agriculture: Data Availability

Aggregate Data	
Planted Area	✔
Production	✔
Consumption	✔
Stocks	✘
Exports	✔
Imports	✔
Data Disaggregated by Product Groups or Individual Commodities	
Planted Area	✔
Production	✔
Consumption	✔
Stocks	✘
Exports	✔
Imports	✔
Production by District	✔
Consumption by District	✘
Prices a/	✔
Periodicity	Quarterly b/
Value Data c/	✔
Volume Data	✔
Start/End Dates	1978/1994
Data sources	MOA, GBS, SUREXCO
System used	Lotus

a/ Consumer prices and off-farm prices.
b/ Quarterly data are maintained for annual crops only; annual data are maintained for other crops.
c/ Calculated from volume and off-farm prices.

It is not clear whether there is systematic verification of the data after input. Basic data manipulation includes the calculation of value data and the determination of total rice exports. No analysis is undertaken of the data. Statistical tables are the main output and are generated upon request. End-users include the management of the MOA and other government ministries and students. Requests from the private sector are rare.

Interviews with the staff of the Statistics Office and a perusal of statistical reports indicate that a number of constraints hamper the efficient functioning of agricultural statistical collection and manipulation in Suriname, and the effective operation of the MOA Statistics Office. First, the

production data are subjective, which is mainly due to the methodology used in data collection. Rather than using crop-cutting methods that entail estimations based on field samples, data collectors depend on ad-hoc field interviews with farmers who often are not aware of production levels. Exacerbating this problem is the lack of transportation that prevents data collectors from obtaining a representative sample. An outdated registry of farmers is used to identify producers to be interviewed, which prevents MOA personnel from reaching a reasonable sample of producers.

The lack of salary incentives and managerial direction contribute to the low motivation of data collectors, which in turn is reflected in both the amount and quality of statistics collected. For example, salaries for data collectors are approximately 30 to 50 percent lower than those for extension workers, and management makes annual field visits rather than the monthly field visits that were made in the 1980s.

Finally, no computer facilities exist in the MOA Paramaribo Statistics Office ; data are processed using the computers of a neighboring office in the Ministry. The lack of a dedicated personal computer undermines the motivation of the staff in the Statistics Office, whose work is given little priority in the day-to-day tasks of the MOA. Lastly, although managers of the Statistics Office felt that the staff has adequate training in compiling and manipulating agricultural statistics, several errors were noted in statistical tables that reflect the lack of knowledge of basic concepts and the erroneous summing up of volume data across products to obtain aggregates.

6.2.2 Other Ministries

a. Ministry of Regional Development

The objective of the Ministry of Regional Development is to promote development in the rural areas of Suriname and to support the integration of the inhabitants, who are mainly Amerindians and Bushnegroes, into the mainstream social and economic structure of the country. As such, it plays a coordinating role and seeks to support the joint efforts of different ministries, including the Ministries of Natural Resources, Forestry and Mining, Agriculture and Tourism. The ministry carries out its responsibilities through District Commissioners.

b. Ministry of Planning and Development Cooperation

The Ministry of Planning and Development Cooperation is a fairly new ministry. It was established in 1993 and is still developing its role as an activist in Suriname's development. The National Planning Office is part of the ministry and is charged with most aspects of the country's overall development planning. Individual ministries formulate their own plans, which are coordinated by the Ministry of Planning in collaboration with the Ministry of Finance. For donor-supported projects, the Ministry of Planning also plays a coordinating role, and it reviews the projects before they are evaluated by the relevant ministries.

c. Ministry of Finance

The primary involvement of the Ministry of Finance with the Ministry of Agriculture is in the annual provision of funds for the MOA budget and the collection of revenue from agricultural activities. In addition, the Customs Department, which is a branch of the Ministry of Finance, has direct involvement with agriculture primarily through taxation of agricultural imports and exports.

d. Ministry of Trade and Industry

The Import-Export Office in the Ministry of Trade and Industry is directly involved in the agricultural sector. Its staff verifies documentation for agricultural exports and imports, and maintains records of those activities.

e. The Ministry of Public Works

The Division of Drainage Construction and the Division of Road Maintenance are part of the Department of Civil Technical Works of the Ministry of Public Works. They provide some services to the agricultural sector. The Division of Drainage Construction is charged with monitoring and constructing water passageways (e.g, the Saramacca Canal), the operation of a limited number of principal drains and the repair of sluice gates. The Unit of Roads and Bridges in the Division of Road Maintenance is charged with supervising the design and construction of roads and bridges, which is usually undertaken by private engineering firms and contractors. The Ministry of Public Works has no entity responsible for irrigation.

f. The Ministry of Natural Resources

The Ministry of Natural Resources is directly related to agriculture in the context of land ownership and the land tenure system. As described in Chapter 3, this ministry is responsible for farm project approvals. Project proposals involving land requests larger than 10 hectares are reviewed by a core cabinet team under the Vice-President (known as the Land Council).

6.3 Private Sector Organizations

Two general business associations are active in the country and both are involved in agriculture. The first one is the Association of Surinamese Manufacturers (ASFA), which was established in 1980 in response to increased policy emphasis on industrialization. It focuses on the secondary sector but also recognizes the need to support primary producers. ASFA member companies are active in all sectors, including manufacturing, agriculture, forestry and mining.

The second entity, the Surinamese Entrepreneurs Association (VSB), is the oldest employers' organization in the country. Like ASFA, it represents the private sector in several consultative bodies involving the Government and other important business and industry organizations. As a result, there

is overlap between VSB and ASFA, as well as between VSB and other more specialized associations. VSB's total membership comprises 356 companies involved in more than 14 sectors and sub-sectors, and includes manufactures, agriculture, food processing, alumina, steel, concrete, and services but is dominated by members involved in trade and finance. Although the VSB has a Commission on Agriculture, the commission does not have any staff. In addition to ASFA and VSB, other associations such as the Association of Paddy Producers (VPP), the Association of Paddy Processors (VPV) and the Suriname Rice Millers Association (SRMA) are active in Suriname.

6.4 Non-Government Organizations

In recent years, numerous non-governmental organizations (NGOs) have become active in Suriname. Local NGOs are active at both the national and community levels. Some international NGOs are also represented, including those with a concern for forestry and the environment such as Conservation International and the World Wildlife Fund.

The Forum for NGOs is an umbrella organization comprised of over 100 NGO member organizations, and has been operating since 1992. Its main objective is to help support the work of its members by providing a network for NGOs to discuss issues of importance, cooperate with one another in similar programs and exchange experiences. The Forum is a formal, legal association and exists to assist in strengthening its member organizations. The NGO Service Bureau is the executing body of the Forum and is responsible for the coordination of activities. It also provides a wide range of technical assistance. The 100 member organizations are national, intermediary or community-based, such as women's organizations and neighborhood organizations.

The main activities of the Forum are:

- Strengthening the role of grassroots organizations and NGOs in the development of the interior of the country.
- Capacity-building of women's organization with special emphasis on strengthening the productive role of women.
- Sustainable development in the Amazon.
- Research on inventories, impact studies, situational analyses, and data collection.
- Training at different levels and in different fields, including agriculture.
- Management of NGO Fund.
- Management of a Fund for Micro Projects of member organizations.

- Improving small scale food production and increasing food security for vulnerable groups of the population.
- Strengthening neighborhood organizations to foster community development.
- Supporting micro and small entrepreneurs.

The activities of the NGOs, like those of the private sector organizations active in Suriname, are limited by financial and managerial constraints. Also, like the private sector organizations, the NGOs in Suriname have received little support from the Government.

7. Research, Extension and Training Services

7.1 Introduction

In Suriname the major research and training institutions in agriculture are governmental, while private sector research is carried out on an individual basis. The institutions are of critical importance for long-term competitive agricultural production and for the general sustainability of the sector, but they face numerous constraints that inhibit their effective operation. One of the most important constraints is the continuous budget cut-backs for research and training activities, which have resulted in both lowered levels of activity and the eventual break-down of equipment as a result of lack of maintenance. For example, the transportation equipment used by extension workers has not been replaced and thus field visits have nearly come to a halt. Other constraints include the lack of personnel specialized in research and training, and the absence of an incentive structure to attract newcomers into the field of agriculture. This situation is exacerbated by the low salary level for junior agronomists in the government and the low status given to agriculture as a private sector career opportunity.

7.2 Public Sector Institutions

7.2.1 The Agricultural Experimental Station

The Experimental Station is a department within the Ministry of Agriculture. It was established in 1910 with the broad mandate to promote agriculture. It initiated operations with experimental fields in La Poule (coffee, cacao, rubber), Oryza (rice), Nickerie\POR (rice, livestock, bananas), Brokobakka (citrus, coffee, cacao, coconut, rubber, palm oil), Santo (fruits, bananas) and Boma (fruits). In the 1970s, individual parastatal institutes were established to channel development funds to those crops, predominantly in the form of projects, as well as to carry out research. Examples of such parastatal projects that are currently operating include SML, SEL, SLOC, Surland, Victoria/Phedra, STIPRIS, and SNRI.

Until the 1980s, the Experimental Station carried out a considerable amount of research in the fields of phytopathology, soil science, crop science, farm mechanization, and food processing. Thereafter, activities were gradually narrowed down and current activities are limited. Its professional staff has been reduced from 48 university graduates in 1977 to fewer than 10. The limited research capacity in terms of both manpower and funding is presently concentrated on crop research, in which soybeans and maize play a key role. Furthermore, a new orientation in research has been recently initiated to shift the focus away from high-yield varieties having high chemical requirements to integrated pest management, bio-composting, and the preservation of plant genetic resources. The lack of trained personnel has prevented the Experimental Station from branching into projects on agricultural diversification or non-traditional exports.

7.2.2 CELOS

The Center for Agricultural Research in Suriname (CELOS) is a foundation linked to the University of Suriname. This institution has undertaken extensive research in agriculture, including forestry (for example, a forestry management system). The Center, which comprises nine sections, is presently supported by a staff of 150 headed by a Director and led by a Board of Directors. The European Union is funding some projects at CELOS, including the Natural Resources and Environmental Assessment (NARENA), the propagation of planting material by tissue cultivation, and a laboratory on wood technology.

7.2.3 SNRI

The Suriname National Rice Research Institute (SNRI) was founded in response to the decline of the seed-breeding program of the Foundation for Mechanized Farming in Suriname (SML). As such, SNRI aims to strengthen rice research as one of the basic factors in improving rice production and thus Surinamese rice exports. In 1993 SNRI initiated a breeding program to screen potential new varieties of rice. As a result of its work, actions will be undertaken to purify and improve the two main varieties grown locally (eloni and diwani), which have recently emerged in the Guyanese market. The planned car-ferry connection between Suriname and Guyana will enable increased collaboration between SNRI in Suriname and the National Agricultural Research Institute (NARI) in Guyana. This development is important since Suriname and Guyana, as ACP-countries with preferential access to the European market, are obliged to direct their research to cost-saving practices in order to improve their international market positions.

7.3 University and Technical Institutes

The overall training provided at university and technical institutes in Suriname fails to meet the needs of the agricultural sector. The absence of basic agricultural education is striking and previous attempts to improve the situation have failed, since agriculture in general is not viewed favorably throughout the country as a career choice. Mid-level agricultural education is provided by the well-regarded Nature Technical Institute (NATIN). Due to its small size, the higher agricultural engineering course at the University is restricted to the Bachelor of Science level.

Additionally, there is a lack of regular vocational training in agriculture which would otherwise enable farmers to improve productivity, quality and safety. In the past, suggestions for this type of training have been widely accepted, especially in the center of rice production in the Northwest Nickerie region. Nonetheless, few actions have been taken to design and implement such a training program, although the Lower Technical School plans to introduce short courses on agriculture in their curriculum.

7.3.1 University of Suriname

The University of Suriname (UOS) provides agricultural education through its Technology Faculty. One of the six departments of the Faculty is the Agricultural Production Department and offers specializations in forestry, livestock and agriculture. The demand for staff educated and trained in agriculture is closely related to the existing or emerging opportunities in the sector. Economic prospects in this field are also key to attracting student interest in enrolling in university courses leading to specialization in agriculture.

The Agricultural Production Department has a small full-time staff and a group of 15 part-time lecturers. The degree in Agriculture is at the Bachelor of Science level, and is a four-year program. Apart from the basic courses offered during the first two years of the program, specialized subjects include crop production, crop management, soil science, soil chemistry, soil fertility, processing and storage, land preparation, land survey, crop protection, machines and equipment, rural development, agriculture extension, agricultural economics, agricultural business economics (agribusiness) and agricultural policy. The program also requires an internship of four months and a final research exercise, which usually lasts about six months and focuses on specific subjects.

In 1995 a new series of course offerings was developed to include environmental science and was initiated with ten students in the Technology Faculty. This program is expected to compete for students in the Agriculture Production Department, and includes the following areas of specialization: nature conservation, aquaculture production, water quality and environmental management. Other new activities that were recently initiated at the University include the development of cooperation programs with the University of the West Indies campuses located in Trinidad, Barbados and Jamaica.

7.3.2 NATIN

NATIN is a governmental training institution affiliated with the Ministry of Education. It offers agricultural training at the secondary level and serves as the major training center for the Government and the private sector. Additionally, the institute also provides basic training to many mid-level managers in the field of agriculture. It has three areas of specialization: natural resources, engineering studies, and chemical and medical laboratory analysis. The natural resources program includes agriculture, forestry and soil management, land survey, meteorology and mining.

Candidates for entry to NATIN are between 16 and 17 years of age and must have completed the Mulo-B or LTS-C secondary school streams. Those in the former stream are required to take an entry examination. The first two years of the Agriculture/Forestry/Soil Management sub-stream offer a general curriculum; the third and fourth years offer specialized agriculture subjects. At the end of the third year students spend a ten-week internship in production companies or at government institutions. The internship is important to acquaint students with the practice of a chosen specialization. At the end of the fourth year, apart from a theoretical exam, graduation projects are prepared in which the candidates are required to demonstrate their ability to apply knowledge and experience to field work in an integrated manner.

PART IV

FACTORS AFFECTING COMPETITIVENESS

8. Determinants of Competitiveness

8.1 The Agricultural Sector

The competitiveness of Suriname's agricultural sector will be a fundamental determinant of the success in revitalizing the sector. The importance of competitiveness will be enhanced by the prospects of less expensive imports of agricultural products and inputs as a result of the country's trade liberalization and the changes currently underway in its European and CARICOM regional markets, as well as those that will result from Suriname's accession to the WTO. Both policy makers and members of the business community have already begun to address the issue of competitiveness. Following recent economic literature (Porter, 1990, Best, 1990, Thurow, 1992 as reported in Boye, 1996), competitiveness broadly depends on the simultaneous interaction of four sets of factors that enable a country to compete: (i) factor endowments; (ii) economic policies and incentives; (iii) institutional capacity and programs; and (iv) infrastructure conditions.

Suriname's natural resource endowment, its low population to land ratio, tropical climate and access to international markets by sea provide the country with an inherent comparative advantage in agricultural production. However, Suriname has not fully exploited its comparative advantage because of impediments in other areas. Based on Suriname's past economic performance and political background, the most important types of economic policies and incentives that are likely to influence the country's agricultural competitiveness are those that affect macroeconomic stability and those that create an incentive structure that facilitates agricultural exports. While important exchange reforms have been implemented and GDP growth has accelerated, macroeconomic stability is tenuous and important regulatory hindrances to agricultural trade remain in place. Also, while a new investment law will soon be implemented, the country lacks an overall export promotion strategy that encompasses export credit and insurance schemes, and a comprehensive information network.

The development of key institutions will also be crucial to the competitiveness of Suriname's agriculture, and will affect the long-run competitiveness of the sector. In particular, the strengthening of the Ministry of Agriculture in its strategic planning capabilities, research and extension services, statistical services, and staff training is needed to jump-start the sector's growth and facilitate the private sector's response to international market needs and opportunities. Likewise, the support of the newly-founded Suriname Trade Promotion Organization will help to promote selected sectors and industries with the involvement of the private sector, and will serve as an example for the development of private-sector based promotion institutions.

The remaining part of this chapter will attempt to address the major factors that influence the competitiveness of selected Surinamese agricultural products. Exact measurement of the degree of competitiveness of the agricultural sector and specific agricultural products in Suriname is complex since it relies on the comparison of macroeconomic, sectoral and industry-specific conditions across

countries.[12] The information presented below aims to offer insights in Suriname's agricultural products that are competitive or could be competitive, and the factors most likely to affect competitiveness. Supporting basic statistical information on planted acreage and yields is presented in Appendix Table A.8.

8.2 Rice

8.2.1 Industry Structure

In addition to being Suriname's principal agricultural export product, rice has the largest planted area of all the crops produced in the country. About 60,000 hectares of rice were planted each year in 1990-94, compared with only about 2,000 hectares a year for bananas. However, unlike banana production, that of rice has steadily declined since 1986, predominantly as a result of a lower sowing factor, which reportedly has fallen to about 1.4 compared with 1.8 in past years (FAO, 1996).[13] The principal reasons attributed to this lackluster performance include the inadequate capacity of the main pumping station serving the Nickerie district, poor drainage and the lack of regular field leveling.

Rice production has traditionally been concentrated in the Nickerie district, although recently it has expanded to the Saramacca area (FAO, 1996). The size of farms dedicated to rice production ranges from the large 10,000 hectare parastatal SML to medium and large-size privately-owned farms of between 100 and 2,000 hectares and small holdings of 2 hectares. According to the International Consultancy Association for Project Development (ICAD, 1996), there are about 5,540 rice producers in Suriname, of which approximately 87 percent are smallholders (defined as cultivating less than six hectares), 11 percent are medium-size holders (cultivating between 6 and 24 hectares),

[12] In his recent research on trade, technology and competitiveness, Haque (1995) suggests that productive efficiency is an appropriate measurement of international competitiveness across countries. Three methods have been used to quantify the competitiveness in the manufacturing sector that could be applied to agriculture, provided that data at both the product and country levels are available. The first method is that of total factor productivity (TFP), which uses outputs and inputs to measure efficiency over time. Although TFP is widely used, it can lead to erroneous results because it is based on the assumption that all producers operate in an identical manner. Domestic resource costs (DRC) offer a second type of measurement of efficiency, and the technique is based on the ratio of value added in a sector to the estimate of value added that is derived by applying international border prices to output and inputs. It too is widely used but has drawbacks in its dependence on detailed data and the inability to compare results across countries or of the same country at different periods in time. Third, Haque suggests labor productivity as an appropriate measure of competitiveness, since it is associated with growth in per capita income. Care must be taken, however, to consider differences in the quality of labor and the contribution of inputs such as capital equipment.

