

GUYANA

AGRICULTURAL EXPORT DIVERSIFICATION PROGRAM

(GY-L1007)

LOAN PROPOSAL

This document was prepared by the project team consisting of: Geoffrey Cannock (INE/RND), Project Team Leader; Francisco Basilio Souza (RND/CAR); Javier Cuervo (INE/ENE); Ricardo Vargas del Valle (INE/RND); Gisella Barreda (INE/RND); Roy Parahoo (FID/CGY); Diego Buchara (LEG/SGO); and Javier Grau (WSA/CGY).

CONTENT

I.	FRAME OF REFERENCE.....	2
A.	Recent macroeconomic trends and the main constraints to economic growth..	2
B.	Opportunities and challenges in the Agriculture Sector.....	3
C.	The Country's sector strategy.....	5
D.	Bank Experience in the Agriculture Sector in Guyana	6
E.	The Bank's country and sector strategy	7
F.	Coordination with other Donors.....	7
G.	Programme Strategy	7
II.	THE PROGRAM.....	9
A.	Objectives and description	9
B.	Components.....	9
C.	Cost and financing.....	16
III.	PROGRAM EXECUTION.....	17
A.	The borrower, guarantor and executing agency	17
B.	Project execution and administration	17
C.	Programme Operating Regulations	20
D.	Procurement of goods and services	21
E.	Disbursement schedule.....	22
F.	Monitoring and evaluation	22
G.	External financial audits.....	24
IV.	VIABILITY AND RISKS.....	24
A.	Institutional viability	24
B.	Socioeconomic viability	25
C.	Financial viability.....	27
D.	Environmental and social impacts.....	28
E.	Benefits and Beneficiaries.....	29
F.	Risks	30

ANNEXES: Annex I: Logical Framework

APPENDICES: Proposed Resolution

Electronic Links and References	
Basic Socioeconomic Data	http://www.iadb.org/countries/home.cfm?id_country=GY&Language=English
Status of Loan in Execution & Loans Approved	http://portal.iadb.org/approvals/pdfs/GYen.pdf
Tentative Lending Program	http://opsgs1/ABSPRJ/tentativelending.ASP?S=GY&L=EN
Information available in the files of INE/RND	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1152995
Annex II - Procurement Plan	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=1203486

ABBREVIATIONS

ADP	Agricultural Export Diversification Program
AES	Agribusiness Export and Facilitation Services
AHC	Agricultural Health and Food Safety Coordination Committee
AHFSS	Agricultural Health and Food Safety Services
AHU	Animal Health Unit
ASDU	Agriculture Sector Development Unit
ASL	Agricultural Sector Loan
ASSP	Agricultural Services Support Program
BOO	Build, Operate, and Own
BOT	Build, Operate, and Transfer
CARICOM	Caribbean Community
CSME	CARICOM Single Market and Economy
D&I	Drainage and Irrigation
EA	Environmental Assessment
EMS	Evaluation and Monitoring System
EPA	Environmental Protection Agency
ESMP	Environmental and Social Management Plan
EU	European Union
FAO	Food and Agriculture Organization
FDD	Food and Drug Department
FDI	Foreign Direct Investments
GABA	Guyana Agri-business Association
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GLP	Good Laboratory Practices
GLSC	Guyana Lands and Surveys Commission
GMP	Good Manufacturing Practices
GMSA	Guyana Manufacturers and Services Association
GNBS	Guyana National Bureau of Standards
GOG	Government of Guyana
GO-INVEST	Guyana Office for Investment
GTIS	Guyana Trade and Investment Support Project
HACCP	Hazard Analysis in Critical Control Points

IICA	Inter-American Institute for Cooperation on Agriculture
ITA	International Partner(s) for Technological Assistance
MOA	Ministry of Agriculture
MOH	Ministry of Health
NAAG	National Aquaculture Association of Guyana
NAHFSS	National Agricultural Health and Food Safety System
NARI	National Agricultural Research Institute
NCCSPSM	National Coordinating Committee for Sanitary and Phytosanitary Matters
NDDP	National Dairy Development Programme
NGMC	New Guyana Marketing Corporation
OIE	World Organization for Animal Health
ORM	Operating Regulations Manual
PERT	Project Evaluation and Review Technique
PEU	Program Executing Unit
PHU	Plant Health Unit
PSE	Private Sector Entrepreneurship
PSP	Private Sector Participation
PTCCB	Pesticides and Toxic Chemical Control Board
QCBS	Quality-and-Cost Based Selection
R&D	Research and Development
RPA	Rice Producers Association
SPS	Sanitary and Phytosanitary
SWAP	Sector-wide Approach
USAID	United States Agency for International Development
VPHU	Veterinary Public Health Unit
WG	Working Group
WTO	World Trade Organization

PROJECT SUMMARY
AGRICULTURAL EXPORT DIVERSIFICATION PROGRAM (GY-L1007)

FINANCIAL TERMS AND CONDITIONS¹		
Borrower:	Co-operative Republic of Guyana (GOG)	
Executing Agency:	The Ministry of Agriculture (MOA)	
Source	Amount	%
IDB (OC):	US\$10,450,000	47.7%
IDB (FSO):	US\$10,450,000	47.7%
Local:	US\$ 1,019,000	4.6%
Total:	US\$21,919,000	100.0%
Category	OC Financing	FSO Financing
Amortization period:	30 years	40 years
Grace period:	6 years	40 years
Disbursement period:	5 years	5 years
Interest rate:	Adjustable	0.25%
Supervision & inspection fee:	0%	0%
Credit fee:	0.25%	0%
Currency:	US Dollars	US Dollars
PROJECT AT A GLANCE		
<p>Project Objective: The Agricultural Export Diversification Program (ADP) aims to contribute to the increase of Guyana's export growth rate and reduce its volatility. Its purpose is to establish services and institutions for a sustainable increase in the income derived from the export of non-traditional agricultural exports in the aquaculture, fruits and vegetables, and livestock subsectors; enhancing the protection of domestic consumers from illness, and domestic production from disease and contamination.</p>		
<p>Special contractual clauses:</p> <ol style="list-style-type: none"> <u>Conditions prior to the first disbursement of Bank's resources:</u> The National Committee for the Coordination of Sanitary and Phytosanitary Matters has been created, its members appointed, and its rules of procedure have been approved (§3.15); the MOA has hired the additional personnel to the ASDU and has appointed as part of the Steering Committee of the ASDU a representative of the Ministry of Health (§3.2); and the Operating Regulations Manual has entered into effect (§3.18). <u>Condition prior to the disbursement of Bank's resources for Components I and III:</u> The Executing Agency (i) has hired a specialized agency or consulting firm for the implementation of the activities under Component I (§3.6); and (ii) has hired a specialized international agency for the implementation of the activities under Component III (§3.16). <u>Prior to the disbursement of Bank resources for the construction, equipment, and operation for the basic abattoir:</u> Evidence that at least four livestock business plans are under implementation (§3.7). <u>Special disbursement:</u> After the Loan Agreement has been signed, and has entered into effect, and the Borrower has complied with the conditions prior to first disbursement set forth in the General Conditions of the Loan Contract, the Bank may authorize disbursements up to the amount of US\$500,000 chargeable to Bank resources, in order to help the Executing Agency to comply with the special conditions prior to first disbursement (§3.21). 		
Exceptions to Bank policies: None		
Project consistent with Country Strategy: Yes, the program is coherent with the strategy (§1.19).		
Project qualifies for: SEQ [] PTI [] Sector [] Geographic [] % Headcount []		
Procurement: See §3.19–§3.22		
Verified by the CESI on: October 20, 2006 (CESI 41-06). See §4.18–§4.22.		

¹ The interest rate, credit fee, and inspection and supervision fee mentioned in this document are established pursuant to document FN-568-3 Rev. and may be changed by the Board of Executive Directors, taking into account the available background information, as well as the respective Finance Department recommendations. In no case will the credit fee exceed 0.75%, or the inspection and supervision fee exceed 1% of the loan amount (*)
 (*) With regard to the inspection and supervision fee, in no case will the charge exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount divided by the number of six-month periods included in the original disbursement period.

I. FRAME OF REFERENCE

- 1.1 Guyana has experienced little economic transformation since independence and is still an agriculture and resource-based economy. Guyana has exhibit slow economic growth averaging only one percent since 1970. Moreover, its income volatility is quite high. The need for expanding growth sources, combined with the declining prices of the current traditional agricultural base makes it a strong argument in favor of the diversification of agricultural exports. Moreover, Guyana faces some challenges regarding the limited potential of the domestic market and the loss of the privileged access to the EU market. In this context, it becomes important to launch viable diversification strategies in the agricultural sector. By contributing to diversifying the agricultural exports, this operation seeks to resume economic growth, assist in the transition of the loss of trade preferences and reduce the country's vulnerability to terms of trade shocks.

A. Recent macroeconomic trends and the main constraints to economic growth

- 1.2 During 1998-2005 annual economic growth slowed to a mere 0.3%. Domestic private investment lost dynamism, falling to 9% of GDP while FDI flows fell to 7% of GDP. Guyana's share of public investment in total domestic reached 75% in 2005. The external account deficit is projected to decline gradually from 28% of GDP to 16% of GDP between 2006-2010. The overall fiscal deficit reached 11.2% in 2006. However, a significant fiscal adjustment is envisaged through 2010, reducing the fiscal deficit to 2% of GDP. Although high fiscal deficits have not crowded out private investment, the overall efficiency of public investments is low due to weak execution capacities. Prudent monetary and foreign exchange policy have helped to maintain inflation at moderate levels, despite recent high oil prices. Based on IMF analysis, the real exchange rate does not appear to be overvalued. The economy recovered in 2006 and grew 4.7%, but it is not clear to what extent economic growth will be sustainable in the coming years.
- 1.3 Guyana benefited from the Heavily Indebted Poor Countries (HIPC) Initiatives, which provided considerable debt relief to the country. Guyana has been granted additional debt relief in the context of the Multilateral Debt Relief Initiative (MDRI) provided by the IMF and the World Bank in 2005 and more recently, the IDB-07 Debt Relief Initiative. After applying IDB relief to the 2006 debt stock, the external debt-to-GDP ratio would drop to about 58 percent. The current Bank's concessional lending program for Guyana consists on a parallel lending approach that blends FSO and OC resources that results in a suitable concessionality level according to the Bank's Debt Sustainability/Performance Based Allocation Framework. Guyana will likely face a gradual decline in the availability of external concessional funds after significant debt relief and GDP rebasing. Access to concessional financing will be critical for Guyana's debt sustainability and for smoothing out the fiscal adjustment.
- 1.4 Guyana's weak economic performance has been closely linked to its poor export performance, showing a heavy reliance on some export products for which it is not

competitive in international markets. In addition, Guyana often has been exposed to terms of trade shocks. This is likely the result of Guyana's limited export diversification toward higher-value products and its high level of dependency on oil. Moreover, the country is currently facing a loss of trade preferences and its impact on terms of trade changes may be significant.