[13] The sowing factor, or the cropping intensity, is the actual planted acreage divided by the standing rice acreage. For rice, the factor can reach 2.0 if all rice land is planted twice a year. However, in practice several reasons usually cause the factor to be lower than the optimum. In most countries, the main reasons are the unavailability of irrigation water and its uneven distribution, especially for the second crop in the dry season. Most agronomists estimate that a sowing factor of 1.8 is easily attainable.

and 2 percent are large holders (cultivating more than 24 hectares). Smallholders are characterized as being part-time producers who usually rent land, while many of the larger farms are operated by extended families involved in several different areas of the rice industry, for example, production, processing and domestic and international marketing (FAO, 1996).

8.2.2 Production Systems

Paddy, or lowland rice, is the principal type of rice produced in Suriname and is cultivated each year on a two-crop cycle. With the exception of small isolated plots, nearly all rice is cultivated using a mechanized system (FAO, 1996). Fields are tilled when dry using predominantly wheeled tractors with disc harrows and are then flooded and leveled for seeding. On large farms, seed, herbicides and fertilizers are generally applied by air; on small farms these operations are usually undertaken manually. Harvesting generally coincides with the dry seasons, although the timing of the harvest depends on the sowing schedule, which in turn is influenced by equipment availability and the possibilities of pumping in water for irrigation during the dry months and pumping out water for drainage during the wet months (Bishay 1984b). Combines are used to harvest the paddy, and are usually rented to small farms. The wet paddy is then sold to traders or millers at the roadside, or transported by barge or truck to drying facilities or integrated mills which reduce the moisture content from 20-22 percent to about 14 percent (FAO, 1996). This first processing stage results in cargo rice (husked brown rice), which is the principal export rice product.

8.2.3 Factors Influencing the Competitiveness of Rice

Production Costs - Box 8.1 illustrates recent production costs of a large rice farm in Nickerie. Financing charges represent the largest share of all costs (18 percent), and are based on a six-month loan at 45 percent annual interest. Ureum fertilizer and its transport to the farm and airstrip are also significant costs (comprising 15 percent of all costs), while land preparation represents about the same amount (14 percent). The purchase of seed and its transport to the farm and airstrip, and the purchase of various herbicides and insecticides are also important expenses for this particular rice farm (each input amounting to 12 percent of all costs). Box 8.2 shows that costs of production represent approximately 70 percent of the price received for rice exported along the ACP route, and approximately 60 percent along the LGO route.

While production costs are an important component in assessing the competitiveness of rice and other products, additional analyses of changes in costs over time would be useful, were the data available. For example, while financing charges represented the single most important cost in mid-1996, perhaps this expense contributed a smaller share to total costs several years ago. Variations in certain costs could reflect changes in certain economic conditions and provide insights on how those changes could act as signals to policy-makers and private sector producers, so that strategies could be formulated to respond better to market needs. Also, since competitiveness is based on comparisons among countries, it would be useful to contrast the cost of rice production in Suriname with that of other countries. For example, it is useful to know that the cost of producing irrigated

rice in Suriname is less than that in Belize, where the cost of production in 1995 amounted to about US$287 a metric ton (Boye, 1996). Information on the production cost of other CARICOM rice producers would also be valuable.

Box 8.1
Production Costs of Paddy Rice in the Nickerie District
(Cost per hectare, Spring 1996 Crop)

Operation	Sf	US $
1. Land preparation	50,000	125.00
2. Seed 150 kg @ Sf 244 + 3 jute zkn @ Sf 500	38,100	95.25
3. Transport seed to farm 2 zkn 75 kg @ Sf 750	1,500	3.75
4. Transport seed to airstrip 2 zkn @ Sf 750	1,500	3.75
5. Paddy propagation 2 workers @ Sf 4,000	8,000	20.00
6. Ditch digging (manual labor costs)	4,000	10.00
7. Maintenance of ditches	10,000	25.00
8. Brestan herbicide ½ kg @ Sf 12,757.50	6,378	15.95
9. Gramaxone insecticide 1 liter @ Sf 4,275	4,275	10.70
10. Propanil insecticide 4 liter @ Sf 2,750	11,000	27.50
11. 2-4D Amine insecticide ½ lt @ Sf 2,350	1,175	2.95
12. Azodrine insecticide 1 lt. @ Sf 4,620	4,620	11.55
13. Karate insecticide ½ lt. @ Sf 11,000	5,500	13.75
14. Airplane cost for sowing	6,100	15.25
15. Airplane cost for spraying herbicides 2 @ $ 3.85	3,075	7.70
16. Airplane cost for spraying insecticides 2 @ $ 2.25	1,795	4.50
17. Ureum fertilizer 6 zkn @ Sf 7,350	44,100	110.25
18. Transport Ureum 6 zkn @ Sf 750	4,500	11.25
19. Transport ureum (farm-airstrip) 6 zkn @ Sf 750	4,500	11.25
20. Airplane cost for fertilization 3 x $ 5.80	6,974	17.45
21. Selection for red rice 2 workers @ Sf 4,000	8,000	20.00
22. Airplane pilot services	32,000	80.00
23. Combine costs	30,000	75.00
24. Burn straw/stalks	4,000	10.00
Subtotal:	**291,092**	**727.75**
25. Interest (45% annually, for 6 months)	65,496	163.75
TOTAL:	**Sf 356,588**	**US$ 891.50**

Note: The prevailing exchange rate of Sf 400/US$1 was used.
Source: Agricultural Bank, Nickerie Branch.

Export Transaction Costs - In addition to the cost of production, export transaction costs play an important role in determining the competitiveness of rice, and are most effectively addressed

in terms of monetary cost and time incurred to effect an export transaction. Box 8.2 provides an illustration of the major transaction costs that exporters incur for a shipment of 2,000 tons of rice, which is considered to be an average size shipment for Suriname. The illustration reflects the rice policy that was in effect in May 1996 and the trade routes that were being used by rice exporters. For exported rice, the monetary cost of export fees amounts to about 5 percent of the price received; the highest fees are incurred to pay the export tax and the statistical and consent tax. For retained rice, exporters are required to pay one fee that amounts to about 2 percent of the price received.

Box 8.2
Cost and Price Comparison for a 2,000 Ton Shipment of Surinamese Rice

A. Retained Quantity a/

Per Ton	Total
Price Received:	
US$275	US$110,000
(Sf 110,000)	(Sf 44 million)
Less:	
Quality Check fee	
US$1.88	US$ 750
(Sf 750)	(Sf 300,000)
Profit: US$273	**US$109,250**
(Sf 109,250)	**(Sf 43.7 million)**

B. Exported Quantity b/

ACP Route		LGO Route	
Per Ton	**Total**	**Per Ton**	**Total**
Price Received:		**Price Received:**	
US$370 fob	US$592,000	US$405 fob/ton	US$648,000
Less:		***Less:***	
SUREXCO Export tax		SUREXCO Export tax	
US$1	US$ 1,600	US$1/ton	US$ 1,600
(Sf 400)	(Sf 640,000)	(Sf 400)	(Sf 640,000)
Statistical & consent tax		Statistical & consent tax	
0.5% total value	US$ 3,019	0.51% total value	US$ 3,305
Quality check fee		Quality check fee	
US$18.75/sample	US$ 8.75	US$18.75/sample	US$ 18.75
(Sf 7,500)		(Sf 7,500)	
Export rice tax		Export rice tax	
US$15/ton	US$ 3,000	US$15/ton	US$ 3,000
Subtotal fees:	***US$ 7,638***	***Subtotal fees:***	***US$ 7,924***
Income less Export Fees:		**Income less Export Fees:**	
US$365/ton	**US$584,362/total**	**US$400/ton**	**US$640,076/total**
Less:		***Less:***	
Production Costs		**Production Costs**	
US$255/ton c/	**US$408,000/total**	**US$255/ton c/**	**US$408,000/total**
Profit: US$110/ton	**US$176,362/total**	**Profit: US$145/ton**	**US$232,076**

a/ Current policy requires that 20 percent of the total export shipment be retained for domestic use; in this example, 400 tons would be retained.
b/ In this example, 1,600 tons would be exported.
c/ The calculation of production costs per ton is based on total production costs presented in Box 9.1 and the assumption of a yield of 3.5 tons a hectare, based on data provided by the Ministry of Agriculture and presented in Appendix Table A.8.
Note: Rice producers must also take into consideration in total production costs (i) the letter of guarantee fee, if used, that amounts to about 1.1 percent of the shipment value, (ii) the amount of foreign exchange required to be surrendered and the financial charges incurred if the financing of US dollars is required, and (iii) the import duty applied to exports by the trading partner.

Although the fees incurred in exporting rice is considerably smaller than production costs, they nonetheless represent significant costs in terms of time, which consequently translate into monetary costs. Chapter 3 detailed the steps that are required by exporters to undertake export transactions, and supported the views expressed by the exporters interviewed as part of this study that export procedures are cumbersome and represent significant opportunity costs. These opportunity costs, in turn, impact on the ability of exporters to compete effectively in the market, and reduce profitability due to the time required to process exports. Policy initiatives should therefore be undertaken to reduce the burden of the 'red tape' inherent in exporting from Suriname; likewise, consideration should be given to the elimination of certain fees, such as the SUREXCO export tax and the quality check fee.

Quality - Variations in the quality of rice cause product differentiation, as buyers perceive that rice imports from Suriname are not a perfect substitute for those of competing exporters. Moreover, quality appears to be an important determinant of the competitiveness of the product. Unlike production costs and export transaction costs, quality is a product characteristic that is taken into account by the importer, and is compared with quality of the same type of good provided by competitors (Lord, 1991). Because quality is an intangible characteristic, its impact will depend on the perception of the importer. Surinamese rice is valued for its long grain characteristics, good flavor and cooking qualities, and those qualities will likely have a significant impact on the ability of this product to face competition in its major markets once preferential arrangements no longer exist. Nevertheless, according to the FAO (1996), Surinamese rice is currently facing competition in the EU market from United States rice, which is slightly shorter than the Surinamese rice and therefore suffers less breakage during the milling process.

Infrastructure - The lack of maintenance of infrastructure has resulted in problems with irrigation and water control, and has adversely affected the principal rice-growing district of Nickerie in terms of reduced production and increased losses. As mentioned in Chapter 4, the MCP project that would alleviate this constraint was never completed. Poor road maintenance also affects rice production and the ability of the exporter to bring the product to market, especially during the rainy seasons when roads become flooded and are further damaged by their inability to support heavy truckloads of rice.

8.2.4 Enhancing the Competitiveness of Rice

While rice producer and export associations in Suriname are of the general opinion that Surinamese rice is competitive in the world market and could maintain its competitive edge with the removal of preferential markets, the rice sub-sector requires important policy actions and technical support to ensure that Suriname is able to maintain and expand its market share. Specific suggestions for improving the competitiveness of rice are:

- Reduce export transaction costs by eliminating unnecessary export transaction fees and reducing the time required to process exports.

- Upgrade the infrastructure systems that have the greatest impact on rice, including the immediate installation of an effective irrigation system and an improved road maintenance program.

- Improve the quality of rice by supporting rice research, investing in the feasibility of constructing parboiling facilities and promoting Surinamese rice as a high-quality product.

8.3 Bananas

8.3.1 Industry Structure

Bananas are Suriname's second major export crop and are produced exclusively on two estates owned by the parastatal enterprise SURLAND. The total area farmed increased steadily from 1985 to 1991 when it peaked at approximately 2,200 hectares; it has since leveled off to between 2,100 and 2,200 hectares a year. Yields nonetheless have decreased from 26 tons a hectare in 1988 to the current 22 tons a hectare. The decrease in output is mainly attributed to the lack of production inputs, plant disease, and management and labor problems at SURLAND.

While there is no smallholder production of bananas in Suriname, this type of production dominates the plantain industry which mainly serves the domestic market, although exports have increased in recent years. Both production and yield trends of plantains have been mixed in the last few years following the large 1991 expansion in area planted; yields currently average about 20 tons a hectare.

8.3.2 Production Systems

Banana cultivation and harvesting are primarily carried out manually, although some mechanization exists. The production system is characterized by a higher planting density than in other banana-producing countries (i.e., about 2,000 production units a hectare in Suriname compared with 1,500 units a hectare in Central American countries (Bishay, 1984b)). This density is mainly due to the field layout of double rows of plants that are separated by drainage channels. According to Bishay (1984b), this production system inhibits the entry of machinery into the field for many agricultural practices such as weed control and harvesting. However, ditch cleaning is now undertaken mechanically and fertilizer is usually applied by air (FAO, 1996). Banana bunches are cut by hand and are carried along the beds to overhead cableways, which are technologically outdated and reportedly result in banana bunch damage (FAO, 1996). The moving cableway then hauls the suspended bananas into packing shed stations where the bunches are manually unhooked, packed and transported by truck to the Fyffes ships for export to Europe.

8.3.3 Factors Influencing the Competitiveness of Bananas

Yield - One of the major factors influencing the competitiveness of Suriname's bananas is its low yield relative to other Latin American banana producers. The present yield of about 22 tons a hectare is far below that of Ecuador, whose recent yields were nearly double those of Suriname, about 40 tons a hectare (FAO, 1996).

Transportation Costs - High transportation costs are often cited as detracting from the competitiveness of Suriname's bananas. They average US$240 a ton compared with US$100 a ton for bananas originating from other Latin American producing countries (Ministry of Agriculture, 1995). While details on production costs were unavailable at the time of report preparation due to labor strikes and management problems at SURLAND, FAO (1996) estimated that Suriname's total production costs for bananas are currently about US$4 a box, compared with those of US$2 a box for Ecuador. The difference in cost between the two countries is mainly attributed to more efficient production patterns and lower labor costs of Ecuadorian producers relative to those in Suriname.

Harvesting System - The inefficient harvesting system also impacts on the competitiveness of the banana industry in Suriname. Even though the fruit is transported to the packing station by means of a mechanical overhead cableway, its technology is outdated, it is slow and it often damages the fruit. The packing station itself, while somewhat mechanized, requires extensive manual labor in loading and unloading the fruit and spraying it before it is packed. Because there are approximately 30 harvests a year, nearly a quarter of the year is dedicated to harvesting bananas due to the length of time required to complete the harvest cycle (Bishay, 1984b).

Quality - Despite the drawbacks that characterize this fruit industry, Surinamese bananas, like rice, are regarded as being of high quality (FAO, 1996). The type of banana produced in Suriname is of the 'Cavendish' type, which is a small flavorful banana that is well received in the British market. In this regard, bananas from Suriname have a competitive edge over those of Ecuador, which are considered to be inferior despite their larger size and tendency to have less blemishes than the Surinamese fruit.

8.3.4 Enhancing the Competitiveness of Bananas

Given the low yield of Surinamese bananas, the outdated harvesting system, and high production costs relative to other Latin American banana producers, it is likely that the Surinamese banana industry will not be economically viable without the protection currently afforded by the preferential market arrangements. SURLAND management has recognized this challenge and, together with financing provided by Fyffes and the European Union, has concluded the preparation of a project to upgrade sprinkler systems, replace the overhead cableway system, and upgrade the packing and handling equipment (for details on the project and financing arrangements, see Chapter 11). Also, according to the FAO (1996), the Government of Suriname has requested funding from the European Union to implement a trial program to alter the layout of the planting system. The new

system would entail a deeper drainage ditch than that which is presently used, resulting in reduced drainage maintenance costs and irrigation water run-off losses.

Despite the fact that funding has been secured from a major international donor to upgrade the infrastructure of the banana industry, important elements impacting on competitiveness remain to be addressed:

- In the short run, the issue of continual conflict in management at the SURLAND plantations should be resolved and a stable management environment should be put in place and maintained.
- In the medium to long run, the privatization of SURLAND should be considered as an option to enable the banana industry to compete at an international level.
- Analysis of detailed production costs should be undertaken to identify which costs could be reduced through improved efficiency.
- A marketing scheme in conjunction with Fyffes should be developed to promote the Cavendish type of bananas in the British and other European markets so that consumers recognize the Surinamese product once the market is liberalized.

8.4 Palm Oil

8.4.1 Industry Structure

Palm oil production is one of the main agricultural activities in Suriname that is not concentrated on the coastal plain (FAO, 1992). Suriname's total area planted with palm oil has declined steadily since 1985 and, according to statistics provided by the Ministry of Agriculture, totaled 3,870 hectares in 1994. In early 1995, only about 20 percent of the planted acreage for palm oil was in production (Cloesen, 1995), the remaining area having been abandoned. The principal reasons for the decline in the palm oil industry, which is entirely state-owned, include the widespread incidence of the spear rot disease, rebel insurgence in the interior of the country where the estates are located, and the shortage of foreign exchange needed for spare parts.

Productivity has followed the downward trend in area planted, although it showed signs of recovery in 1992 when it reached 10 metric tons a hectare. Recent data provided by the Ministry of Agriculture indicate that productivity declined to about 7 metric tons a hectare in 1994. Actual output differed markedly from that which was anticipated: when the first palm oil plantation was established in Victoria in 1970, maximum yields of 20 metric tons a hectare were expected upon plant maturity. Yields that approximated this estimate (viz., between 12 and 19 metric tons a hectare) were recorded at the Phedra plantation in 1986, seven years after the first fruit were planted (FAO, 1992).

The trend in fruit processing and the production of crude oil, kernel cake and fatty acids followed that of output.

8.4.2 Production Systems

According to the FAO (1992), the type of palm oil produced in Suriname is of the African type that is cultivated from seeds imported from New Guinea, the Ivory Coast and Benin. The first harvest usually occurs three years after planting, and continues throughout the year averaging about 45 harvests. The usual life of palm oil trees is 18 years. Maximum yields are usually reached after seven years, and range from 15 to 20 metric tons a hectare.

Harvesting is a labor-intensive process that requires systematic and intensive monitoring and control to minimize losses (FAO, 1992). As in other countries world-wide, mechanized harvesting is nearly impossible once the palms become established due to the in-field drainage channels (FAO, 1996). In Suriname, once the fruit is harvested it is carried to the roadside where it is hoisted into trucks and then transported to the Victoria factory for processing.

8.4.3 Factors Influencing the Competitiveness of Palm Oil

Today the palm oil industry in Suriname is characterized by the effects from the last several years of pest and plant disease, social unrest that resulted in the abandonment of many plantations, and the shortage of foreign exchange to purchase the necessary spare parts and equipment. Additionally, the plantations are operating at a loss, resulting in the interruption of day-to-day operations that influence the overall performance of the industry. For example, at the time of report preparation, the Victoria processing factory had been closed once again due to the inoperation of the plant's generator. This closure prevented the harvest from taking place at the Patamacca and Phedra plantations. Break-downs of the generator and capital equipment at Victoria was reported to occur at least three times a year, thereby disrupting supplies needed for processing to meet the demands of the local market and requiring imports of soya oil that mainly originate in Brazil and the Netherlands.