- 1.5 One of the most binding constraint to economic growth in Guyana lies in poor appropriability of returns on private investment, which has hampered capital accumulation, innovation and diversification of the economy. The main reasons are: (i) a weak institutional framework and (ii) coordination and information failures in the discovery of new export activities which have led to a low sophistication of Guyana's export basket; and have also constrained export growth and structural transformation. The ADP contributes to address this constraint fostering private investment into more sophisticated business initiatives without burdening the public sector's execution capabilities.

B. Opportunities and challenges in the Agriculture Sector

- 1.6 Agriculture is the most important sector of Guyana's economy, accounting for approximately 32% of GDP, 30% of employment, and 40% of export earnings. Sugar and rice, with privileged access to the European Union (EU), account for 74% of agriculture's GDP as well as 65% of total agricultural exports, including shrimp and timber. About 75% of Guyana's sugar production is exported to the EU at prices more than double the world market prices.
- 1.7 Agriculture's growth rate exhibited large fluctuations that ranged from -9.4% to 14.8% during the last five years. These results are closely related to sugarcane and rice output volatility. Moreover, both products face the challenge of having their preferential quotas in their European markets phased out,¹ coupled with low and declining world prices².
- 1.8 Guyana enjoys comparative advantage in the export of other crops and livestock products, fruits and vegetables³, and aquaculture. Those advantages arise from the availability of land, water, labor costs, organic production basis, and its preferential position as a potential exporter to the CARICOM. Guyana enjoys a favorable advantageous position in terms of animal and plant health status since it is free from the fruit fly and the foot-and-mouth disease. The long tradition that Guyana has had in processing seafood for exports, has provided a readily available infrastructure that can easily be transferred to aquaculture. As a means to diversify its agro-exports, Guyana has already been showing progress in non-traditional

¹ Sugar is Guyana's largest export, accounting for around one-quarter of total exports. The reduction in the preferential EU sugar prices will be reflected in large export losses, which could reach 6% of GDP by 2010, based on IMF estimates.

² Although in 2006 the average sugar world market price increased 60% from last year reaching US\$0.16 /lb, its long-term trend has been projected at US\$0.11 /lb by 2015 according to the World Bank, whereas the current level of sugar production cost in Guyana is US\$0.18/lb.

³ As shown by the domestic resource costs computations for other crops in the Technical File "Agricultural Export Diversification Programme. Report on Economic and Financial Feasibility".

agro-based exports. In 2002, Guyana exported 78 different non-traditional agricultural products. Non-traditional exports have been growing at an annual 6% rate since 1993, however they still have a low base.

- 1.9 In spite of the said comparative and competitive advantages, Guyana has not been capable so far in building a non-traditional export sector since it faces several constraints along the supply chain as well as a poor business climate.
- 1.10 Main restrictions within the livestock cluster that need to be addressed are: (i) lack of suitable volume. Cattle supply is far below an economically viable scale for export purposes. Moreover, current breeds are Creole, which are not suitable for those areas in Guyana where land has a cattle-raising vocation potential; (ii) ineffective sanitary surveillance systems. There are no systems for controlling cattle movement within the country. Borders are relatively unprotected; (iii) poor institutional support. The sanitary systems do not have enough technical and financial resources, and work under an outdated legal framework; (iv) current abattoir facilities are not adequate and it is not feasible to upgrade them for export purposes; and (v) weak technological awareness and business practices. There is limited knowledge on the technologies available for setting up pastures, raising cattle, and building abattoirs, as well as on meeting Good Manufacturing Practices (GMP) and Good Agricultural Practices (GAP) in the livestock chain.
- 1.11 The fruit and aquaculture subsectors' main constraints are: (i) lack of volume at the farm level; (ii) the supply chain is characterized by lack of organization and association, low productivity, and lack of quality standards and processes. A major weakness is the virtual absence of formal contract farming arrangements; (iii) although there are several domestic agricultural input and equipment providers, research and transfer of technology services are quite limited and not effectively linked with specialized networks to facilitate screening and adaptation of new varieties and fingerlings for these agri-business chains, and those will be essential to increase the supply; (iv) non-traditional farmers have very limited access to markets and to market information; (v) scarce supply of professional services; (vi) the drainage and irrigation main infrastructure, including access roads, for those areas amenable for diversification require rehabilitation; (vii) low awareness on the impacts of pesticides and chemical coupled with limited monitoring and enforcement capabilities; and (viii) the fruit subsector also requires investment for the retooling of its phytosanitary systems to increase exports. Poor sanitary hygienic practices are pervasive in food production and food retailing.
- 1.12 Private investors need to negotiate on an ad-hoc basis their agribusiness business plans that cover issues such as tax regimes and conditions to access to land. The Office of the President approves proposals that require access to land after being assessed by Go-Invest and the Guyana Lands and Surveys Commission.
- 1.13 Institutional Framework: The public agencies related to agricultural export diversification have limited capabilities to cope with their respective missions. The main institution that supports agriculture is the Ministry of Agriculture (MOA).