In recent years the Government of Suriname considered revitalizing the industry by expanding acreage near the Victoria processing plant. However, it is doubtful whether the industry can be revived and brought up to international standards. Europe is the main export market for Suriname's palm oil, and its main competitor in that market is Malaysia, which has a competitive edge over Suriname in many respects. Production costs in Malaysia are reported to be far below those of Suriname (FAO, 1992), especially in terms of labor and transportation. The oil extraction percentages are reported to be higher in Malaysia than in Suriname: according to the FAO (1996), fresh fruit bunches in Suriname recently had an extraction of 18 percent compared with 20 percent in Malaysia. Also, the factory structures in both Malaysia and Indonesia are established to compete at an international level, where computerized technology is used to maximize around-the-clock processing. Given these restrictions and the characteristics of the palm oil industry in Suriname, it

is unlikely that opportunities exist for exports of this product and that the expansion of the industry will extend beyond satisfying domestic demand for vegetable oils.

8.5 Fisheries

8.5.1 Industry Structure

In Suriname the fisheries industry can be generally classified into the following activities: (i) fresh water; (ii) brackish water; (iii) coastal and deep-sea fisheries; and (iv) aquaculture projects (Bishay, 1984b). Despite the several varieties of fish that are landed in each of these activities, the Surinamese fishing industry has traditionally been based on shrimp production, which is primarily directed to the export market. Charlier (1996) characterized the Surinamese shipping fleet as being made up of two components: (i) the trawling fleet, which is largely composed of commercial shrimp trawlers and a smaller number of large trawlers targeting fin-fish; and (ii) other vessels that are smaller in size than the standard shrimp trawler and that comprise the broad category of small-scale fisheries.

According to ICAD (1996), about 1,000 fishing licenses were granted to small-scale fishermen and 187 licenses were granted to large-scale, or industrial fishermen in 1993. Of the licenses granted for industrial activities, about two-thirds were approved for shrimp trawling, 22 percent were approved for red snapper trawling, and the balance was approved for general fish trawling. In terms of the number of exporters active in the fishing industry, Charlier (1996) reported that an average of 89 exporters a year operated during 1993-95 out of a total number of 179 companies or persons licensed to export. These statistics imply that, on average, at any given time the same number of exporters were active as those that were inactive. Charlier also points out that this trend could be an indication that shipments took place without export licenses, or without being recorded.

Fish are to be landed at designated sites, one of which is CEVIHAS, a government landing and storage facility. In practice, little government regulation is enforced and landing takes place at numerous sites. SAIL (Suriname American Industries Limited), another parastatal, is a shrimp processing plant that also exports processed products. SUJAFI (Suriname Japan Fisheries Company, Limited) is a private processing company that was established in 1973 with shares owned mainly by Japanese and Surinamese investors. Several smaller private companies process fish to sell products in both the domestic and export markets, and then prepare frozen and ice-box fish to be exported. These companies usually receive their supplies from artisanal fishermen and the by-catch from shrimp trawlers and chartered Venezuelan trawlers.[14]

[14]In 1986 Suriname agreed to allow Venezuelan ships to fish in its commercial zones; currently, these vessels fish mainly for red snapper.

8.5.2 Production System

The fisheries industry is recognized by the Ministry of Agriculture for its significant export potential. Inconsistencies in data reported by the Statistics Department of the Ministry of Agriculture and the Fisheries Department hinder the presentation of exact figures; data drawn from information taken from export licenses is absent for the 1986-91 period. However, according to Charlier (1996), important trends have emerged over the last decade in the fisheries industry that merit attention:[15]

- First, in recent years the share of fish production that has been exported has steadily increased, recording 518 tons (net weight) in 1981 and nearly 1,000 tons in 1985. This upward trend continued until 1993, when exports initiated a slight decline.

- Second, the value of exports, based on the declared value on export licenses, decreased from a maximum of US$2.67 a kg in 1983 to US$0.83 a kg in 1993.

- Third, in recent years most exports have been reported as 'unidentified fish', whereas in the early 1980s red snapper and shrimp were declared as the major export species. Charlier notes that it is likely that low-valued fish are declared to minimize export taxes and the surrendering of foreign exchange, both of which depend on the value of exports declared on the license form.

- Lastly, the trend in unprocessed and processed exports has fluctuated somewhat during the last decade: in the early 1980s unprocessed products (for example, whole, gutted or head-off fish alive, on ice or frozen) dominated exports; in the mid-1980s processed products (fish steaks and fillets) were the leading export; in the late 1980s and early 1990s the trend was reversed again with unprocessed products taking the lead in exports. There appears to be no obvious explanation for these trends, other than changes in consumer preferences and tastes.

[15]While Charlier's statistics exclude exports of SAIL and SUJAFI, they enable a detailed analysis of fish and fish products exported by smaller producers.

8.5.3 Factors Influencing the Competitiveness of Fisheries

Box 8.3
ISO 9000 Standards

Published in 1987 by the International Standards Organization (ISO), the ISO 9000 standards (ISO 9000-9003) describe quality system models, define quality concepts and provide guidelines for using international standards on quality systems. Through internal and external audits the standards enable a company to ensure that its production process will meet published quality standards for its products or services. As such, the ISO 9000 standards relate to production processes, not products. Firms register their quality systems under one of three standards: ISO 9001, 9002 or 9003. ISO 9000 registration is noted only on product literature or advertising; it does not appear on the product or service itself.

Today, more than 80 countries, especially those of the European Union, have adopted the ISO 9000 standards as national standards. There have also been two large regional adoptions, CED (European Committee for Standardization) and COPANT (the Pan-American Standards Commission). While ISO 9000 registration is not a legal requirement for access to the EU market, quality-minded customers are increasingly requiring that their suppliers be registered as being in compliance with an ISO standard. Thus, compliance with ISO 9000 standards can offer manufacturers a competitive advantage. This is particularly true for high technology products and other items with safety or liability concerns. Moreover, procurement authorities and buyers are increasingly including ISO 9000 registration requirements in their purchase contracts.

Manufacturers evaluate their quality systems through one of three methods: (a) self-audits; (b) second-party evaluations, usually performed by the buyer; or (c) third-party evaluations, conducted by organizations independent of the supplier and buyer. In the European Union, third-party evaluations by organizations authorized by member state governments to perform quality system audits and other conformity assessment activities to meet EU legal requirements are one way to achieve legislatively required product approvals for regulated products. Individual customers in Europe and elsewhere may also require third-party evaluations for non-regulated products as part of a contract or supplier certification program. Firms should note, however, that ISO registration certificates for non-regulated products obtained in one EU member state may or may not currently be accepted in other EU countries.

All ISO standards, including the original ISO 9000 series, must be reviewed, and revised or reaffirmed, at least once every five years. Minor revisions to the original ISO 9000 series (Phase I revisions) were published in 1994. Major revisions (Phase II revisions) are scheduled to begin in 1997.

Source: *International Trade Forum*, CompuServe Information Service.

Export quality control and standards - The issue of export quality control and standards is becoming increasingly important for the fisheries industry in Suriname, especially since fish product standards were initiated in January 1995 by one of Suriname's major markets, the European Union. The Fisheries Department is currently developing a training program with technical assistance support provided by the European Union that will enable processing plants to have the International Standards Organization (ISO) 9000 certification (see Box 8.3). In May 1996, legislation for export quality control was lacking in Suriname, although a concept paper had been presented in draft form to the Council of Ministers.

Regulation of Landings - Linked to the lack of quality control and standards is the common practice of fishermen landing their catch at unregulated sites. Such lack of regulation and overseeing has important health and standards implications for fish being sold on both the domestic and export markets. Another direct effect of the lack of regulation is that landing statistics for the industry are rendered unreliable.

Regulation of Fishing in Coastal Waters - The lack of regulation of fishing in coastal waters also impacts negatively on the competitiveness of the fisheries industry in Suriname. Although the exact number of unlicensed vessels is unknown, it is widely recognized that illegal fishing is a common practice in Surinamese waters.

8.5.4 Enhancing the Competitiveness of the Fisheries Industry

If the fisheries industry is to realize its full potential, policy initiatives must be taken by the government to improve its international competitiveness. Specifically, it is recommended that:

- Consideration be given to the privatization of SAIL and CEVIHAS.
- Legislation on export quality and standards for fish products be finalized and implemented, which would respond to the quality demands of Suriname's major export markets.
- Additional manpower be designated to regulate landings through the reallocation of government resources to avoid increased costs, which would result in more accurate statistics.
- Additional manpower also be designated to patrol the coastal waters of Suriname through the reallocation of government resources to avoid increased costs, which would ensure that legal fishing by non-Surinamese boats is enforced.
- The Surinamese fishing industry be targeted for export promotion policies, such as export guarantee and insurance schemes.

8.6 Fruits and Vegetables

8.6.1 Industry Structure

Both fruits and vegetables are considered to be high-value crops having export potential. The total area planted for both crops remained fairly steady during 1990-94, with an annual average area of about 2,400 hectares being planted for fruits and a slightly lower acreage (2,200 hectares) being planted for vegetables. In contrast, the yields for both types of crops varied from year to year. In the case of fruits, yields registered 9.6 tons an acre in 1994 compared with 8 tons an acre in 1992; the average annual yield for fruit during 1990-94 was 8.8 tons an acre. The yield for vegetables was recorded at 15 tons an acre in 1994, compared with 17 tons an acre four years earlier.

The industry is characterized by smallholder production, with approximately 5,500 producers operating only part of their land on a part-time basis (FAO, 1996). According to ICAD (1996), nearly all production of vegetables such as potatoes and beans is undertaken by smallholders, and 73 percent of the production of multi-annual fruits is undertaken by that type of producer. Usually, producers of vegetables have some involvement in other agricultural activities such as livestock and fruit crops, whereas fruit producers are usually involved in only that activity. Parastatals are also operating in this sub-sector, namely Alliance in fruits and Katwijk and the Suriname Agriculture Organization in vegetables. Citrus production is dominated by oranges, while vegetable production

is much more diverse. Examples of vegetables produced in Suriname include tomatoes, cabbage, french beans, string beans, tanja leaves, chinese cabbage, eggplant, cucumber, hot pepper, pumpkin, gourd and okra.

Despite the erratic export performance of fruits and vegetables during the last few years, Surinamese producers are confident that export opportunities exist. Specifically, producers are attempting to penetrate markets for vegetable exports in the Netherlands, which is considered to be an 'ethnic market', the United Kingdom and CARICOM. It is expected that West Indian cherries and passion fruit can be exported to French Guyana and the Netherlands as well as being used for domestic fruit processing industries.

8.6.2 Factors Influencing the Competitiveness of Fruits and Vegetables

Production Costs - Box 8.4 compares the production costs for a private citrus processing company located in Paramaribo during the last two years. Overall, costs increased as a percentage of sales between 1994 and 1995, leaving the company with a pre-tax profit of 13 percent in 1995 and 27 percent in 1994. In both 1994 and 1995 raw materials and packaging costs represented the highest cost, which is likely due to the need to import many of the packaging materials required in fruit processing, especially for those of non-standard sizes (for example, hot peppers and watermelons). Personnel costs represented the second highest cost in both years. Important changes in costs also occurred in the period under review. For example, expenses increased for utilities and cold storage and decreased for maintenance and general costs.

Box 8.4
Profit and Loss Statement for a Citrus Processing Company Operating in Suriname

	1995		1994	
	Sf	% of sales	Sf	% of sales
Total Sales	**136,680,883**		**41,702,804**	
Costs:				
Raw materials and packaging	41,623,531	30%	10,050,311	24%
Personnel	41,238,374	30%	7,456,807	18%
Utilities	9,332,933	7%	1,830,775	4%
Maintenance	3,399,717	2%	2,349,093	6%
Transportation	2,831,165	2%	236,802	1%
Export costs	1,143,991	1%	1,919,587	5%
Cold storage	8,268,692	6%	–	0%
General costs	6,527,582	5%	4,838,094	12%
Interest	585,410	0.4%	8,441	0%
Depreciation	4,525,050	3%	1,807,349	4%
Total Costs	***119,476,445***	***87%***	***30,497,259***	***73%***
Pre-Tax Profit	**17,204,438**	**13%**	**11,205,545**	**27%**

Regulation of Chemicals - Both the use of pesticides and the quality of pesticides available on the local market are currently unregulated in Suriname, which have an impact on the competitiveness of fruits and vegetables vis-á-vis similar products in competing countries. Pesticide use will soon be monitored in the European market. Vegetable producers have been known to apply an excessive amount of chemicals to improve both quality and yield. Likewise, the quality of chemicals and fertilizers that are available to producers is inconsistent, which is due to the lack of standards and technical information.

Marketing Skills - The small-scale producer in Suriname usually lacks the information and marketing skills to expand existing markets or penetrate new ones. Because of this constraint, fruits and vegetables are usually marketed by using local contacts in the major export markets, which often take a considerable amount of time to develop. Exporters also rely on informal arrangements that are often executed without a contract. Small size producers lack the funding to travel overseas and to undertake market research studies to explore new possibilities. Moreover, neither the Ministry of Trade and Industry nor the Ministry of Agriculture provides such technical assistance to producers.

Transportation Costs and Capacity - While details on air freight were provided in Chapter 4, it is important to note in general terms that this cost is significant for many small producers who depend on this mode of transportation to ship produce to Europe. According to the Ministry of Agriculture (MOA, 1995), this cost led to the demise of citrus exports in the early 1990s. The small production size is often insufficient to fill containers that are being shipped by sea.

Size of Surinamese Productive Capacity - Due to the limited productive capacity of Surinamese fruit and vegetable producers, buyers often experience irregularities in the supply of fresh products. This irregularity often causes processors to operate at below-capacity levels, and buyers in foreign markets to search for alternate sources of supply. Another problem inherent in the small size of the Surinamese market is that if production were to expand, the additional produce coming on-line runs the risk of being excessive for the local market while possibly being non-competitive in the export market.

Plant Propagation - Even though both state-owned and privately-owned nurseries operate in Suriname, no certification is required. The result is lack of uniformity and quality in plant propagations. Many private companies are solving this constraint by hiring trained personnel to create their own research departments; this solution, however, is not usually available to most small-scale farmers because of the high costs.

8.6.3 Enhancing the Competitiveness of Fruits and Vegetables

Taking into consideration the overall small size of the fruit and vegetable industry in Suriname, the following actions are recommended to improve this sub-sector's competitiveness in international trade:

- Establish standards and quality control for chemical inputs to assist producers in meeting requirements of the EU market and to produce a healthier product.

- Improve access to information and marketing skills by promoting fruits and vegetables as targeted sub-sectors at the STPO, and by promoting the availability of the CARICOM CARTIS information system and the Internet, all of which can be accessed in Suriname.

- Promote competition in air transportation by allowing more foreign companies to offer their services in Suriname, and by promoting the idea of cooperatives to facilitate the combining of shipments for volume requirements.

- Institute certification standards for both state and privately owned plant nurseries, which would improve uniformity and plant propagations.

8.7 Livestock

8.7.1 Industry Structure and Production Systems

The livestock sector in Suriname encompasses beef cattle, dairy, pig, poultry and feed. Of these sub-sectors beef (and beef products) is the only one considered to have export potential and to be able to compete in international markets. Moreover, all other sub-sectors are heavily dependent on imported inputs which reduces the ability of local producers to generate significant value-added for products such as poultry or pork directed to competitive world markets (London Group, 1993).

The herd size of beef cattle in Suriname is difficult to estimate because official statistics combine all types of cattle, so that no differentiation exists for beef and dairy cattle. Also, the most recent Agricultural Census undertaken in 1981 fails to recognize farm type, size or purpose of production. Nonetheless, the results of recent data collection by the Livestock Department indicate that total herd size expanded since 1985 and was recorded at 96,675 head in 1993. The majority (about 60 percent in 1992) of the farms are located in the Wanica district; other districts having a notable number of herds are Nickerie (with about 14 percent of total herds in 1992) and Para and Commewijne (each recording about 8 percent of total herds in 1992). According to the London Group, which carried out a comprehensive study on the livestock sector in Suriname, most farms have the dual purpose of producing beef and milk, depending on price levels (London Group 1993, 1994). Low productivity dairy cows and bulls are also used for beef production on a regular basis.

The average carcass weight fluctuated during the last decade, while the total weight followed an upward trend until 1991, when it began to decline. For example, during 1985-95, the average weight peaked in 1986 at 163 kg and dropped to 121 in 1992; in 1995 the average weight had recovered to 151 kg. Likewise, the total weight of beef peaked at 2,667 tons in 1991 and gradually declined to its 1995 level of 1,550 tons. The downward trend in overall production probably reflects

the shift in domestic demand towards less expensive alternate meats such as poultry, whose prices fell considerably with the liberalization of that sub-sector in 1994.

8.7.2 Factors Influencing the Competitiveness of Livestock

Dependency on Feed Imports - The livestock and livestock-related sub-sectors are heavily dependent on feed, most of which are imported in the form of maize concentrates and soybeans and are milled at the feed factories. According to officials from the Livestock Department, the cost of feed currently accounts for between 60 and 70 percent of total production costs, especially for poultry. Most feed produced from domestic products is derived from rice milling, and lacks the nutritive standard required to reach optimal production because the composition of feed is not regulated. In recent years, the lack of foreign exchange and import restrictions resulted in a reduction in total feed production and a decrease in quality, which limited competition among feed compounders. Subsequently, prices rose markedly for imported inputs, which led compounders to further reduce quality standards and limit the available supply in the market. As a response, several producers began to import feed mixers to make their own feed, although this was limited mainly to large producers (London Group, 1993). The role of feed mills in the livestock industry nonetheless remains crucial to beef production and to the potential for exports. In particular, the lack of quality and standards for feeds will have an impact on beef production, and consequently, on the competitiveness of this product.

Slaughterhouse facilities - Perhaps the most important constraint that hinders the competitiveness of beef is the lack of adequate slaughterhouse facilities and the low phytosanitary standards which result in the inability of beef to be exported. The Department of Livestock is responsible for providing and maintaining the slaughterhouse facility, and for meat inspection and the enforcement of hygiene regulations. The employment of the facility's staff and its operations are the responsibility of licensed butchers. This arrangement, as highlighted by the London Group (1993), often causes a conflict of interest within the Livestock Department regarding meat hygiene. Operations are further complicated by the different types of slaughter required by religious beliefs.