Within the MOA, the Plant Health Unit (PHU) is responsible for all aspects regarding the phytosanitary conditions of the agriculture products, including inspection at the packinghouses and processing plants. The Animal Health Unit (AHU) is responsible for animal sanitary conditions, animal health programs, inclusive of monitoring and control of animal diseases and the inspection of animals in the food chain. The Pesticides and Toxic Chemical Control Board (PTCCB) exercises control over quality, sale and usage of pesticides and toxic chemicals, while the National Agricultural Research Institute (NARI) and the National Dairy Development Program (NDDP) are responsible for increasing the productivity of crops and livestock, respectively. The New Guyana Marketing Corporation (NGMC) provides market facilitation services to the private sector for the export of non-traditional agricultural produce.

- 1.14 The NDDP, PHU, and AHU are administrative areas within the MOA, whereas PTCCB, NARI and NGMC are semi-autonomous agencies under the MOA. The Ministry of Health oversees the Food and Drug Department (FDD) and the Veterinary and Public Health Unit (VPHU). The FDD's main remit is to protect public health, and helps encourage compliance with the requirements of international trade. The VPHU promotes human health, minimizing the risk of transmissible diseases from animals to humans and by food, derived from animals; and certifies processed meat for export.
- 1.15 The Guyana Lands and Surveys Commission (GLSC) is responsible for managing state-owned lands, and specifically for making such lands available under a leasehold or freehold arrangement. The Guyana Office for Investment (GO-Invest) is responsible for investment facilitation and export promotion.
- 1.16 Farmers that grow crops other than rice and sugar have not established product-specific organizations, although they receive services from organizations such as the Rice Producer Association (RPA) since it is common to farm mixed crops. Cattle Farmers Associations are organized along the Drainage and Irrigation Areas. In September 2005, the Guyana Agri-Business Association (GABA) was established to promote agribusiness development. GABA membership is open to interested private parties along the supply chain. The National Aquaculture Association of Guyana (NAAG) includes members from various parts of the industry, including entrepreneurs/farmers, processors, feed producers, members of government (research and investment), and non-governmental organizations.

C. The Country's sector strategy

- 1.17 The Government of Guyana (GOG) has defined in its National Development Strategy 2001-2010 that the objective for the agricultural sector is to increase the rate of growth of its output. It states that agricultural export diversification will contribute to Guyana's growth through higher value-added products.
- 1.18 The Ministry of Agriculture approved in 2006 an Agricultural Diversification Strategy that adopts a system or cluster approach to export development and to

contribute to a friendly business and investment atmosphere. Guyana has been building its institutional assets to promote agricultural non-traditional exports such as the Fisheries Act (2002), Animal Movement and Disease Prevention Act (2003), the Pesticides and Toxic Chemical Regulations (2000), the Veterinarian Act (2003), and the Drainage and Irrigation Act (2005).

D. Bank Experience in the Agriculture Sector in Guyana

- 1.19 An Agricultural Sector Loan- ASL (965/SF-GY), approved in 1995 with its last tranche disbursed in 2001, contributed to the introduction of reforms on the rice market, on agricultural factor markets, and also helped introduce new and stronger institutions for managing natural resources that led to the creation of the EPA, PTCCB, and GLSC. The ASL conditions were complied with, and these policies have been maintained by the GOG. The government has not introduced any quantitative restrictions, nor licensing requirements on rice exports, and is not engaging in rice trade. The GLSC has made substantial progress in land administration, especially through the land tenure regularization programs.
- 1.20 The ASL reforms enabled a more neutral trade and investment environment for alternative agricultural products and paved the way for investing in drainage and irrigation (D&I) infrastructure such as the ones supported under the Agriculture Services Support Program- ASSP (1558/SF-GY) approved in June 2004. This operation would in turn facilitate an increased output of higher-valued crops that are more intensive in having better-managed drainage and irrigation systems such as the ones envisaged under the Program. As part of the IDB-07 Debt Relief Initiative, the GOG and the Bank agreed upon a cancellation of US\$35 million from the active portfolio. The ASSP was cancelled in the amount of US\$4.9 million out of US\$22.5 million. The ASSP was designed to be executed as a multiple works program, so while a reduction in loan resources implies a reduction in ASSP's outputs, these are scalable in terms of number of D&I areas and farmers benefited by the Program. However, the ASSP's outputs have lagged behind schedule due to execution issues, namely, compliance with prior conditions to first disbursement, failed procurement processes for civil works, and the performance of the executing unit. Actions have been agreed in July 2007 between GOG and the Bank to solve these execution issues.
- 1.21 The main relevant lessons learned from Bank's experience are: i) it is advisable to follow a phased approach towards developing the agricultural sector; ii) institutional reforms are difficult and expectations must be set accordingly; iii) public agencies that enjoy more autonomy have better executions capabilities; iv) new models are needed to make executing units more effective and efficient; and v) mechanisms should be devised for contributing to the financial sustainability of public services.

E. The Bank's country and sector strategy

- 1.22 The Bank's country strategy (GN-2228) is to promote growth oriented programs and policies, which if reinforced by the strengthening of governance, security and justice, public sector systems and social programs, will contribute to poverty reduction. To implement the strategy, the Bank seeks to help Guyana address its three major development challenges: (i) accelerating and sustaining economic growth; (ii) undertake public sector modernization; and (iii) strengthen social programs. The Program contributes to the two former development challenges.
- 1.23 The Program will also benefit from the policy-based component, business climate initiatives as well as the retooling of public agencies envisaged under the Support for Competitiveness Program (1750/SF-GY). The Competitiveness Program will create a mechanism for export competitiveness to provide technical assistance and training aimed to specific business processes in the value chain.

F. Coordination with other Donors

- 1.24 The USAID-funded Guyana Trade and Investment Support Program (GTIS) launched in 2004 a US\$7 million multi-sector program to support exports. The GTIS finances mainly technical assistance activities for exporters. It does not cover capital goods investments nor supports public services. The European Commission is currently holding discussions with the GOG, on the measures that would partially compensate for the loss of income stemming from ending the preferential access to the EU. The EU support would be under a budget approach instead of an investment project approach. IFAD is preparing a US\$7 million project that aims to increase the living conditions for poor rural households, especially those headed by disadvantaged groups.

G. Programme Strategy

- 1.25 The strategy to promote agricultural export diversification requires public interventions to improve the business climate, public-private partnerships, substantial investments to remove the constraints that faces each cluster, enhanced public services, and strong coordination among all stakeholders to effectively tap these potential agribusinesses. Tackling these constraints through marginal and unrelated investments would most likely end up in a failed program. The Program proposes to focus the investments in selected clusters and to set up an institutional mechanism described below to allow the government to support the removal of these constraints by fostering private sector participation in each export cluster. The Program will also establish incentives to new non-traditional business initiatives and will provide a set of public goods to foster innovation, facilitate market access, enhance food safety, and rehabilitate drainage and irrigation systems.
- 1.26 The first guiding principle of the Program's strategy is the cluster approach to export development. For the development of agricultural exports other than rice and sugar, Guyana faces the significant challenge of developing a complete system

that is currently unavailable. These kinds of products would require set up in a completely different way for conducting export businesses. Rice and sugar do not require sophisticated sanitary systems, but for the identified products with export potential, it is crucial to have a government-backed animal and plant health system, a traceability system and contract farming. Current exports of these products are almost nil because the clusters are non-existent or they are highly vulnerable since they confront significant restrictions to growth. A vulnerable cluster does not provide a positive signal for farmers, and agribusinesses.

- 1.27 A second key principle concerns the due priority that needs to be given to the business climate. Adequate business climate conditions are necessary since rapid expansion of exports requires mobilization of a sizeable amount of private resources. The strategy selects those interventions that are essential for success, and that does not compete, replace, or crowd out private initiatives. The scope for government support under the Program will be defined as follows: (i) Functions that need to be directly executed and financed by the government, which are related to the business climate, and plant and animal health systems; and (ii) Functions that require government funding but do not need to be executed by the government. For the latter functions, a demand approach will be followed by the cluster. Due to the underlying arguments for granting subsidies, there is a case for decreasing the degree of government support over time.

Table 1: Functions requiring public funding but not direct execution by the government

Function	Specific Features	Reasons for Subsidy
Research & Development	Promoting R&D partnership schemes based upon the organization export chain. These can be organized, for example, for the trial of varieties for the horticultural and fruit sectors, and pastures genetics for the livestock sectors.	Externalities
Technical Assistance, Training and Knowledge Sharing	<ul style="list-style-type: none"> Hiring of international experts to provide assistance to exporters producers Organization of farmers' Technology Transfer Groups Organization of visits to producing areas in countries with growing conditions ("Technological Missions") Training of farmers in Good Agricultural Practices 	Lack of knowledge of the benefits
Management of the Chain	Chain coordinator	Transaction costs
Contract Farming	New business plans created under contract farming	Asymmetries of information and transaction costs
Shared Facilities	Organization of an auction; subsequent building and operations of abattoir. Drainage and Irrigation Organization O&M.	Economies of scale coordination failures

- 1.28 The private sector development efforts need to be complemented with public goods provided by government agencies for accessing technology, facilitating access to

land for start-up or Greenfield projects for the clusters, promoting market access, and enhancing the agricultural health and food safety services.

- 1.29 The strategy for accessing technology aims at strengthening the current technology development system, not on its capacity to develop research, but on its capacity to serve as a bridge between the demand for technology by producers and exporters and the providers (public and non-public) i.e., domestic and foreign institutions, which are expected to be major research institutions that have the technological packages for the same agro-ecological conditions as Guyana. Both NARI and the NDDP will act as repositories for the introduced technology that will be financed by the project.
- 1.30 The infrastructure developed for rice production can be adapted for agricultural diversification. Because of the existing irrigation infrastructure available, un-used or under-used rice land, the construction and developing of ponds for aquaculture, and for irrigations systems for fruit, vegetable, and livestock make it a feasible additional investment for the private sector provided that the basic D&I infrastructure has been properly rehabilitated. The ADP will focus its support to farmers located in D&I areas more amenable to agricultural diversification, and will rehabilitate of one these D&I areas.
- 1.31 Considering current private sector entrepreneurship capabilities, external investors have to be attracted. Since most of the suitable lands are in government's hands, it would be necessary to make land available through a simple and transparent method. The livestock cluster would be developed around the Berbice River, from the Intermediate Savannahs to its mouth near New Amsterdam. Animals would be reared in the Savannah, and fattened and processed in facilities on the Coast, where, for sanitary and logistic reasons, the abattoir would be located.