Limited foreign market access - The outlet for Surinamese beef exports is limited not only because of the issue of quality, but also because of the high transportation costs to European markets. According to the London Group (1993), the Livestock Section of the MOA identified potential markets on the basis of high imports and prices paid as Aruba, French Guyana, Guadeloupe, Martinique, the Netherlands Antilles and Trinidad and Tobago; transportation to these markets would presumably be lower than to Europe. However, it appears that French beef suppliers enjoy a preference in the overseas territories of France and that French fresh or chilled beef commands a reasonable price because of high EU quality standards. Nonetheless, as the London Group points out, current market signals indicate that Suriname should consider targeting markets where quality standards are lower, such as the small Caribbean islands, and that an investigation should be undertaken on the possibility of developing processed meats as a viable export industry.

Drainage - Poor drainage, which is characteristic of the agricultural sector in general, also impacts on animal health, cattle improvement and the quality of grassland. According to the London Group (1993), the drainage system near Paramaribo, where the old dairy farms were once situated, is in much better condition than the system presently used in Wanica. Lack of maintenance has also further reduced drainage capacity, which has a direct negative impact on grassland production. Despite actions recently taken by producers in certain livestock producing areas to improve grassland, flooding and the poor design of drainage systems has resulted in failed efforts.

8.7.3 Enhancing the Competitiveness of Livestock

Given the current state of the livestock sector in Suriname, substantial changes in the direction of policy, technical assistance and investment would be needed to bring Surinamese beef up to a level where it could compete in international markets, and are reflected in the following recommendations:

- Establish a Bureau of Standards and implement quality and nutritive standards for livestock feed, thereby increasing producer confidence in feed mills and improving the quality of the export product.

- As part of the design of a new agricultural census, clearly define queries on farm type, size and type of livestock product produced and purpose of production, thereby providing accurate statistics to be used in policy making.

- Provide technical assistance to improve the drainage system and implement a regular maintenance schedule, which would improve grasslands and result in increased productivity.

- Improve slaughterhouse facilities irrespective of whether or not a beef export trade can be developed to ensure that phytosanitary measures are implemented and health regulations are carried out. Even though a slaughterhouse that is of EU or United States standards might not be achievable, quality standards are necessary if beef exports are to be considered.

- Undertake research on alternate sources of feed, such as rice waste (broken rice and rice bran) as a component for feed to supplement maize.

- Upgrade veterinary services and implement extension services on a regular basis in the livestock sub-sector, which would reduce the incidence of animal diseases and improve competitiveness.

8.8 Summing Up

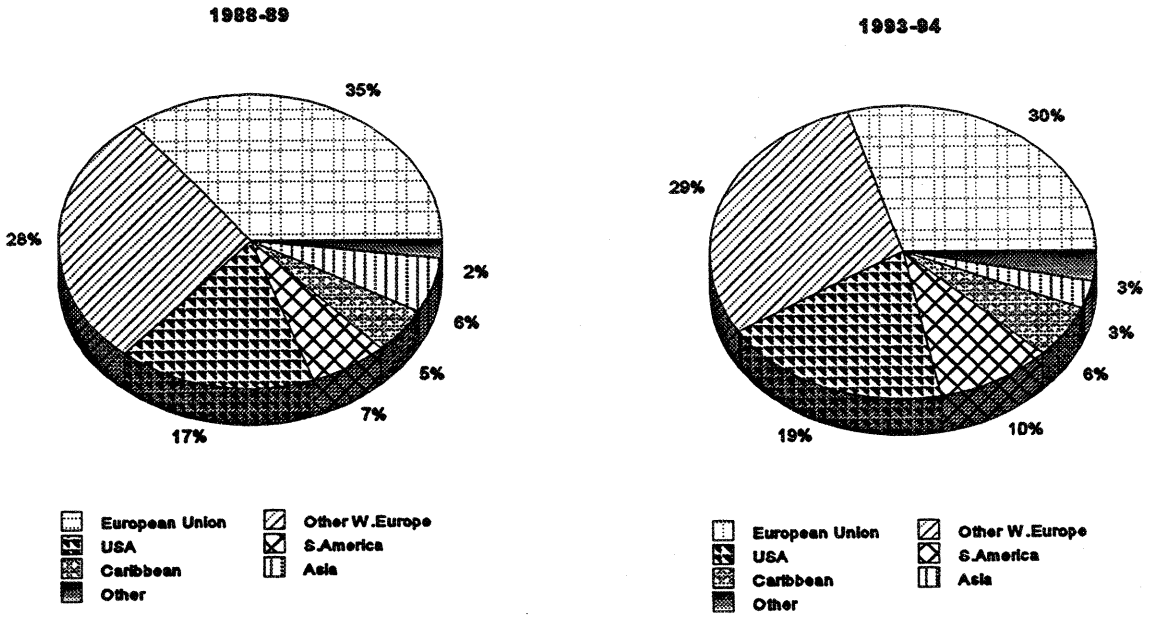
Based on the information available on production costs , quality of output, support services and government policies, it appears that rice, bananas, beef, fruits and vegetables and fisheries have the greatest export potential. While policy initiatives and technical assistance should be directed at improving the competitiveness of specific sub-sectors, certain needs are common across the sub-sectors: (i) deregulation and a reduction of direct state intervention in agricultural production, (ii) the upgrading of infrastructure, and in particular, that of drainage and irrigation and the road network; (iii) the implementation of quality and health standards for inputs and processing facilities by a newly established Bureau of Standards; and (iv) improved access to market information. Palm oil is the only product under review that does not appear to be competitive or to have the capacity to be exported competitively.

9. The Changing Export Markets

9.1 Geographic Destination of Exports

The geographical distribution of Suriname's exports has experienced significant changes in the last several years (see Figure 9.1). The United States and South American markets, and especially Brazil within that region, have become important trading partners, while trade with the European Union declined especially with the United Kingdom and Germany. The United States now absorbs about 20 percent of Suriname's exports, compared with 17 percent in the late 1980s. Suriname's share of exports to Asia declined between 1988-89 and 1993-94, while no significant changes were recorded in the Caribbean and non-EU Western European markets. In other markets, the former Soviet Union now absorbs more than 2 percent of Suriname's exports, compared with slightly less than one percent in the late 1980s. These changes underscore the importance that market access conditions in the United States, South America, and possibly the former Soviet Union, are having on Suriname's exports.

Figure 9.1
Geographic Destination of Suriname's Total Exports
(percent)



Source: Appendix Table A.5.

9.2 Unit Values of Exports

Table 9.1 presents the results of calculations of the trend growth rate and instability of unit trade values for Suriname's main exports during the period 1980-94.[16] The results reflect the general downturns in prices of both bananas and rice at the beginning of the period and the overall sharp price rises that occurred in the mid-1980s. The magnitudes of these changes during the last 15 years do not necessarily suggest similar changes in the future, but they do point to the direction of the price movements and the relative magnitude of those movements between the regulated EU market and those of the unregulated world market.

Table 9.1
Average Annual Price Rises and Year-to-Year Fluctuations of Suriname's Major Commodity Exports, 1980-94

		Trend	Instability
Rice	Suriname	1.3	0.8
	European Union	2.3	1.0
	World	-1.9	1.5
Bananas	Suriname	4.4	0.8
	European Union	2.6	0.6
	World	2.1	0.4

Source: Calculated from trend-fitted estimates of individual price series in 1980-94, using data presented in Appendix Table A.4 and COMTRADE data base.

In general, export price movements of rice and bananas have outperformed those of the world markets for those products. This performance indicates the extent to which the preferential arrangements offered by the European Union have provided Suriname with both favorable growth in earnings and stability for these two major export products. In rice, Suriname's export prices have risen at an average annual rate of 1.3 percent, compared with the negative growth in nominal price movements in the world market for that product. The EU market provided Suriname with the greatest improvements, and registered 2.3 percent annual growth for rice prices. Banana import prices in the European Union rose faster than those in the world market, although at a slower rate than those in the Surinamese market. In general, the world market for bananas is more stable than that of rice since Ecuador has been able to adjust its production when natural disturbances affect the flow of supplies in other Latin American countries.

9.3 Trade Diversion under CARICOM

As its economy begins to open up Suriname faces important questions in the integration choices it is pursuing and those that it could consider in the future. Although Suriname is interested in stimulating trade with other countries in Latin America and the Caribbean, it remains relatively isolated in terms of its regional or bilateral arrangements other than that with CARICOM. To date, there is little, if any, empirical work available on the impact of Suriname's accession to CARICOM,

[16] The calculations of long-term price movements are based on geometric averages derived from fitted trends using 1980-94 data, rather than simple arithmetic averages of year-to-year movements which tend to bias the results when large positive or negative changes occur in the series.

and on its possible future membership in other trade arrangements, such as the Latin American Integration Association (LAIA).

While empirically assessing the overall impact of joining CARICOM or LAIA in terms of changes in revenue resulting from reduced import tariffs and possibly increased imports and exports is beyond the scope of this report, it is possible to assess the compatibility of Suriname's integration with member countries of those two regional arrangements --an analysis that can also be applied in future work to other bilateral and multilateral agreements which Suriname could consider. The so-called trade compatibility indices based on the work of Michaely (1996) and applied to the case of Bolivia when considering membership in MERCOSUR and the Andean Group by Rajapatirana (1995) provide a good indication of the potential for trade diversion under preferential trade arrangements. Trade diversion occurs when there is a substitution of production within a group of countries for a less expensive source of imports from outside the group due to the cost differential created by the preferential margin. The trade compatibility indices assess the home country's imports (or exports) with the potential partner-country exports (or imports).

In the present context, trade compatibility indices were calculated for Suriname to assess the compatibility of its agricultural imports (and agricultural exports) with CARICOM and LAIA agricultural exports (and agricultural imports). The interpretation of the indices is as follows: they are zero when trade flows are not compatible, implying that trade flows are highly dissimilar; they are one when trade flows fully match, implying perfect compatibility or identical flows. In the Suriname-CARICOM case, the interpretation means that if the export-import index were to approach one, Suriname's exports would exactly match CARICOM's imports. Likewise, if the import-export index were to approach zero, Suriname's imports would be dissimilar to CARICOM's exports.

Table 9.2
Indices of Trade Compatibility, 1988-91 Avg.

	CARICOM Imports	LAIA Imports
Suriname's Exports	0.19	0.13
	CARICOM Exports	**LAIA Exports**
Suriname's Imports	0.50	0.46

Notes: Computed on basis of 2-digit SITC Rev. 1 data.
Index for CARICOM based on data for CARICOM states that are members of the IDB (i.e., Bahamas, Barbados, Belize, Guyana, Jamaica, Suriname, and Trinidad and Tobago).
LAIA is comprised of Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Paraguay, Peru, Uruguay and Venezuela.
The index to assess the compatibility of Suriname's (country *i*) exports with CARICOM and LAIA's imports (country *k*) is defined as follows: $S_x=1-((\Sigma|x_i-m_k|)/2)$; likewise, the index to assess the compatibility of Suriname's (country *i*) imports with CARICOM and LAIA's exports (country *k*)is defined as follows: $S_m=1-((\Sigma|m_i-x_k|)/2)$.

Source: Based on calculations using United Nations, COMTRADE data base.

To the extent that data are reported correctly by the General Bureau of Statistics and that trade patterns have not experienced sudden changes, the indices presented in Table 9.2 above provide an indication of the scope of trade expansion following the implementation of a preferential agreement. The results show that the export/import indices are rather low, indicating

that there is a low likelihood of diverting exports of Suriname to the 'rest of the world' to the importing regions of CARICOM and LAIA. In contrast, the compatibility import/export indices suggest that the two regional agreements would have a good likelihood of diverting imports of Suriname from 'the rest of the world' to CARICOM and LAIA member countries. Based on the indices, the choices for Suriname's regional integration would rank CARICOM first and LAIA second.

9.4 Implications of Preferential Market Phase-Outs

The likely phase-out of the preferential markets for banana and rice exports to the European Union suggests that Suriname could experience large foreign exchange losses in the next decade unless trade and investment policies are adopted to support improved competitiveness and agricultural diversification that would compensate for the predicted fall in rice and banana revenues.[17] Estimates of the anticipated shortfall that would accompany the removal of preferential arrangements illustrate the magnitude of possible foreign exchange shortfalls. The calculations are based on the export supply response to projected price changes, as well as the anticipated earnings decreases resulting from the price changes themselves.

Although the export supply of Suriname's rice and bananas is mainly influenced by producer incentives to meet EU quotas, it also has a significant response to constant dollar price movements, especially in the case of rice, whose exporters choose between routes depending on the price. For rice, the price elasticity of export supply is 0.4 in the short run and 1.3 in the long run, indicating a relatively high responsiveness of producers to changes in prices; for bananas, the price elasticity of export supply is 0.8 in both the short and long run, which also suggests a relatively high price responsiveness of banana producers.[18] [19]

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[17] Even though at the time of report preparation Suriname was shipping rice through the LGO route under circumstances different from those offered by the Lomé Convention, this type of analysis is useful to estimate the shortfalls in revenues generated by rice exports because past experiences suggest that Suriname will likely export rice directly to the European Union if the price for that product were higher in that market than along the LGO route.

[18] By way of contrast, Lord (1991) found the price elasticities of export supply for other Latin American banana producers to be 1.5 in the short run and 3.5 in the long run. The large price elasticities for this product reflect Ecuador's strong responsiveness to changes in price.

[19] The estimated equation for rice exports of Suriname is as follows:

$$\ln X_t = 1.2 + 0.39 \ln P_{t-1} + 0.69 \ln X_{t-1}$$
$$(1.0) \qquad (3.1)$$

where X is the export volume of rice, and P is the unit value of rice exports in constant US dollars. The R^2 is 0.53. Numbers in parentheses are t-statistics. The equation was estimated using data for the 1981-94 period.

(continued...)

Figure 9.2 illustrates the resulting convergence of EU rice and banana prices with unregulated world market prices in the second half of the next decade. For purposes of quantifying the potential impact on Suriname's export revenues of the current plan to eliminate rice and banana quotas to ACP countries by the year 2000, it has been assumed that the phase-out of the EU quotas will take place over a nine-year period beginning in 2000. The substantially lower export prices will likely cause Suriname's producers of rice and bananas to reduce output, thereby further lowering foreign exchange earnings from those products. As an example, in 1994 the preferential EU prices for both of these products were about twice as high as the world market prices.

Figure 9.2
Constant US Dollar Prices of Rice and Bananas, Actual 1980-94 and Forecast 1995-2010

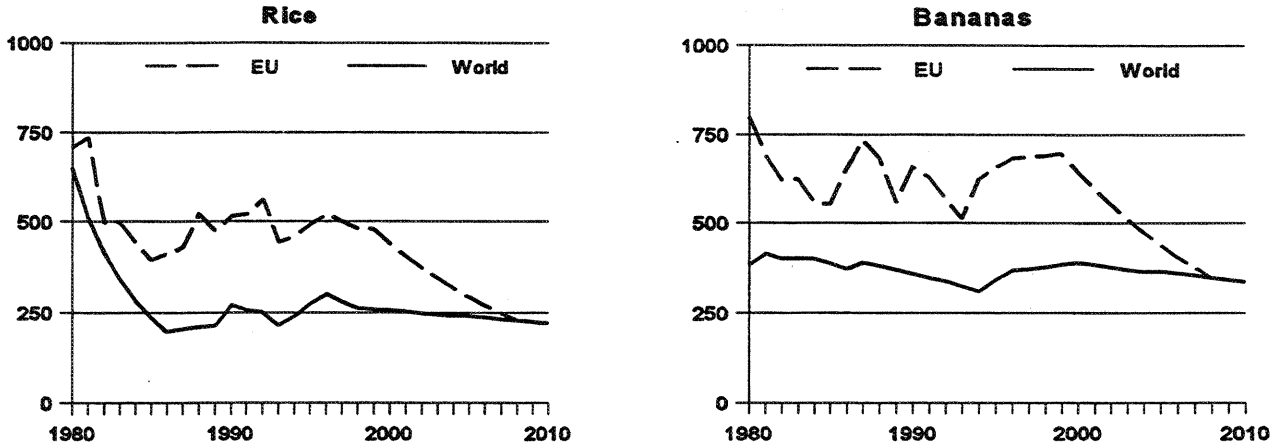

Table 9.3 shows the anticipated short-falls in earnings resulting from the phase-out of the preferential trade arrangements for rice and bananas. All values are in 1990 US dollars. In rice, Suriname would suffer an $8.2 million annual shortfall in export earnings from the loss of the EU quota for Suriname in the first half of the decade (2000-2005), which would increase to $18 million a year in the second half of that decade. In bananas, Suriname would also experience a large decrease in export earnings. In the first half of the decade, the shortfall would average $3.1 million a year, and it would then grow to $5.4 million in the second half of the decade. Together, the shortfall in rice and bananas would equal $11.4 million a year during 2000-2005 and $22.7 million a year during 2006-2010.

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[19] (continued...)

For bananas, the equation was estimated using data for the period 1983-93 and is as follows:

$$\ln X_t = 5.8 + 0.80 \ln P_t$$
$$(1.8)$$

where X is the export volume of bananas, and P is the unit value of banana exports in constant US dollars. The R^2 is 0.34. Numbers in parentheses are t-statistics.

Table 9.3
Projected Shortfall in Suriname's Agricultural Export Earnings Resulting from Phase-Out of EU Preferential Arrangements (constant 1990 US$)

	1995-1999 Average	2000-2005 Average	2006-2010 Average
RICE			
Under Preferential Scheme			
Volume (mt)	79,113	76,094	72,184
Export price in 1990 dollars (US$/mt)	389	367	352
Value (US$'000)	30,790	27,943	25,430
Phase-Out of Preferential Scheme			
Volume (mt)	79,113	67,717	42,483
Export price in 1990 dollars (US$/mt)	389	286	189
Value (US$'000)	30,790	19,686	7,410
Average Annual Difference in Export Earnings (constant 1990 US$'000)	0	(8,258)	(18,020)
BANANAS			
Under Preferential Scheme			
Volume (mt)	30,007	30,229	29,297
Export price in 1990 dollars (US$/mt)	292	294	283
Value (US$'000)	8,752	8,896	8,291
Phase-Out of Preferential Scheme			
Volume (mt)	30,007	24,798	18,179
Export price in 1990 dollars (US$/mt)	292	230	156
Value (US$'000)	8,752	5,786	2,851
Average Annual Difference in Export Earnings (constant 1990 US$'000)	0	(3,109)	(5,441)
TOTAL OF RICE AND BANANAS			
Export Value under Preferential Schemes	39,541	36,839	33,721
Export Value under Phase-Out of Prefer. Schemes	39,541	25,472	10,947
Average Annual Difference in Export Earnings of Rice and Bananas (constant 1990 US$'000)	0	(11,367)	(22,774)

Source: Calculations by the author. See Appendix Tables A.9 and A.10.

Table 9.4 presents calculations for the effects on prices, volumes, cross-prices and values of the eventual removal of the EU quota system for the entire period (2000-2010). Removal of the EU quota system would reduce rice export earnings by 46 percent of their projected level, and banana earnings by 48 percent. Together, the shortfall represents about 5.3 percent of the constant dollar value of Suriname's total export earnings in 1994. Likewise, the price and volume effects are also important for both products: the effect of the phase-out of the EU quota system implies a 32 percent annual decline in earnings associated with lower prices. The effect on volume for both products is similar, although that for bananas is slightly higher than that for rice.

Table 9.4
Estimated Annual Impact on Suriname's Export Earnings from 9-Year Phase-Out of EU Preferential Quota System, 2000-2010
(millions of constant US$ and percent)

		Mill. US$	Percent
Rice	Price Effect	-8.7	-32.4
	Volume Effect	-6.4	-23.9
	Cross-Price Effect	2.7	10.1
	Value Effect	-12.4	-46.2
Bananas	Price Effect	-2.7	-31.8
	Volume Effect	-2.3	-26.6
	Cross-Price Effect	0.9	10.0
	Value Effect	-4.2	-48.4

Notes: The calculation of the components making up the various types of effects is as follows:

Let P_1, Q_1 and V_1 represent the respective price, quality and value of rice and banana exports under the current EU quota system, and P_2, Q_2 and V_2 represent the respective price, quality and value, of rice and banana exports without the EU quota system. Then

Price effect = $Q_1(P_2 - P_1)$
Volume effect = $P_1(Q_2-Q_1)$
Cross Price effect = $(P_1 - P_2)(Q_1 - Q_2)$
Value effect = $Q_1(P_2-P_1)+P_1(Q_2-Q_1)+(P_1-P_2)(Q_1-Q_2)$

Source: Calculated from data presented in Appendix Table A.10.

The shortfall in earnings would impact negatively on the Surinamese economy, and especially on the two sub-sectors of rice and bananas. Because improvements in Suriname's export competitiveness will require several years to implement, and because diversification programs will require a long-term strategy, policies, programs and institutional support mechanisms should be adopted in the near future to prevent such a shortfall in earnings from the loss of preferential arrangements.

PART V

GOVERNMENT PLANS AND DONOR ACTIVITIES

10. The Development Plan

10.1 Overview of the Multi-Annual Development Plan

The current Multi-Annual Development Plan (MADP) lays out the Government of Suriname's economic strategy for the period 1994-98. It differs considerably from the previous plan's focus on democratization in its emphasis on economic development. Among its major concerns are the marked decline in economic activity, unemployment and the erosion of the Surinamese currency as a consequence of high inflation. To address these issues, the 1994-98 MADP aims to: (I) change the focus of trade from import to export-oriented activities; (ii) advocate economic order by providing institutional strengthening to the public sector and promoting private sector development; (iii) promote rational decision-making processes that rely on political stability, appropriate investment laws and sound fiscal and foreign exchange rate regimes; and (iv) develop and sustain a development financing policy to solicit project funding from donors (Government of Suriname, 1993).

The 1994-98 MADP budget is expressed in US dollar equivalents and amounts to approximately US$960 million, of which the foreign exchange component is US$800 million. The budget break-down is as follows:

- Approximately US$380 million (or 40 percent of the total budget) is allocated to the production sectors.
- Approximately US$200 million (or 20 percent) is allocated to the social and public administration sectors.
- Approximately US$380 million (or about 40 percent) is allocated to infrastructure, of which US$100 million has been earmarked for the development of hydroelectric power.

The budget is intended to finance about 45 core programs whose overall objective is to carry out the MADP's strategic development goals. The core programs include investments, technical service support and training, and legal and administrative measures. Inputs are to be financed through banking institutions and donors.

As result of the implementation of the core programs, the following socioeconomic effects were expected to take place during the timeframe of the MADP:

(i) Real GDP would grow by 1 percent in 1994 and by 3 percent in the following year;

(ii) 13,000 new jobs would be created by 1998 in the private sector in parallel to a 5 percent annual decrease in government jobs and an 8 percent expansion in industry-based jobs.

(iii) Purchasing power would decline by 4 percent in 1994 and increase by 15 percent annually in 1995-98.

(iv) The budget deficit would move to a surplus by the end of the plan period.

(v) A uniform exchange rate would be introduced for all export-oriented activities in mid-1994 and net currency reserves would accumulate to the international standard of three months of import coverage by the end of 1998.

Currently available information on macroeconomic conditions indicates that progress towards the achievement of most of the socioeconomic goals has been made. In particular, while GDP growth contracted by 5 percent in 1994 compared with the MADP budget goal of 1 percent real growth, estimates for 1995 indicate that it grew by 7 percent, compared with MADP budget estimates of 3 percent (IDB, 1997). Although the budget deficit was turned into a surplus in 1995, it remains to be seen whether this positive development can be maintained throughout the MADP period. Likewise, a unified exchange rate was introduced in 1994 and international reserves rose to approximately six months worth of imports in 1995. However, the import coverage was achieved mainly through an increase in alumina prices, rather than through economic policy reforms (IDB, 1996). In addition, while employment figures on new jobs are unavailable, the Government has taken measures to offer support to new enterprises.

10.2 Agriculture in the Multi-Annual Development Plan

The 1994-98 MADP addresses the revitalization of agriculture in Suriname through a two-pronged strategy. During the first half of the period, the plan focuses on the rehabilitation of agricultural production, the strengthening of agro-industry and the improvement of traditional export production. In the second half, the plan will focus on the modernization of both the agricultural sector and agro-industry, and it will seek to expand non-traditional agricultural production. During the second phase, forestry, mining and industrialization will also be given priority. No quantitative or measurable goals are established in the plan, which hinders the objective evaluation of the MADP's progress.

Other MADP objectives for agriculture include stimulating exports through the enhancement of the country's comparative advantages in selected products and exploiting anticipated changes in the country's traditional export markets and regional trade agreements. As part of its strategy to achieve these objectives, the MADP provides for the upgrading of infrastructure, the strengthening of research and marketing initiatives, and improving agricultural training and educational facilities. It also calls for the commercial management of parastatal companies and, where possible, their

privatization. As a result, the role of the public sector would shift from a direct involvement in agricultural production to the creation of an environment that fosters investments and private sector development.

The MADP specifically divides its policy on agriculture into the following categories:[20] [21]

- Agricultural technical policy
- Agricultural structural policy
- Market and price policy

Agricultural technical policy aims to increase agricultural productivity by upgrading current production practices, introducing new cultivation techniques, promoting mechanization and improving water management. As part of this policy, the MADP recognizes its past emphasis on large-scale agriculture in certain sub-sectors (for example, rice, bananas and palm oil), and the lack of attention to small-scale agriculture in other sub-sectors that could be potentially important for both domestic consumption and the export market (for example, fruits and vegetables and cattle breeding). The MADP also mentions that the private sector has been largely absent in research and information activities. However, in recent years the attitude of the private sector towards taking the lead in innovation appears to have changed somewhat.

Agricultural structural policy is addressed in the MADP in terms of general agricultural structure and enterprise structure. General structure refers to infrastructure, the geographical division of enterprises, and the number of enterprises operating in agriculture. The enterprise structure relates to company size, costs of production and equipment, legal structure and the way in which property is owned or leased. Because the Government considers the enterprise structure to be the responsibility of the private sector, the MADP focuses on general agricultural structure and has as its objective its overall reform through infrastructure improvements, revisions to the land policy and changes in credit and market policies.

In infrastructure, the MADP includes activities to make more farm land available, improve drainage, water management and irrigation, and control soil erosion. Infrastructure plans also include

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[20] The remaining section of this part of the report is based on a paper presented at the National Consultation Preparations for the Special Meeting of the Conference of Heads of Governments of the Caribbean Community on Agriculture held in Paramaribo in December 1995. The paper, entitled "Supporting Measures to Guarantee the Competitive Position of Agricultural Production" was prepared by L. de La Marche, Economist of the Livestock Department in the Ministry of Agriculture.

[21] Socio-agricultural policy, a fourth area of agricultural policy, was mentioned in de la Marche's working paper. However, no details on the Government's plans for this policy were included.

the construction and improvement of roads and public utilities such as electricity, water and communications. An important part of the MADP as it relates to infrastructure is that the Government recognizes that the large number of ministries involved in infrastructure and their overlapping responsibilities require revision. Land policy plans include the reform of the 1982 legislation to make land distribution less restrictive. At the same time, the MADP states that increased costs in land use must be offset by revisions to the current rent structure. The MADP makes no mention of the sale of government land or the imposition of a land tax system to raise the needed revenues.

The credit component of the general agricultural structural policy recognizes the need to make capital available for investment and to finance operations as a means of promoting modernization in the sector. The MADP states that the most important policy instrument is the credit facility that will soon become available under the so-called IFAD loan, which is to be managed by the Agricultural Bank. Likewise, it recognizes the need to develop and implement legislative and regulatory controls for private sources of financing, such as contract production, purveyor credit and buyer's credit.

Agricultural market and price policy aims to stabilize farm prices of agricultural products, thereby stabilizing farmer incomes. Because of its implications for spending patterns and the purchasing power of the agricultural community, pricing policy is considered to be the most politically sensitive component of the overall agricultural policy because it can take the form of price controls, setting guarantee and basic prices, subsidies, production control, and regulated marketing organizations. As such, sub-sectors will be addressed on a case-by-case basis, and consideration will be given to the impact of Suriname's accession to the CARICOM market in defining the price policy for specific sub-sectors. The market and price policy also attempts to improve the financial position of the producer by strengthening the supply of inputs and the purchase of the final product. This policy also addresses education and market information, quality control and management, and legislation on animal and plant diseases and their control, with particular emphasis on exports.

11. Donor Support Activities

11.1 Coordination of Donor Activities

The Project Evaluation and Monitoring Unit of the Ministry of Planning and Development Cooperation has the overall responsibility of coordinating donor projects, and is involved in donor programs throughout the project cycle. The Unit makes important contributions at the identification, implementation and monitoring stages of donor-supported projects. Projects funded under the FAO and IICA are excluded from the Unit's activities because of the direct involvement of those organizations with the Ministry of Agriculture.

11.2 Government of the Netherlands

The Government of the Netherlands is the largest donor in Suriname's agricultural sector in terms of funding level (for details on agricultural projects funded by major donors, see Table 11.1) and is currently involved in four projects. The first project is the Smallholders Support Project, which is co-financed with the International Fund for Agricultural Development (IFAD), a subsidiary of the FAO. This so-called IFAD project aims to reverse the deterioration of production by meeting the needs of the marginal and poor rural producers and fishermen. An intermediate objective is to strengthen the organizational and operational capacity of the Agricultural Bank and the extension services provided by both the public and private sectors. The project's target groups are 4,000 smallholder producers of fruits, vegetables, milk, peanuts, fish and shrimp, and honey located mainly in the coastal region of the country, and 1,000 subsistence farmers located in the interior of the country. The IFAD project has three main components:

(i) The import of agricultural inputs and capital equipment for individual producers or producers' associations that can be obtained by credit or cash at reasonable prices and loan terms.

(ii) Institutional strengthening and project coordination for the Ministry of Agriculture, its extension services, producer associations and non-governmental associations; these institutions will be supported by staff, technical assistance, training and equipment.

(iii) Monitoring and evaluation through technical assistance, which will institutionally strengthen the Agricultural Bank as the executing agency.

Table 11.1
Donor Activities, 1996

Donor	Project Name	Project Objectives	Funding Level	Project Period	Project Phase
Government of the Netherlands	Infrastructure Improvement for Agricultural Sector	Upgrade infrastructure most urgently needed to improve agricultural sector performance.	57 million Dfl (requested) a/	4 years	Identification.
	Patamacca Palm Oil Project	Rehabilitate existing palm oil crop and create employment in the interior of the country.	US$15 million of which: US$7.5 million loan US$7.5 million grant	4 years	In preparation.
	Smallholders (IFAD) Project	(i) Provide credit line to smallholder and substinence farmers; (ii) improve extension services of Ministry of Agriculture and NGOs; (iii) provide institutional strengthening to the Agricultural Bank.	US$7.6 million of which: US$3.6 million grant US$4.0 million loan	1997-2001	In preparation.
	Agricultural Policy Improvement Project	Provide short-term technical assistance to formulate policy framework.	To be determined.	2 months	In preparation
European Union	Banana Enterprise Project	Modernize infrastructure of SURLAND banana plantation.	3 .5 million ECU grant b/	2-year supply contract	Implementation.
	National Center for Rice Research and Breeding Station	Establish a national rice research center independent of parastatals to improve rice production and export.	3.2 million ECU grant	1996-2001	Implementation.
Government of Belgium	Fisheries Program: Boskamp Project	Construct and equip ice factory in Boskamp.	US$300,000 grant	1985-96	Equipment supplied: close to completion
	Fisheries Program: Ministry of Agriculture Institutional Strengthening Project	Strengthen the Department of Fisheries in the Ministry of Agriculture.	Phase I: US$4 million grant Phase II: US$4 million grant	Phase I: 1989-93 Phase II: 1993-96	Implementation.
	Fisheries Program: Wooden Boat and Wharf Project	Construct wharf and provide line of credit to fishermen for wooden boat purchase.	To be determined.	1996-97	In preparation.
IICA	Integral Rural Development Project	Train and support farm production through demonstration projects, especially in agro-forestry; targeted at the East and Central Marowini River area and West Upper Suriname River basin.	US$925,636 grant	1996-98	In preparation.

a/ Details are unavailable on the amounts requested in loan and grant funds.
b/ Fyffes is financing an additional US$4 million to support this project.
Note: The IDB is not currently financing any agricultural projects in Suriname.

The second consists of the rehabilitation of two palm oil factories located in the region of Patamacca. The project has two main objectives: (i) to rehabilitate existing crops that cover about 600 hectares, and (ii) to create employment in the interior.

The third project provides urgently needed funds for infrastructure in the agricultural sector of the western part of the country. In Nickerie, project plans include the upgrading of irrigation and drainage canals and the reinitiation of the Multi-Purpose Corantijn Canal Project (MCP). In Coronie, the project aims to recondition a major dam; in both Saramacca and Commewijne, canals will be rehabilitated and sluices will be constructed and repaired. In Wanica, project plans include the rehabilitation of canals, the repair of pumps and installation of motor and generator-driven pumps, and the construction of sluices.

The fourth project provides short-term technical assistance to the Ministry of Agriculture to help formulate a framework for agricultural policy. The study is to be undertaken during a two-month period by four specialists in planning, agronomy, financial economics and infrastructure.

11.3 European Union

The European Union is currently funding two projects that focus on the banana and rice sub-sectors. The banana project is a supply contract for equipment and is being co-financed by Fyffes, which will also provide technical assistance in addition to irrigation and packing equipment. The project's objective is to modernize the infrastructure of the SURLAND plantation located in Jarikaba, introduce new banana varieties and improve existing quality to enable the sub-sector to compete in the world market as preferential arrangements for ACP bananas are phased out. The following six types of equipment will be supplied under this project:

(i) Monorail transportation system to move fruit from farm to packing station (example: hanging tractor system).

(ii) Packing station equipment to semi-automate fruit sorting, weighing, and spraying (examples: conveyor belt, scale, water supply system, fungicide spray system).

(iii) Soil preparation equipment to enable work in heavy clay soils (example: spading machine and tractor).

(iv) Windbreak cuttings to propagate bananas (example: erythrina fusca cuttings).

(v) Tissue culture banana plants to propagate fruit (example: tissue culture banana plants of grande naine type).

(vi) Nursery equipment to upgrade existing equipment for improved production (examples: equipped greenhouse and shade cloth for overhead irrigation system).

The overall objective of the rice project is to improve production and exports through the establishment of a national rice research center. The expected results include: (i) the production and supply of improved pre-basic seeds needed for multiplication, (ii) technical support for seed multiplication companies, and (iii) the formulation of improved technology for the production of rice. The project intends to achieve these goals through the following activities:

- Rehabilitating and equipping a rice breeding and agronomy station.
- Training local staff in rice breeding and agronomy.
- Implementing a rice breeding program.
- Assessing rice production practices.
- Providing multi-locational testing and demonstration of improved rice production practices and input applications.
- Associating rice producers and the extension service with all activities of the research station.

The European Union also helped to establish a small fisheries facility in the early 1990s. Despite the installation of cooling and storage facilities, the facility is inoperative due to water constraints, marketing problems and financial difficulty caused by the country's former exchange rate regimes. The European Union also financed an artificial insemination project in the early 1990s that appears to not be functioning well due to lack of success in the insemination process. This situation is due to the poor infrastructure of the country's road network which prevented the inseminators from arriving at the farms during the required times, as well as and the lack of training of the inseminators themselves. Given the poor performance of its previously-funded projects and the weak management of those projects by the Ministry of Agriculture, the European Union's new five-year program (1995-2000) excludes agriculture as a focal point in Suriname. Future funding for the sector will depend in great part on the performance of the two projects currently underway.

11.4 Government of Belgium

The Government of Belgium has been active in the fisheries sector since 1989 when it offered technical assistance support to the Fisheries Department of the Ministry of Agriculture. Resident fisheries biologists and specialists are establishing data bases of fisheries statistics and other information relevant to the fisheries industry; the project also provided technical assistance to support fishermen cooperatives. A third phase of the project will focus on quality control issues, the continuation of the statistical data base and a laboratory to help expand fishery exports. An important part this project is the fishery sciences training offered in Belgium to Surinamese citizens.

A second project funded by the Government of Belgium was initiated in 1990 with the construction and equipping of an ice factory in Boskamp. The second phase of that project aims to complete the piping system and is expected to make the factory fully operational by the end of 1996. The activities of a third project include the construction of a wharf and the provision of a line of credit for wooden boat purchases. The Government of Belgium is also involved in a training program at the University of Suriname where it provides instructors mainly in the Faculty of Technology and Social Science; in the last few years it has also financed more than 35 microenterprise projects in the interior.

11.5 IICA

IICA is currently operating one national project in Suriname and has proposed another. The first is the Integral Rural Development Project that aims to support and train farmers in selected Hinterland Communities in the field of agro-forestry. Project activities focus on the establishment of demonstration units. With the cooperation of the Ministry of Regional Development, the Ministry of Agriculture and agricultural NGOs, the project helps farmers produce and process cassava, rice and peanuts, and has provided training in Paramaribo for Hinterland Community leaders. The second project, for which IICA is currently seeking funding, is to promote legumes for use as a fuel source.