II. THE PROGRAM

A. Objectives and description

- 2.1 The Agricultural Export Diversification Program (ADP) aims to contribute to the increase of Guyana's export growth rate and reduce its volatility. Its purpose is to establish services and institutions for a sustainable increase in the income derived from the export of non-traditional agricultural exports in the aquaculture, fruits and vegetables, and livestock subsectors; enhancing the protection of domestic consumers from illness, and domestic production from disease and contamination.

B. Components

- 2.2 ADP comprises four components: (i) promotion of Private Sector Entrepreneurship (PSE) in agribusiness that will foster initiatives to enhance entrepreneurship capabilities in the agribusiness cluster. It will also support the implementation of institutional arrangements for promoting and managing the agricultural

diversification strategy; (ii) improving the capabilities of Agribusiness Export and Facilitation Services (AES), that will support agribusiness through delivering regulatory and public services, such as technology adaptation and transfer, and market information; (iii) strengthening and consolidating Agricultural Health and Food Safety Services (AHFSS) that will improve the effectiveness of the animal health, plant health and food safety systems; and (iv) Drainage and Irrigation Rehabilitation (DIR), to rehabilitate one primary and secondary D&I system that is suitable for agricultural diversification purposes.

1. Private Sector Entrepreneurship into Agribusiness - PSE (US\$5,979,000)

a) Promotion and consolidation of agribusiness (US\$2,947,000)

- 2.3 This subcomponent aims at supporting the establishment of Working Groups (see ¶3.4) and the execution of activities for the promotion and consolidation of three agribusiness clusters: (i) vegetable and fruits; (ii) livestock; and (iii) aquaculture. Under this subcomponent, WGs will prepare and present to the Executing Agency with the support of an international agency or specialize consulting firm, the following: (i) strategic plans for each cluster; (ii) annual operating plans; (iii) identification of the activities to be carried out under Component II; (iv) technical notes addressing specific issues to foster the cluster's business climate; and (v) quality of services surveys to assess the performance of the services provided under the Program. During the first year of Program execution, Bank's resources will finance the associate costs for the establishment and functioning of the WGs, including managerial needs, office rent, office supplies, accounting services, training, and logistic services. After the first year of Program execution, said costs will be gradually assumed by the WGs pursuant to the specifications and guidelines set forth in the Operating Regulations Manual.
- 2.4 Program resources will also finance the provision of public (club) goods necessary for the implementation of the Strategic Plans for each cluster. Main activities to be financed are: (i) Training and Knowledge Sharing aimed at small groups of farmers; (ii) Technical Assistance provided by technicians actually involved in the export process; (iii) Market Discovery whereby potential buyers in importing countries are identified, and business arrangements among these buyers and Guyanese exporters are facilitated; (iv) Research and Development (R&D) Partnerships whereby a group of farmers and exporters from each cluster form a partnership with NARI; (v) Technological Missions aimed at upgrading agribusiness processors and farmers' knowledge of modern technologies by organizing group visits to producing areas in countries with similar growing conditions; and (vi) Quality Improvement Program that will enhance food quality by introducing Hazard Analysis and Critical Control Point (HACCP) and quality assurance protocols. The Program will finance, among other activities, the following: training, consulting services, and agricultural supplies.

**b) Supporting the implementation of agribusiness plans
(US\$2,000,000)**

- 2.5 The purpose of this subcomponent is to support WG members (see ¶3.5) in: (i) preparing their agribusiness plans; and (ii) providing financial support for their implementation. Eligible projects must be focused on a non-traditional market opportunity within the selected clusters.
- 2.6 Preparation of Agribusiness Plans: The Program will co-finance on a non-reimbursable basis, up to 50% of the costs associated to consulting services needed to prepare the agribusiness plans. Said financing will not exceed in any case more than US\$3,000 per plan. In order to be eligible for financing, the following criteria should be met: (i) being a member of the cluster's Working Group; and (ii) submit a letter of intention to the Cluster Coordinator with a profile of the proposed agribusiness plan. The Operating Regulations Manual (ORM) of the Program sets forth the parameters, guidelines and mechanism for the disbursement of resources of the financing allocated for this activity.
- 2.7 Implementation of Agribusiness Plans: The Program will co-finance services required for the actual implementation of selected agribusiness plans to cover up to 30% of the project costs with an individual cap of US\$50,000 for fruits & vegetables, US\$80,000 for livestock and US\$120,000 for aquaculture. The co-financing share may be revised during Project execution. The business plans may be presented by individuals farmers, or farmer associations. Agricultural producers must be able to demonstrate that: (i) have binding contracts with agro-processors and exporters, whereby all services needed to complete the export transaction will be provided; and (ii) are legally holders of the farm where the business plan will be develop. Preference will be given to business initiatives that are innovative and show a higher payoff. Disbursements will be made on a case by case basis as follows: (i) 20% at the signing of a contract between the beneficiary and the ASDU to conduct and implement the approved agribusiness plan; (ii) 40% after compliance of intermediate benchmarks, clearly established in said contract, related to the achievement of relevant milestones for the implementation of the agribusiness plan, such as on-farm investment completed; all areas with new varieties under cultivation; or successful trial export achieved; and (iii) 40% after achievement of actual export results established as goals in the contract. Specification are set forth in the ORM. Additionally, benchmarks will be subject to verification through inspections by the Bank and submission of relevant documents by the beneficiaries.