The Ministry of Agriculture is also involved in several regional projects sponsored by IICA. For example, IICA's Cooperative Research and Technology Transfer for the South America Tropics (PROCITROPICOS) project has the dual objectives of establishing an information network to validate technologies and providing training activities. The Development of Tropical Fruits in the Caribbean Project supports on-going activities mainly in the private sector in nursery management and intends to establish national networks for research and development of the fruit sub-sector to be used by producers, exporters and agro-processors. Other projects include: (i) a survey to monitor animal and pest diseases to facilitate trade and production throughout the Caribbean, (ii) the hemoparasite network for the Guyanas (Suriname, Guyana and French Guyana), and (iii) the collection of field data on the carambola fruit fly.

11.6 Other Donors

The OAS has been active in the past in providing support to the Ministry of Agriculture but has no projects currently operating in agriculture. In the early 1980s the OAS provided technical assistance over a two-year period in economic planning. It also provided technical assistance to undertake a study on medicinal plants, and sponsored a project on post-harvest loss, which ended in the mid 1980s.

Projects funded by the FAO with the participation of other ministries included: (i) an aquaculture research project with the University of Suriname; (ii) the cultivation of a legume to be used as firewood and animal feed; (iii) a drainage system project; (iv) a soybean research project; and (v) an on-going fellowship program which initially provided funding for training in agriculture and now mainly funds other types of technical training. The FAO is also planning to fund a rice

mechanization project in the near future. The Government of Japan, also an important donor, provided a US$3 million grant to purchase inputs for fishermen. A joint regional project to be funded by the Governments of Holland and France, and by FAO, IICA and IFAD is being discussed to eradicate fruit flies in Suriname, as well as in Brazil, Guyana and French Guiana.

PART VI

A STRATEGY FOR REVITALIZING THE AGRICULTURAL SECTOR

12. Strategy and Recommended Actions

12.1 Rationale and objectives of a strategy for revitalizing the agricultural sector

This chapter proposes a strategy for revitalizing the agricultural sector -- defined as including the fisheries and livestock sub-sectors -- in Suriname. The rationale for revitalizing the agricultural sector is to increase national income and foster the economic and social development of Suriname. Agriculture is a sector of fundamental importance to the Surinamese economy. In terms of income generation (value added) and exports, it is the second most important productive sector after mining. It has the second largest employment after the government sector. The economic health of the agricultural sector, therefore, has an important bearing on the economic and social development of the country as a whole and a revitalized agricultural sector could make a great contribution to the economic and social development of Suriname. However, the present contribution of agriculture is way below potential. Although Suriname has a comparative advantage in certain agricultural crops due to its climate and high land to population ratio, the agricultural sector has performed poorly over the last 15-20 years.

The fundamental goal of the strategy is to revitalize the agricultural sector and increase value added in the agricultural sector. It is expected that increased value added would be derived through increased production levels and greater production of higher value crops and that a revitalized sector would be associated with increased direct and indirect employment, increased exports and foreign exchange earnings, and greater rural development.

12.2 Key elements of the strategy

Any strategy to revitalize the agricultural sector in Suriname should meet at least three criteria:

(i) It should help the agricultural sector in a manner that does not negatively affect other sectors i.e. it should be non-distortionary.

(ii) It should be realistic in terms of what can feasibly be achieved, and in particular it should be fully cognizant of the severe institutional and budgetary constraints present in Suriname.[22]

[22] To some extent the budgetary constraint can be alleviated by external resources, and it is probable that a coherent, realistic, and well-designed program of support for the agricultural sector would receive ample external funding. However, the binding budgetary constraint is not capital expenditures but current expenditures: maintenance expenditures, once irrigation and drainage channels or roads have been built; and funding for adequate salaries to enable public institutions to attract and retain sufficient numbers of skilled staff.

(iii) It should help Suriname's agricultural sector adjust to the future loss of preferential trade arrangements.

The proposed strategy, therefore, is conditioned by the above criteria. It is primarily focussed on removing obstacles or constraints to agricultural development rather than trying to intervene directly to stimulate agricultural production. Implicit in this approach is the idea that the state's role would change from that of direct agricultural producer to that of a facilitator of private farmers. In this new role, the state would establish and maintain the appropriate economic, regulatory, infrastructure and institutional environment for agricultural development, leaving actual agricultural production to the private sector. This new division of labor would not only stimulate agricultural production by assimilating the dynamism of private producers but would also leave the state with greater resources and institutional capacity for maintaining an environment that is conducive to agricultural development -- a task that only the state can perform.

12.2.1 Fundamental policies

A *sine qua non* for successful revitalization of the agricultural sector is the maintenance of sound macroeconomic policies. Above all, exchange rate policy will be crucial in determining agricultural sector performance. A fundamental requirement for the agricultural sector is that the current policy of a unified and competitive exchange rate be maintained. Reversion to a multiple exchange rate system or to a heavily overvalued official exchange rate would prevent the agricultural sector from recovering and would negate other actions to revitalize the agricultural sector. More generally, a stable macroeconomic environment with low and predictable inflation, and predictable real interest rates, would also provide the macroeconomic environment most conducive to investment in the agricultural sector.

12.2.2 Short-Term Actions

For the short term it is proposed that the government focus on deregulating the agricultural sector through policy reforms. Such reforms should be a priority because they improve the overall incentive framework for the agricultural sector and therefore raise the rate of return on all subsequent actions, because they are feasible in a short time, and because they lay the basis for actions and programs that would materialize in the medium and long term. Many policy reforms can be undertaken in a very short period of time because they require only stroke-of-the-pen actions. In addition, these policy reforms could be undertaken without straining existing institutional and budgetary resources. On the contrary, since most of the reforms would entail deregulation, the reforms would actually lighten the regulatory burden on government and would free up staff time.

Deregulation Program - The deregulation program should include abolishing import and export shipment licenses and import and export operating licenses. If this cannot be done across the board, it should at least be done for agricultural products. Abolition of shipment and trade operating licenses would eliminate the excessive amount of time required to process paperwork, thereby

lowering agricultural producers' transactions costs and increasing agricultural trade. In addition, it would increase the transparency of agricultural trade. A second priority for the deregulation program should be to eliminate the foreign exchange surrender requirement. If it is judged that the surrender requirement cannot be eliminated economy-wide, it should at least be eliminated for the principal agricultural exports such as rice, bananas, and vegetables. Elimination of the surrender requirement would remove a major disincentive to agricultural exports, would provide producers with the foreign exchange necessary to import production inputs in a timely fashion, and would reduce agricultural producers' transactions costs.

12.2.3 Medium-Term Actions

In the medium term, actions could be directed at more substantive changes in the agriculture sector. Some of the actions and programs envisaged for the medium term should be initiated in the short-term phase, but would only be completed in the medium term.

Changing the role of the state in the agriculture sector - As mentioned above, an important plank of the strategy is that the state's role will change from that of direct agricultural producer to that of a facilitator of private producers. A key part of this change would be the divestment of state-owned agricultural enterprises to the private sector. This would lessen the budgetary and institutional burden on the government while enhancing the efficiency of the enterprises. Efficiency would improve because enterprises would be freer to manage themselves as they deem appropriate, because enterprises would face a hard budget constraint, and because management and employees would have a greater incentive to make the enterprises succeed. The region is rich with examples of the output and efficiency gains made by newly privatized enterprises. In neighboring Guyana, sugar output decreased by 61 percent in the 14 years following nationalization of the industry, and then increased by 87% in the two years following the establishment of a management contract with a private sector company. A number of criteria could be used to determine the appropriate sequencing of the privatization of enterprises. However, a strong case can be made for starting with those enterprises which are in viable sub-sectors, such as fisheries, and where the gains from privatization could materialize in a relatively short period of time. A longer time-frame, combined with creative privatization strategies, may be necessary for those agricultural enterprises that are in very poor condition and where the provision of employment has been the government's major reason for supporting the enterprises.

Improving agriculture-related infrastructure - The poor state of infrastructure has become an important bottleneck to the development of the agricultural sector. Improving infrastructure, therefore, will be key to facilitating greater agricultural output and reducing producer costs. The most important infrastructure needs are in drainage and irrigation, and roads, particularly in the Nickerie district. However, it will be important not only to improve current infrastructure provision but also to improve maintenance and upkeep systems. This has both budgetary and institutional implications. Regular and adequate maintenance of infrastructure will necessitate substantial recurrent funding. For this reason, among others, investments in infrastructure should be part of a

package of measures to promote the agricultural sector. Mechanisms to provide recurrent funding, therefore, must be established. These could include experiments with user fees and local maintenance. Linked to this, the administrative responsibility for infrastructure provision and maintenance would have to be clarified and simplified. One solution might be to truly devolve responsibility for agricultural infrastructure to the respective district, where it would be closer to the direct beneficiaries.

Reforming agriculture-related administration - If the government is to have the capacity to establish and maintain the appropriate economic, regulatory, and institutional environment for agricultural development, public institutions with an impact on or responsibility for the agricultural sector will have to be reformed and strengthened. Foremost among these institutions would be the Ministry of Agriculture and the Ministry of Natural Resources. Reform efforts should be directed at deciding on the Ministry of Agriculture's mission and addressing the problems of a lack of well-qualified staff and the low proportion of the ministry's budget that is available for non-staff expenditures. Ideally such problems should be addressed comprehensively throughout the civil service. In addition, such reforms could be complemented by the provision of training for technical staff and increased computerization.

Overcoming credit constraints - Systemic improvement in the efficiency of Suriname's financial sector can only be achieved through significant financial sector reforms, which are beyond the scope of this strategy and should be undertaken from an economy-wide rather than agriculture sector perspective. The scope to address financial and credit constraints within a strategy for agriculture is therefore limited. However, the provision of credit to small-scale agricultural producers would benefit from improvement in the land tenure system (see below), which would increase the ability of producers to use land as collateral for loans. In addition, it may be possible to encourage credit unions to serve small farmers. Small-scale farmers' credit unions may be cheaper, more stable, and more efficient providers of credit to small farmers, than commercial banks.

Improving quality control - Improving quality control will be important to enhance competitiveness and secure export markets. This is particularly true for the fisheries sub-sector where access to the European market will depend on ISO 9000 certification. In addition, the livestock sector would greatly benefit from improvement of slaughterhouse facilities and management and a veterinary services program. Establishment of a Board of Standards could also play a role in improving quality standards. However, measures to improve quality control have institutional and budgetary requirements, the aforementioned administrative reform and strengthening will be a necessary precondition for moving towards improved quality control.

Improving marketing, particularly of fresh fruits and vegetables - Since many fresh fruit and vegetable producers are small scale, there may be scope for the government to assist producers in overcoming constraints such as limited market information and weak marketing skills.

12.2.4 Long-Term Actions

For the long term, the key challenges relate to programs and activities that could have a positive impact on the agricultural sector but that have a long gestation period or require certain pre-conditions to met first. Four major areas that require long-term action are land management, agricultural information and research, legislative matters pertaining to the agricultural sector and coastal water patrolling.

Revising the land tenure system - Revising and modernizing the land tenure system is of fundamental importance for the agricultural sector, but cannot be achieved overnight. Therefore, although the process of modernizing the land tenure system may only be completed in the long term, it may be desirable to start the process soon after initiation of the general strategy. Revisions to the land tenure system should aim to make the system more farmer-friendly by accelerating the approval process, making the approval process more transparent, and lowering the costs of land ownership changes. In addition, the present system of land categories should be critically examined to determine whether the system deters private investment directly, or indirectly by curtailing an importance source of collateral.

Improving information and research on the agricultural sector - Improving the extent and accuracy of information on the agricultural sector will be important to facilitate policy-making and may contribute to reducing the time and cost for producers requesting land for purchase. Improving information could be done through a variety of avenues including: the execution of a new agricultural census; updating of the farmer registry; and strengthening the statistics office of the Ministry of Agriculture. It may also be possible to boost agricultural output by supporting and strengthening various agricultural research institutes, and by encouraging cross-border research collaboration with Guyana.

Developing agriculture-related legislation - Although the development of new legislation is a time-consuming and administratively-demanding process, certain legislation could be developed that would help to protect the agricultural sector from unfair competition and would help to protect the environment. Establishing anti-dumping legislation, for example, would protect Suriname's domestic market from unfair external competition while providing for greater uniformity, certainty, and transparency in the implementation of rules on anti-dumping. In addition, the establishment of regulations on pesticides would improve the quality of chemicals and pesticides used in agriculture and could curb their use, where excessive.

Improving coastal water patrolling - Coastal water patrolling could be improved by increasing the manpower and number of boats available for coastal patrolling. Although this measure would have a budgetary impact, it would reduce the incidence of illegal fishing in Surinamese waters and may increase the volume of registered fish exports.

STATISTICAL APPENDIX

Table A.1
Suriname: Gross Domestic Product
(Millions of Surinamese Guilders at 1980 constant prices)

	1992	1993	1994	1995
AGRICULTURE, FORESTRY AND FISHING	156	160	144	136
Agriculture	97	104	99	92
Paddy	36	30	30	31
Maize	0	0	0	0
Sugar	0	0	0	0
Bananas	8	8	8	8
Plantains	13	14	14	14
Cocoa	0	0	0	0
Coffee	0	0	0	0
Palm	1	1	1	0
Oranges	5	6	6	6
Grapefruit	0	0	0	0
Other citrus	1	1	1	1
Others (vegetables)	31	43	38	30
Animal husbandry	25	21	15	14
Forestry	9	9	9	10
Fisheries	25	25	21	21
MINING AND QUARRYING	138	152	177	187
Bauxite	64	63	73	68
Crude oil	74	89	104	119
MANUFACTURING	178	171	170	176
Alumina	51	49	49	52
Aluminium	18	17	15	16
Shrimp processing	19	19	17	17
Rice	9	7	8	9
Palmbunches	1	1	0	0
Sugar/alchohol	0	0	0	0
Alcohol	0	0	0	0
Wood processing	14	14	15	18
Other industries	66	65	65	65
WATER AND ELECTRICITY	135	130	122	138
Water government	2	2	2	2
Water SWM	7	7	7	7
Electricity Suralco	45	46	47	46
Electricity EBS	78	72	63	80
Electricity government	3	3	3	3
CONSTRUCTION	68	49	49	54
TRADE, REST. & HOTELS	179	113	99	150
Wholesale trade	139	87	72	114
Retail trade	29	18	15	23
Market	5	3	5	5
Restaurants	4	2	3	3
Hotels	4	2	4	5
TRANSPORT, STORAGE & COMMUN.	93	84	86	92
Land transport	19	18	18	18
Water transport	4	4	4	4
Air transport	29	17	17	20
Travel agencies	7	7	7	8
Telephone and telegraph	29	34	35	37
Post office	5	5	5	5
FINANCIAL INSTITUTIONS	271	284	297	309
Banks	131	145	161	172
Insurance	35	35	32	32
Dwellings	79	79	79	79
Commercial services	25	25	25	25
PUBLIC ADMINISTRATION	425	442	408	394
PERSONAL, SOCIAL & SERVICES	16	14	7	7
LESS IMPUTED BANK SERVICE CHARGES	120	126	149	160
TOTAL GDP	1,540	1,473	1,411	1,484

Source: ABS and IDB estimates for March 1996.

Table A.2
Suriname: Employment by Industry, 1980-1994 1/

Industry	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Agriculture, livestock and fisheries 2/	13,900	14,020	13,950	13,860	13,770	13,360	13,000	12,710	14,076	13,827	13,523	13,600	13,600	13,000	n.a.
Forestry and wood processing	3,200	3,140	3,180	3,220	2,930	2,900	2,844	1,650	-	-	-	-	-	-	-
Mining and bauxite processing	6,117	6,056	5,628	5,138	4,771	4,588	4,282	3,426	3,242	3,242	3,242	3,303	3,303	3,242	3,181
Industry	11,180	10,950	11,070	11,190	10,960	10,630	10,305	10,106	10,007	10,492	10,464	10,360	10,003	9,880	n.a.
Electricity and water	1,230	1,279	1,316	1,341	1,365	1,341	1,365	1,353	1,328	1,304	1,292	1,267	1,205	1,205	1,292
Construction	3,336	3,602	3,554	3,320	2,905	2,657	2,360	1,980	2,675	2,390	2,060	1,955	1,950	1,920	1,920
Commerce, restaurants and hotels	14,500	14,370	14,760	14,020	12,840	11,650	11,417	11,301	11,534	11,443	11,659	12,090	12,888	12,746	n.a.
Transport and communications	2,031	2,133	2,112	2,072	2,072	2,031	2,051	2,112	2,173	2,315	2,051	2,072	2,051	2,072	2,112
Banking and insurance	1,327	1,427	1,513	1,543	1,586	1,626	1,656	1,663	1,689	1,726	1,766	1,815	1,868	1,901	2,102
Real estate and property	760	764	746	730	673	688	706	694	700	628	665	678	692	710	n.a.
Government	34,846	35,404	36,839	38,185	38,695	39,710	40,625	41,164	43,842	44,083	43,445	42,816	42,697	40,652	38,552
Other services	1,979	2,118	1,979	1,920	1,979	1,959	2,019	2,058	2,098	1,920	1,920	1,939	2,118	2,177	2,216
Total	94,406	95,263	96,647	96,539	94,546	93,140	92,630	90,217	93,364	93,370	92,087	91,895	92,375	89,505	n.a.
Percentage share															
Agriculture and forestry	18.1	18.0	17.7	17.7	17.7	17.5	17.1	15.9	15.1	14.8	14.7	14.8	14.7	14.5	n.a.
Mining	6.5	6.4	5.8	5.3	5.0	4.9	4.6	3.8	3.5	3.5	3.5	3.6	3.6	3.6	n.a.
Industry	11.8	11.5	11.5	11.6	11.6	11.4	11.1	11.2	10.7	11.2	11.4	11.3	10.8	11.0	n.a.
Electricity, water and construction	4.8	5.1	5.0	4.8	4.5	4.3	4.0	3.7	4.3	4.0	3.6	3.5	3.4	3.5	n.a.
Government	36.9	37.2	38.1	39.6	40.9	42.6	43.9	45.6	47.0	47.2	47.2	46.6	46.2	45.4	n.a.
Other services	21.8	21.8	21.8	21.0	20.3	19.3	19.3	19.8	19.5	19.3	19.6	20.2	21.2	21.9	n.a.

1/ The ABS compiles two tables on employment: employment in enterprises having more than 9 employees and, because many persons have more than on job, the number of available positions. This table is a hybrid of the two; it uses data for employment in enterprises except for agriculture, where data are not collected, and the industry and commerce sectors, where a substantial amount of employment is in enterprises having less than 9 employees.

2/ After 1987, forestry and wood processing is included in the category of agriculture, livestock and fisheries.

Source: General Bureau of Statistics (ABS).