**c) Private Sector Participation in Agribusiness Facilities
(US\$1,032,000)**

- 2.8 The design, construction, equipment, and operation for a basic abattoir will be financed. The basic abattoir will be built to serve the minimum economic and efficient scale of 12,000-slaughtered heads/year.

2. Agribusiness Export and Facilitation Services (US\$2,569,000)

- 2.9 This component will focus on strengthening public services needed to support the selected agribusiness productive clusters, specifically: (i) technology development and transfer; (ii) market access services; and (iii) access to land.

a) Support to technology development and transfer (US\$1,949,000)

- 2.10 The objective of this subcomponent is to furnish NARI and NDDP with the ability to acquire, disseminate and serve as repository for the genetic material introduced into the country, the relevant technologies, and best production practices needed to develop the clusters as requested by the WGs supported under the PSE component.

- 2.11 The strengthening for NARI (US\$935,000) will be concentrated in:

- a. Technology appropriation, transfer & dissemination: The Program will support NARI in: (i) accessing bilateral and multilateral research organizations and networks; (ii) implementing a database that will disclose the results obtained from the research and information collected; (iii) rehabilitating its library; and (iv) disseminating capabilities for training to public extension officers of the MOA, agricultural educational institutions and private technical assistance providers.
- b. Germoplasm conservation & basic seed multiplication: The objective is to ensure that the genetic material that is imported keeps its physiological quality and it is multiplied under optimal conditions that will allow its distribution to all interested producers. Program resources will finance the rehabilitation and the acquisition of the equipment for NARI's seed laboratory and warehouse facilities. Although, the technical responsibility for the basic seed production is with NARI, production, if necessary, will be carried out under contract with private producers such as those under the R&D Partnerships.

- 2.12 The strengthening for NDDP (US\$1,007,000) will be concentrated in:

- a. Cattle genetic improvement with emphasis in beef production: The Program will support the NDDP in: (i) improving beef cattle herds; (ii) organizing, maintaining, and posting a database with the information regarding the introduced and tested technological packages; (iii) providing insemination services or transfer of embryos to ranchers; and (iv) disseminating the combination of improved pastures and improved beef cattle animals.
- b. Establishment and maintenance of a genetic bank to improve beef and dairy cattle: The Program will support NDDP in: (i) the design, implementation and operation of a system for following up the zootechnical parameters from the offspring inseminated with imported semen or implanted with embryos. The data bank will help identify and select cows and bulls that will contribute to the establishment of a germplasm bank with improved characteristics like reproductive efficiency, carcass yield, precocity and high weight gain that will

enhance future Guyanese beef cattle herds; and (ii) setting up a laboratory for the collection and processing of semen from the germplasm bank and transferring the technology to all interested ranchers, and to help preventing reproductive diseases. The Program will also finance scientific information services; training; and media campaigns targeted to farmers; among others.

b) Business Facilitation (US\$620,000)

- 2.13 Market Access Services: The Program will assist on drafting market access protocols between Guyana and its trading partners, and on overcoming technical barriers to agro-exports. A simple market network will be designed and implemented for connecting local officers and producer organizations to provide them with business opportunities, and market information.
- 2.14 Land Access for Potential Investors: Technical assistance will be provided to GLSC and Go-Invest for strengthening investment promotion processes and public land administration aimed at increasing the availability and use of suitable land for 'greenfield' investments in livestock and agribusiness sectors.
- 2.15 The 'greenfield' Investment Opportunity Promotion System: the following activities will be supported: (i) development of public land databases in GIS format, including information on: land tenure; soil capacity; hydrology; forest and vegetation cover and infrastructure; (ii) a streamlined public land lease application for a pilot program for allocating relatively large land plots, approved and operative; (iii) a computerized Public Land Investment Opportunity Promotion System for identifying and promoting Public Land available for agribusiness investment developed and implemented with multi-institutional user network; (iv) public agencies' users trained in the use of land information systems; (v) a Public Land Lease application tracking system developed and implemented; and (vi) campaigns to attract local and foreign private investors.
- 2.16 Main items to be financed under this subcomponent are: consulting services, travel, information subscription services, software, and field works.