Table A.3
Suriname: Consumer Price Index, January 1992-May 1996

Year	Month	CPI Percent Change	
		Monthly	Annualized
1993	Avg.	11.6	
	Jan	10.6	233.4
	Feb	15.0	437.7
	Mar	11.9	286.4
	Apr	6.7	117.5
	May	3.6	52.3
	Jun	1.0	12.2
	Jul	10.3	223.4
	Aug	8.9	178.2
	Sep	24.5	1289.9
	Oct	23.8	1192.1
	Nov	4.8	75.6
	Dec	5.5	89.1
1994	Avg.	17.8	
	Jan	17.7	606.6
	Feb	13.6	361.3
	Mar	12.1	295.0
	Apr	13.4	354.6
	May	18.0	627.7
	Jun	16.8	547.2
	Jul	13.1	336.9
	Aug	5.7	95.3
	Sep	10.4	229.0
	Oct	18.4	655.8
	Nov	40.7	5931.7
	Dec	33.2	3005.6
1995	Avg.	2.8	
	Jan	12.5	311.5
	Feb	5.1	82.3
	Mar	3.3	48.0
	Apr	11.7	277.4
	May	10.6	233.3
	Jun	3.8	57.1
	Jul	-1.6	-17.8
	Aug	-1.5	-16.3
	Sep	-1.2	-13.7
	Oct	-2.6	-27.3
	Nov	-4.1	-39.7
	Dec	-2.2	-23.8
1996	Avg.	1.6	
	Jan	-1.6	-17.6
	Feb	3.3	48.3
	Mar	1.8	24.4
	Apr	-4.3	-41.0
	May	0.7	9.0
	Jun	0.9	11.7
	Jul	3.8	55.7

Source: ABS and IDB.

Table A.4
Suriname's Major Exports, 1979-95

Product	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Bauxite																
Value (US$ mill.)	64.5	63.0	29.4	24.9	40.7	35.9	24.7	10.6	0.3	-	-	-	-	-	-	-
Price (US$/mt)	36.5	49.6	59.1	55.5	42.5	36.2	30.6	34.7	37.9	-	-	-	-	-	-	-
Volume ('000 mt)	1,767.0	1,270.0	497.0	449.0	957.3	992.5	806.9	304.9	7.4	-	-	-	-	-	-	-
Alumina																
Value (US$ mill.)	271.8	265.5	231.0	215.8	201.5	175.6	176.2	189.7	299.7	441.0	354.1	264.0	242.0	219.7	214.9	310.0
Price (US$/mt)	204.4	227.8	221.3	188.8	183.8	138.8	131.6	141.3	183.7	305.2	240.4	182.2	159.9	154.0	155.2	195.4
Volume ('000 mt)	1,329.3	1,165.6	1,043.7	1,143.3	1,096.5	1,265.2	1,339.0	1,342.1	1,631.2	1,445.1	1,473.1	1,449.1	1,513.6	1,426.1	1,384.9	1,586.3
Aluminum																
Value (US$ mill.)	65.6	49.0	69.5	34.6	42.8	30.9	33.2	3.5	14.7	51.4	50.6	40.1	44.3	35.0	31.8	45.6
Price (US$/mt)	1,448.2	1,549.5	1,152.0	1,206.3	1,455.8	1,098.5	1,173.9	1,102.9	1,934.2	1,969.3	1,846.7	1,918.7	1,384.4	1,218.9	1,262.0	1,730.8
Volume ('000 mt)	45.3	31.6	60.3	28.7	29.4	28.1	28.3	3.2	7.6	26.1	27.4	20.9	32.0	28.7	25.2	26.3
Shrimp																
Value (US$ mill.)	18.9	40.9	42.0	36.1	36.0	31.4	44.9	44.5	31.3	32.0	42.8	37.3	48.1	36.0	33.0	33.0
Price (US$/mt)	6.1	11.1	12.7	11.6	10.9	11.2	10.9	11.2	11.5	12.8	12.9	12.2	14.6	13.0	12.7	12.7
Volume ('000 mt)	3,100.0	3,700.0	3,300.0	3,100.0	3,300.0	2,800.0	4,118.4	3,979.2	2,721.1	2,499.7	3,312.9	3,065.4	3,301.4	2,760.2	2,603.9	2,603.9
Rice																
Value (US$ mill.)	42.2	36.6	39.4	37.0	31.8	43.3	32.8	39.5	39.8	31.8	25.4	22.0	28.5	24.9	32.5	35.8
Price (US$/mt)	416.8	324.5	301.5	290.7	336.0	339.6	321.9	341.4	464.2	393.6	391.9	416.7	378.0	335.1	403.2	403.2
Volume ('000 mt)	101.2	112.9	130.8	127.4	94.7	127.5	102.0	115.7	85.8	80.7	64.9	52.7	75.4	74.3	80.6	87.9
Bananas and plantains																
Value (US$ mill.)	5.7	6.8	7.4	7.4	8.9	10.3	12.4	9.9	11.3	10.2	10.3	9.1	9.7	8.2	9.8	11.7
Price (US$/mt)	170.4	187.3	197.2	229.7	255.2	274.9	308.8	291.6	317.9	354.0	364.2	323.8	322.8	302.6	297.0	347.0
Volume ('000 mt)	33.2	36.5	37.5	32.2	34.9	37.3	40.1	34.0	35.6	28.8	28.3	28.2	30.2	27.1	33.0	33.8
Lumber																
Value (US$ mill.)	11.8	10.4	11.5	6.4	4.9	3.6	2.7	1.8	3.1	2.4	0.7	0.7	1.5	1.8	6.1	9.2
Price (US$/mt)	198.7	200.4	243.3	198.8	210.1	212.2	196.1	246.5	203.7	200.7	305.6	305.6	248.0	300.0	469.2	469.2
Volume ('000 mt)	59.5	52.0	47.2	32.4	23.2	16.9	14.0	7.5	15.4	12.0	2.2	2.2	6.1	6.0	13.0	19.5
Crude oil																
Value (US$ mill.)	-	-	-	-	-	-	-	0.9	3.8	6.1	5.9	6.2	6.0	4.4	10.1	12.9
Price (US$/mt)	-	-	-	-	-	-	-	11.2	12.4	14.7	16.1	15.1	12.7	11.1	10.2	11.7
Volume ('000 mt)	-	-	-	-	-	-	-	80.3	308.3	412.3	366.1	408.9	471.5	396.2	982.3	1,102.2
Other products	33.9	1.5	20.6	20.0	6.1	5.2	5.2	3.6	3.8	3.2	3.8	3.6	7.1	6.0	9.0	9.0
Total Exports (US$ mill.)	**514.4**	**473.8**	**450.6**	**382.3**	**372.6**	**336.1**	**332.2**	**304.0**	**407.9**	**578.1**	**493.6**	**383.0**	**387.3**	**336.0**	**347.2**	**466.8**

Source: ABS, Suriname Bauxite Institute and IDB.

Table A.5
Suriname: Total Exports by Region and Country, 1986-94 1/
('000 Surinamese guilders)

Region and Country	1986	1987	1988	1989	1990	1991	1992	1993 2/	1994 2/
North America	102,738	116,469	145,631	129,410	96,097	82,772	73,617	613,122	986,257
Canada	1,982	6,897	6	22	1	83	3	141	810
United States	100,756	109,572	145,625	129,388	96,096	82,689	73,614	612,981	985,447
Central America	562	2	159	1	0	2	614	27	824
Guatemala	–	–	–	–	–	–	–	25	5
Honduras	–	–	–	–	–	–	–	–	–
Mexico	–	–	–	–	–	–	–	2	–
Panama	–	–	1	1	–	2	614	–	1
Other C.Amer. Countries	562	2	158	–	–	–	–	–	818
Caribbean Islands	12,141	10,044	19,117	75,262	14,371	19,764	73,021	65,167	711,901
Barbados	19	–	–	5	1	–	3	119	3,555
Cuba	–	–	–	–	–	–	–	–	–
Dominican Republic	351	–	4	64	35	–	24	–	–
Greneda	392	307	42	–	–	–	–	2	–
Guadeloupe	6,017	3,401	6,372	5,070	247	223	456	778	3,708
Jamaica	–	–	40	–	–	–	1	75	–
Martinique	3,948	3,732	4,120	1,271	2,692	3,073	3,330	2,504	7,981
Netherlands Antilles	1,298	518	1,269	758	652	997	41,356	34,746	596,788
Puerto Rico	12	–	177	–	–	–	–	8	–
St. Lucia	17	–	114	–	–	–	–	–	–
Trinidad and Tobago	7	1,687	6,771	68,048	10,733	15,465	27,842	26,936	99,856
Other Car. Islands	80	399	208	46	11	6	9	0	13
South America	90,835	45,586	50,043	60,783	41,090	53,597	66,038	370,894	271,651
Argentina	–	–	–	–	–	–	–	–	–
Brazil	52,739	37,490	48,255	59,691	40,444	52,527	63,767	365,882	259,539
Columbia	–	–	39	–	–	–	9	7	79
French Guyana	2,940	2,246	1,599	944	456	604	425	3,438	6,423
Guyana	1,680	1,490	150	148	190	465	1,714	1,420	4,662
Venezuela	33,461	4,360	0	0	0	1	123	146	927
Other S. Amer. Countries	15	–	–	–	–	–	–	–	21
W. Europe (EU)	207,508	171,721	263,004	334,244	310,946	215,241	302,205	683,128	2,425,098
Belgium	1,638	3,618	3,451	1,176	46	2,590	31	1,041	9,651
Denmark	1	–	–	20	5	–	3	7	–
France	23,162	5,947	12,679	14,981	39,405	14,939	91,021	25,536	65,669
Greece	–	1,186	–	–	–	–	–	–	–
Great Britain	25,877	19,857	20,185	35,496	18,428	11,416	28,502	13,757	43,988
Italy	12,682	27	2,108	90	–	156	45	0	1,081
Netherlands	131,259	135,141	198,956	240,989	243,282	168,728	176,222	601,360	2,007,336
Portugal	–	–	–	10,181	3,391	827	3,206	24	0
Spain	787	380	–	4,696	6,217	11,514	2,760	41,017	295,104
W. Germany	12,102	5,565	25,625	26,615	172	5,071	379	387	2,269
Other EU Countries	–	–	–	–	–	–	36	–	–

(cont'd)

Table A.5 (cont'd)
Suriname: Total Exports by Region and Country, 1986-94 1/
('000 Surinamese guilders)

Region and Country	1986	1987	1988	1989	1990	1991	1992	1993 2/	1994 2/
W. Europe (excl. EU)	108,514	131,436	202,717	282,629	300,450	223,132	120,218	486,897	3,071,100
Norway	96,397	119,106	197,372	282,576	299,901	219,121	120,112	486,803	3,071,081
Austria	–	–	–	32	49	19	–	1	–
Sweden	6,343	8,440	5,337	–	497	3,992	105	–	–
Switzerland	5,774	3,890	8	21	3	–	–	93	–
Other W. Eur. Countries	–	–	–	–	–	–	1	–	19
E. Europe	0	0	0	17,381	23,460	3,640	2	0	375,232
USSR	–	–	–	–	–	3,637	1	–	375,232
Other E. Eur. Countries	–	–	–	17,381	23,460	3	1	–	–
Asia	75,474	71,006	46,164	54,167	57,156	49,952	69,899	53,542	309,748
China	–	–	–	–	5	–	5	0	901
Philippines	–	–	–	–	–	–	–	–	–
Hong Kong	8	–	36	39	52	22	30	10	–
Indonesia	–	–	–	–	–	–	–	–	–
Japan	75,466	71,005	46,128	50,422	57,098	49,922	69,818	53,513	308,847
Saudi Arabia	–	–	–	–	–	–	–	3	–
Singapore	–	–	–	–	–	1	–	–	–
Sri Lanka	–	–	–	–	–	–	–	–	–
Taiwan	–	–	–	2	1	–	–	–	–
United Arab. Em.	–	–	–	–	–	–	2	–	–
South Korea	–	–	–	–	–	4	10	17	–
Other Asian Countries	–	1	–	3,704	–	3	34	–	–
Africa	0	0	3,792	12,697	2	0	0	4	0
Guinea Bissau	–	–	–	–	–	–	–	4	–
Cape Verde Islands	–	–	–	–	–	–	–	–	–
Other Afr. Countries	–	–	3,792	12,697	2	–	–	–	–
Other Regions	–	–	–	–	1	–	–	–	–
Grand Total	**597,772**	**546,264**	**730,627**	**966,574**	**843,573**	**648,100**	**705,614**	**2,272,781**	**8,151,811**

1/ Includes re-exports.
2/ Estimated.
Source: ABS.

Table A.6
Suriname: Production Volume and Value of Selected Crops, Livestock and Fisheries 1980-84 and 1990-92

	1980	1981	1982	1983	1984	1990	1991	1992
Annual Crops								
Rice								
Volume (tons)	257,629	280,727	301,130	267,958	301,975	196,010	229,260	261,080
Value ('000 Sf)	63,634	65,409	73,475	65,650	74,890	98,005	162,775	365,512
Price (Sf/ton)	247	233	244	245	248	500	710	1,400
Maize								
Volume (tons)	290	408	211	165	375	274	185	159
Value ('000 Sf)	261	428	317	248	375	617	500	461
Price (Sf/ton)	900	1,049	1,502	1,503	1,000	2,252	2,703	2,899
Cassava								
Volume (tons)	2,956	4,676	2,571	2,659	3,760	2,450	3,058	3,517
Value ('000 Sf)	2,276	3,460	1,877	1,888	2,745	4,778	7,737	9,320
Price (Sf/ton)	770	740	730	710	730	1,950	2,530	2,650
Peanut								
Volume (tons)	210	339	344	257	485	571	414	428
Value ('000 Sf)	687	1,237	1,204	1,028	1,528	6,252	4,388	6,998
Price (Sf/ton)	3,271	3,649	3,500	4,000	3,151	10,949	10,599	16,350
Urdi								
Volume (tons)	63	100	77	68	80	96	112	112
Value ('000 Sf)	187	356	277	235	238	970	1,159	2,950
Price (Sf/ton)	2,968	3,560	3,597	3,456	2,975	10,104	10,348	26,339
Biennial Crops								
Sugarcane								
Volume (tons)	146,399	146,327	125,391	128,823	130,625	0	0	0
Value ('000 Sf)	6,916	7,661	7,700	8,000	8,112	0	0	0
Price (Sf/ton)	47	52	61	62	62	0	0	0
Bananas								
Volume (tons)	39,226	44,703	42,399	36,598	41,063	47,943	49,971	49,886
Value ('000 Sf)	10,591	13,411	13,568	12,809	16,425	28,766	27,181	27,437
Price (Sf/ton)	270	300	320	350	400	600	544	550
Plantains								
Volume (tons)	1,918	4,500	3,166	3,495	5,512	7,757	17,082	13,197
Value ('000 Sf)	1,918	3,690	2,374	2,272	2,480	13,575	25,623	38,591
Price (Sf/ton)	1,000	820	750	650	450	1,750	1,500	2,924
Perennial Crops								
Palm								
Volume (tons)	21,026	24,653	28,188	31,235	33,894	7,695	7,814	10,640
Value ('000 Sf)	2,850	3,329	3,805	4,217	4,576	2,001	2,032	5,692
Price (Sf/ton)	136	135	135	135	135	260	260	535
Coconut								
Volume (tons)	5,479	6,526	7,177	6,753	6,772	10,956	12,096	9,522
Value ('000 Sf)	822	979	1,077	1,013	880	12,599	14,503	11,426
Price (Sf/ton)	150	150	150	150	130	1,150	1,199	1,200
Oranges								
Volume (tons)	8,756	9,375	7,717	8,673	8,659	13,405	13,335	14,130
Value ('000 Sf)	4,553	4,875	4,321	4,857	4,156	15,416	19,736	30,380
Price (Sf/ton)	520	520	560	560	480	1,150	1,480	2,150
Grapefruit								
Volume (tons)	1,773	1,150	1,197	1,903	1,659	1,288	1,327	1,154
Value ('000 Sf)	461	299	311	495	332	1,996	1,539	2,308
Price (Sf/ton)	260	260	260	260	200	1,550	1,160	2,000

(cont'd)

Table A.6 (cont'd)
Suriname: Production Volume and Value of Selected Crops, Livestock and Fisheries 1980-84 and 1990-92

	1980	1981	1982	1983	1984	1990	1991	1992
Perennial Crops (cont'd)								
Other citrus								
Volume (tons)	584	606	455	540	940	1,299	1,343	1,632
Value ('000 Sf)	371	385	347	411	597	1,910	1,961	2,856
Price (Sf/ton)	635	635	763	761	635	1,470	1,460	1,750
Cocoa								
Volume (tons)	65	75	30	35	40	17	27	21
Value ('000 Sf)	169	195	78	91	104	192	357	368
Price (Sf/ton)	2,600	2,600	2,600	2,600	2,600	11,294	13,222	17,524
Coffee								
Volume (tons)	45	53	44	47	40	46	55	43
Value ('000 Sf)	486	477	286	306	260	690	825	993
Price (Sf/ton)	10,800	9,000	6,500	6,511	6,500	15,000	15,000	23,093
Livestock Slaughtered								
Beef								
Volume (tons)	1,179	1,298	1,355	1,365	1,436	2,251	2,661	2,637
Value ('000 Sf)	6,485	6,905	7,453	7,508	8,472	33,810	39,915	65,925
Price (Sf/ton)	5,500	5,320	5,500	5,500	5,900	15,020	15,000	25,000
Pork								
Volume (tons)	1,135	1,102	993	1,153	1,380	1,666	1,976	1,450
Value ('000 Sf)	3,632	3,857	3,476	4,036	6,210	21,658	6,323	34,945
Price (Sf/ton)	3,200	3,500	3,501	3,500	4,500	13,000	3,200	24,100
Goats and Sheep								
Volume (tons)	7	9	8	7	8	10	11	8
Value ('000 Sf)	52	65	61	80	90	250	330	320
Price (Sf/ton)	7,429	7,222	7,625	11,429	11,250	25,000	30,000	40,000
Poultry								
Volume (tons)	8,400	8,400	8,600	8,600	8,800	11,415	9,563	8,800
Value ('000 Sf)	25,200	25,200	27,950	27,950	30,800	109,581	142,688	171,600
Price (Sf/ton)	3,000	3,000	3,250	3,250	3,500	9,600	14,921	19,500
Local Fisheries								
Shrimp								
Volume (tons)	228	144	132	123	205	117	637	269
Value ('000 Sf)	282	200	219	214	360	878	5,105	2,827
Price (Sf/ton)	1,237	1,389	1,659	1,740	1,756	7,504	8,014	10,509
Crab								
Volume (tons)	31	37	43	33	40	52	1	27
Value ('000 Sf)	54	56	80	54	59	35	7	135
Price (Sf/ton)	1,742	1,514	1,860	1,636	1,475	673	7,000	5,000
Other Fishery Products								
Volume (tons)	2,127	2,285	2,151	2,395	2,788	3,333	7,096	13,182
Value ('000 Sf)	2,847	3,202	3,014	3,377	3,725	23,342	467,131	124,015
Price (Sf/ton)	1,339	1,401	1,401	1,410	1,336	7,003	65,830	9,408
Sea Fisheries								
Shrimp								
Volume (tons)	3,096	3,777	3,710	3,289	2,754	2,929	3,083	2,836
Value ('000 Sf)	54,641	73,916	84,180	61,413	53,609	69,359	57,128	na
Price (Sf/ton)	17,649	19,570	22,690	18,672	19,466	23,680	18,530	na

Note: Excludes vegetables, other biennial crops and other perennial crops due to lack of data.

Table A.7
Suriname: Commercial Bank Credit, By Sector
(millions of Surinamese guilders)

	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Agriculture	99.9	119.9	142.5	157.6	171.0	178.8	226.7	225.4	227.6	262.6	313.6	383.1	971.1	4762.7
Fisheries	0.6	0.9	3.5	5.6	5.9	3.6	3.2	6.9	6.6	10.2	18.0	30.8	57.3	240.4
Forestry	0.7	0.6	0.5	0.8	2.1	3.5	1.9	4.1	12.9	15.7	7.5	13.0	12.8	46.6
Mining	41.4	35.8	46.4	37.4	40.0	46.6	38.1	46.8	69.8	74.0	85.7	37.2	47.5	321.0
Manufacturing	50.8	52.6	58.3	70.3	69.7	89.1	104.0	123.5	175.4	209.3	252.8	358.2	669.1	2738.4
Electricity and water	24.3	23.6	25.1	20.0	12.6	8.5	0.0	0.0	0.0	0.0	0.0	0.0	10.8	0.0
Construction	20.7	20.2	22.6	20.2	22.6	22.9	29.0	38.8	57.1	81.0	136.0	220.8	495.6	1597.6
Commerce	197.5	189.7	156.1	154.7	157.1	179.0	223.6	346.6	457.6	546.3	856.4	1125.3	2376.7	5893.4
Transport and communications	10.5	12.0	14.4	16.2	15.0	18.7	26.3	27.0	33.6	54.9	73.3	86.4	188.6	847.2
Services	24.8	28.6	32.5	38.2	43.2	48.3	61.2	59.7	78.0	96.3	165.5	201.5	366.7	1123.2
Other (including housing)	173.8	208.1	234.6	291.6	329.9	296.4	337.1	405.5	540.5	682.4	775.6	937.9	1832.8	3099.4
Total credit extended	645.0	692.0	736.5	812.6	869.1	895.4	1051.1	1284.3	1659.1	2032.7	2684.4	3394.7	7029.0	20669.9
						(percent of total)								
Agriculture	15.5	17.3	19.3	19.4	19.7	20.0	21.6	17.6	13.7	12.9	11.7	11.3	13.8	23.0
Fisheries	0.1	0.1	0.5	0.7	0.7	0.4	0.3	0.5	0.4	0.5	0.7	0.9	0.8	1.2
Forestry	0.1	0.1	0.1	0.1	0.2	0.4	0.2	0.3	0.8	0.8	0.3	0.4	0.2	0.2
Mining	6.4	5.2	6.3	4.6	4.6	5.2	3.6	3.6	4.2	3.6	3.2	1.1	0.7	1.6
Manufacturing	7.9	7.6	7.9	8.7	8.0	10.0	9.9	9.6	10.6	10.3	9.4	10.6	9.5	13.2
Electricity and water	3.8	3.4	3.4	2.5	1.4	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Construction	3.2	2.9	3.1	2.5	2.6	2.6	2.8	3.0	3.4	4.0	5.1	6.5	7.1	7.7
Commerce	30.6	27.4	21.2	19.0	18.1	20.0	21.3	27.0	27.6	26.9	31.9	33.1	33.8	28.5
Transport and communications	1.6	1.7	2.0	2.0	1.7	2.1	2.5	2.1	2.0	2.7	2.7	2.5	2.7	4.1
Services	3.8	4.1	4.4	4.7	5.0	5.4	5.8	4.6	4.7	4.7	6.2	5.9	5.2	5.4
Other (including housing)	26.9	30.1	31.9	35.9	38.0	33.1	32.1	31.6	32.6	33.6	28.9	27.6	26.1	15.0
Total credit extended	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Central Bank of Suriname.

Table A.8
Suriname: Production of Selected Crops, 1980-93

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
RICE														
Production of paddy														
('000 mt)	257,629	280,727	301,130	267,958	301,975	299,185	299,954	271,600	265,244	260,895	196,010	229,260	261,080	216,890
Planted area														
('000 ha)	65,000	66,400	72,600	73,300	74,770	74,890	75,136	71,155	69,520	69,860	52,005	60,085	68,750	58,640
Yield	4.0	4.2	4.1	3.7	4.0	4.0	4.0	3.8	3.8	3.7	3.8	3.8	3.8	3.7
(Yield in Guyana)	2.9	3.0	3.2	3.2	3.5	3.3	3.4	3.2	3.0	3.5	3.0	3.3	3.5	n.a.
BANANAS														
Production														
('000 mt)	39,226	44,703	42,399	36,598	41,063	43,139	43,744	43,204	52,894	45,943	47,943	49,971	49,886	47,495
Planted area														
('000 ha)	1,625	1,939	1,672	1,629	1,709	1,641	1,625	1,761	1,986	2,076	2,073	2,116	2,131	2,150
Yield	24.1	23.1	25.4	22.5	24.0	26.3	26.9	24.5	26.6	22.1	23.1	23.6	23.4	22.1
PLANTAINS														
Production														
('000 mt)	1,918	4,500	6,365	3,495	5,512	4,963	2,847	8,505	8,391	8,766	7,757	17,082	13,197	18,928
Planted area														
('000 ha)	284	600	337	326	452	341	265	314	322	352	375	663	622	981
Yield	6.8	7.5	18.9	10.7	12.2	14.6	10.7	27.1	26.1	24.9	20.7	25.8	21.2	19.3
VEGETABLES 1/														
Production														
('000 mt)	4,650	10,581	5,264	4,580	5,094	5,601	4,233	15,877	13,816	15,483	23,153	33,122	35,934	43,923

1/ Includes cabbage, tomatoes and green vegetables.

Source: Ministry of Agriculture.

Table A.9
Constant Dollar Export Prices (fob) and World Market Import Prices (cif) of Suriname's Rice and Banana Exports, 1980-94 actual and 1995-2010 projected
(constant 1990 US$ a metric ton)

	Rice				Bananas			
		EU Support				EU Support		
	Suriname	With	Without 1/	World	Suriname	With	Without 1/	World
1980	659	708	708	649	269	798	798	384
1981	466	737	737	509	269	694	694	415
1982	407	497	497	414	266	622	622	400
1983	377	499	499	343	298	624	624	403
1984	418	444	444	284	317	559	559	401
1985	407	394	394	236	330	552	552	389
1986	376	411	411	198	361	656	656	372
1987	387	428	428	204	330	736	736	390
1988	506	522	522	210	347	685	685	381
1989	410	476	476	213	369	558	558	371
1990	392	515	515	271	364	659	659	360
1991	398	521	521	257	309	631	631	348
1992	354	564	564	251	302	569	569	340
1993	307	444	444	215	277	513	513	325
1994	362	460	460	241	267	624	624	311
1995	388	494	494	274	280	657	657	343
1996	410	521	521	301	292	683	683	369
1997	393	500	500	280	293	686	686	372
1998	378	481	481	261	295	691	691	378
1999	377	479	479	259	298	697	697	384
2000	375	477	441	257	300	703	646	390
2001	372	472	406	253	298	697	598	384
2002	368	468	374	248	295	691	554	377
2003	365	464	344	244	292	684	513	371
2004	361	459	317	240	290	678	475	365
2005	362	460	292	240	291	680	440	367
2006	359	456	269	236	288	674	407	361
2007	355	452	248	232	285	668	377	355
2008	352	448	228	228	283	663	349	349
2009	349	444	224	224	280	657	343	343
2010	346	440	220	220	278	651	338	338

1/ Price support mechanisms phased out over 9-year period beginning in 2000.

Sources: Historical data from COMTRADE database; projections for world market prices by the World Bank, and those for preferential markets assumed to maintain historical price differential with the world market. Forecast for Suriname based on 1994 distribution of exports to preferential markets.

Table A.10
Constant Dollar Value of Suriname's Agricultural Export Earnings Shortfall from Removal of EU Rice and Banana Quotas, Actual 1980-1994 and Projected 1995-2010
(1990 US$ a metric ton, metric tons, and US$000 values)

	RICE EXPORTS						REVENUE		BANANAS						REVENUE		TOTAL		REVENUE	
	Regulated Trade 1/			Unregulated Trade 2/			DIFF. 3/		Regulated Trade 1/			Unregulated Trade 2/			DIFF.		Reg. Trade 2/	Unreg. Trade 2/	DIFF. 3/	
	(mt)	(US$/mt)	(US$000)	(mt)	(US$/mt)	(US$000)	(US$000)	(%)	(mt)	(US$/mt)	(US$000)	(mt)	(US$/mt)	(US$000)	(US$000)	(%) 1/	(US$000)	(US$000)	(US$000)	(%)
1980	101,200	659	66,643	101,200	659	66,643	0	0	33,200	269	8,939	33,200	269	8,939	0	0	75,582	75,582	0	0
1981	112,900	466	52,566	112,900	466	52,566	0	0	36,500	269	9,806	36,500	269	9,806	0	0	62,372	62,372	0	0
1982	130,800	407	53,297	130,800	407	53,297	0	0	37,500	266	9,993	37,500	266	9,993	0	0	63,290	63,290	0	0
1983	127,400	377	48,092	127,400	377	48,092	0	0	32,200	298	9,604	32,200	298	9,604	0	0	57,696	57,696	0	0
1984	94,700	418	39,578	94,700	418	39,578	0	0	34,900	317	11,079	34,900	317	11,079	0	0	50,657	50,657	0	0
1985	127,500	407	51,925	127,500	407	51,925	0	0	37,300	330	12,293	37,300	330	12,293	0	0	64,218	64,218	0	0
1986	102,000	376	38,352	102,000	376	38,352	0	0	40,100	361	14,464	40,100	361	14,464	0	0	52,816	52,816	0	0
1987	115,700	387	44,729	115,700	387	44,729	0	0	34,000	330	11,230	34,000	330	11,230	0	0	55,959	55,959	0	0
1988	85,800	506	43,437	85,800	506	43,437	0	0	35,600	347	12,341	35,600	347	12,341	0	0	55,778	55,778	0	0
1989	80,700	410	33,123	80,700	410	33,123	0	0	28,800	369	10,632	28,800	369	10,632	0	0	43,755	43,755	0	0
1990	64,900	392	25,434	64,900	392	25,434	0	0	28,300	364	10,308	28,300	364	10,308	0	0	35,742	35,742	0	0
1991	52,700	398	20,955	52,700	398	20,955	0	0	28,200	309	8,713	28,200	309	8,713	0	0	29,668	29,668	0	0
1992	75,400	354	26,685	75,400	354	26,685	0	0	30,200	302	9,127	30,200	302	9,127	0	0	35,813	35,813	0	0
1993	74,300	307	22,823	74,300	307	22,823	0	0	27,100	277	7,516	27,100	277	7,516	0	0	30,339	30,339	0	0
1994	80,600	362	29,174	80,600	362	29,174	0	0	33,000	267	8,797	33,000	267	8,797	0	0	37,971	37,971	0	0
1995	77,962	388	30,276	77,962	388	30,276	0	0	29,086	280	8,157	29,086	280	8,157	0	0	38,433	38,433	0	0
1996	78,282	410	32,081	78,282	410	32,081	0	0	30,004	292	8,746	30,004	292	8,746	0	0	40,827	40,827	0	0
1997	80,147	393	31,504	80,147	393	31,504	0	0	30,116	293	8,820	30,116	293	8,820	0	0	40,324	40,324	0	0
1998	80,165	378	30,331	80,165	378	30,331	0	0	30,314	295	8,951	30,314	295	8,951	0	0	39,282	39,282	0	0
1999	79,008	377	29,756	79,008	377	29,756	0	0	30,515	298	9,085	30,515	298	9,085	0	0	38,841	38,841	0	0
2000	78,079	375	29,288	78,079	347	27,113	(2,175)	-7%	30,733	300	9,231	28,715	276	7,925	(1,306)	-14%	38,519	35,038	(3,481)	-9%
2001	77,324	372	28,732	75,060	320	24,031	(4,701)	-16%	30,508	298	9,080	27,020	256	6,913	(2,167)	-24%	37,812	30,944	(6,868)	-18%
2002	76,527	368	28,171	70,792	295	20,897	(7,274)	-26%	30,287	295	8,933	25,426	237	6,030	(2,903)	-32%	37,104	26,927	(10,177)	-27%
2003	75,708	365	27,613	65,892	272	17,934	(9,679)	-35%	30,069	292	8,789	23,925	220	5,260	(3,529)	-40%	36,401	23,194	(13,208)	-36%
2004	74,879	361	27,060	60,775	251	15,251	(11,810)	-44%	29,854	290	8,648	22,514	204	4,588	(4,060)	-47%	35,708	19,839	(15,870)	-44%
2005	74,049	362	26,797	55,703	231	12,888	(13,909)	-52%	29,923	291	8,694	21,185	189	4,002	(4,691)	-54%	35,490	16,890	(18,600)	-52%
2006	73,519	359	26,363	50,832	213	10,843	(15,520)	-59%	29,710	288	8,555	19,935	175	3,491	(5,064)	-59%	34,918	14,334	(20,584)	-59%
2007	72,898	355	25,904	46,248	197	9,096	(16,809)	-65%	29,501	285	8,420	18,759	162	3,045	(5,375)	-64%	34,325	12,141	(22,183)	-65%
2008	72,220	352	25,434	41,989	181	7,602	(17,832)	-70%	29,294	283	8,288	17,631	150	2,649	(5,639)	-68%	33,722	10,252	(23,471)	-70%
2009	71,507	349	24,960	38,045	178	6,769	(18,191)	-73%	29,090	280	8,159	17,399	148	2,572	(5,588)	-68%	33,119	9,341	(23,778)	-72%
2010	70,775	346	24,487	35,300	175	6,172	(18,315)	-75%	28,890	278	8,034	17,170	145	2,496	(5,537)	-69%	32,521	8,668	(23,853)	-73%

1/ Regulated trade refers to preferential trade arrangement for Suriname's exports of rice and bananas that are destined to the EU and that is currently in effect.
2/ Unregulated trade refers to the eventual removalby 2008 of the preferential trade arrangement for Suriname's exports of rice and bananas that are destined to the EU market.
3/ Difference due to phasing out of preferential arrangements in EU market.

ANNEX
LIST OF MEETINGS

Annex: List of Meetings

Government Institutions

Ministry of Agriculture, Fisheries and Animal Husbandry	Mr. J. Sisal, Minister Mr. J. Sahtoe, Advisor
Planning Department	Mr. H. Grauwde, Coordinator Ms. M. van der Kuyp, Economist Ms. K. Kromoreso, Economist
Statistics Department	Mr. Rambaran, Head
Crops Department	Mr. Bhansing, Deputy Director
Livestock Department	Mr. L. de la Marche, Economist Mr. J. Nojodimedjo, Economist Mr. E. Rozenblad, Veterinarian
Fisheries Department	Mr. C. Lietar, Economist Mr. P. Charlier, Fisheries Biologist
Ministry of Planning and Development Cooperation	Mr. R. Assen, Minister Mr. S. Tjon Ahin, Director Mr. I. Rambharse, Economist, Project Evaluation and Monitoring Unit
National Planning Office	Mrs. L. Monsels, Director Planning Office Mrs. C. de Rooij, Head Macroeconomic Dept. Mr. M. Wongsopawiro, Agriculture Sector Mr. P. van Acker, Macro-modeling Analyst Ms. S. Adhin, Head Environmental Planning Section Mr. R. Khoesial, Head Data Base Management Unit
Warwick Research Institute	Mr. J. C. Ameels, Resident Macroeconomist
Central Bank, Research Dept.	Mr. R. Adhin, Head

Ministry of Trade and Industry	Mr. R. Kalloe, Minister
Division of Import-Export and Foreign Currency Control	Mr. A. Jadoenath Missier, Head
International Economic Affairs	Ms. L. Wiebers, Head
Ministry of Finance	
Public Finance Section	Mrs. S. Khedoe-Bharos, Head
Customs Administration	Mr. Trott, Head
Treasury	Mr. Soekyad, Inspector
General Bureau of Statistics	Mr. Sno, Director Ms. V. Rantwijk, National Accounts Data Mr. Kasanwiryo, Trade Data

Parastatals

Surexco	Mr. R. Jodabir, staff member Mr. W. Panchoe, staff member
Surland	Ms. S. Khoeisial, Acting Deputy Director Finance
CEVIHAS	Mr. M. Akkerman, Director
GPOV	Mr. P. Rellum, Director

Public Sector Agricultural Research Institutions

SNRI	Mr. K. Kartosewieto, Director
CELOS	Mr. S. Renfurm, staff member

Education and Training Institutions

University of Suriname	Mr. R.van Ravenswaay, Coordinator Agricultural Research
NATIN	Ms. M. Kaboord, Director

Private Producers

Comfish	Mr. A. van Alen, Director/Owner
APVE	Mr. R. Graanoogst, Export Manager
VSB (Suriname Trade & Industry Association)	Mr. E. Refos, Director Mr. H. Bueno de Mesquita Mr. N. Soechit Mr. D. Liong A. Kong

Processors

CIC	Mr. W. Balraadjsing Mr. R. van Kanten
Bleyco	Mr. E. Bleijert, Director/Owner

Banks

Agricultural Bank	Mr. Bundel, Director
National Development Bank	Mr. Rodgers, Deputy Director
De Surinaamsche Bank	Mr. S. Proeve, Deputy Director Mr. P. Sewberath Misser

Forum for NGO's	Mr. H. Wesenhagen, Director Mr R. Landveld, Program Coordinator
Donors	
Embassy of Holland	Mr. Brands, Sector Specialist Rural Development
European Union	Mr. M. Jansen, Junior Expert
Embassy of Belgium	Mr. Windels, Head, Development Cooperation Dept. Ms. Marij Aerts, Adjunt Head, Development Coop. Dept
IICA	Mr. G. Villanueva, Representative Mr. G. Buckmeier, Project Leader Mr. H. Ormskerk, Project Leader
OAS	Mr. A. Tjon Ahung, Representative

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