3. Strengthening and consolidating agricultural health and food safety services (US\$5,993,000)

- 2.17 The purpose of this component is to improve the effectiveness of the animal health, plant health and food safety units of the Ministries of Agriculture and Health, transforming them in an integrated system to protect domestic consumers from illness, and domestic production from disease and contamination while ensuring that Guyana's exports meet international standards. The component is designed to establish and strengthen the system and assure that policy and regulations are coordinated as well as the use of the resources of all institutions concerned. This integrated system will form the basis for the implementation of modern and specialized semi-autonomous agencies. The component will address these needs through the following subcomponents and outputs:

a) **Appropriate policy and coordination mechanisms strengthened (US\$212,000)**

- 2.18 Legal framework updated: The Program will finance consulting services to review and update the plant, animal and food safety legislation. In the case of the plant health, the legislation aims to avoid the introduction and spread of exotic pests; to protect plants resources; and to facilitate the export of plants and plant products. It is also necessary to revise the animal and plant health regulations to conform to the WTO's SPS agreement and draft harmonized legislation and regulations for CARICOM/PAHO. The following regulations will be developed and/or updated: animal movement, eradication campaigns, biological residues, sampling, post mortem inspection, and hygienic practices in abattoirs.
- 2.19 Establishment of common working instruments: To accelerate the path to integration, the Program will finance the establishment of a common information and management system for the agricultural and food safety health units.
- 2.20 Creation of a semi-autonomous agency for the agricultural health units: The Animal Health Unit, and the Plant Health Unit will be granted semi-autonomous status to contribute to the Program's sustainability. **The Borrower undertakes to grant, within thirty (30) months from the date of the loan contract, semiautonomous status to the Animal Health and Plant Health Units.**

b) **Plant Health strengthened (US\$1,749,000)**

- 2.21 The Program will: (i) inspect commodities legally imported into the country in order to avoid the introduction of exotic plant pests; (ii) conduct surveys and surveillance for exotic and established pests respectively; (iii) conduct farm certification and verification services prior to export; (iv) ensure that the agricultural commodities exported do conform to the importing countries phytosanitary requirements, by inspecting them prior to exporting and executing quarantine treatments if required.
- 2.22 The subcomponent will address weaknesses in the sub-systems of surveillance, education, and import and export services. Strengthening will be concentrated in: (i) implementation of effective monitoring systems at all ports of entry; (ii) implementation of effective survey and surveillance pest detection and local eradication actions; (iii) provision of information to importers, exporters and general public; and (iv) certification of exported agricultural products.
- 2.23 The subcomponent will finance hiring and deployment of technicians; training; acquisition of equipment and supplies; books and subscriptions; consultancies; public awareness campaign and technical communications; and refurbishing of laboratory facilities and supporting installations.

c) Animal Health enhanced (US\$2,318,000)

- 2.24 The Program will help Guyana to: (i) implement projects against foreign animal diseases such as Avian Flu, and ensure a more reliable food supply; (ii) maintain a surveillance system for the lists recognized by the countries of the region; (iii) implement the campaign of prevention, control and eradication of Bovine Tuberculosis and Brucellosis, and declaring areas free of infection; and (iv) protect the population against zoonoses. In addition, it will ensure Guyana's compliance with the basic quality standards/requirements contained in the OIE standards and the application of SPS measures of the WTO and help Guyana's producers to take advantage of the opportunities offered by open global markets and CARICOM/CSME.
- 2.25 It will address weaknesses in surveillance, trace-back, education, laboratory services, disease eradication and control. Strengthening will be focused on: (i) epidemiological surveillance and risk analysis through the establishment of an Epidemiology Unit; (ii) establishment of the Veterinary Diagnostic Laboratory at Mon Repos, which will include civil works rehabilitation, equipment, appointment and training of personnel; and (iii) control over the movement of animals, products and sub-products, through the Inspection and Quarantine Section.
- 2.26 The subcomponent will finance hiring of requisite experts; training; acquisition and deployment of equipment and supplies; books and subscriptions; implementation of an animal health public awareness campaign; databases and record systems; updating methodologies to bring them up to international standards, manuals to standardize activities; rehabilitation and improvement of facilities; and an Epidemiological Surveillance, Risk Analysis and Livestock Identification System.

d) Food Safety and Quality Assurance (US\$1,306,000)

- 2.27 This subcomponent will help local industry to produce safer foods, increase public awareness of safe food handling and processing techniques, and minimize the incidence and economic impact of food-borne illness outbreaks.
- 2.28 It will: (i) promote the participation and fulfillment by the GOG of existing obligations and those that will be acquired with CARICOM/CSME related to regulations, diagnostic and control laboratories, and vigilance and surveillance systems; (ii) establish an integrated training system that will facilitate both inspection and advice to growers, processors, and packers in GAP, GMP and HACCP; (iii) consolidate the activities of the Inspection and Quarantine system at airport and frontier posts among the agencies; and (iv) reinforce the laboratory capacity of the FDD, the Veterinary Diagnostic Laboratory and the Plant Health Laboratory towards their accreditation by international agencies. New equipment and supplies will be acquired to modernize the laboratories supporting sanitary and food safety demand for analysis and diagnosis.

- 2.29 Main items to be financed under the component are: (i) individual experts; (ii) training; (iii) strengthening and upgrading health infrastructure for laboratories, quarantine and inspection posts; (iv) equipment and supplies to bring laboratories up to the level of GLP and begin the process of preparing them for laboratory accreditation; (v) scientific information services; (vi) a food safety and quality education programs; (vii) a training program for growers, packers and transporters in the basics of GAP, GMP, and HACCP for minimizing food safety problems; and (viii) consulting services for designing surveillance systems, food safety information systems and conducting pest risk analysis.

e) Pesticide and Toxic Chemical Control Board (US\$408,000)

- 2.30 The Program will finance (i) acquisition and deployment of equipment and supplies for the Pesticides Laboratory; (ii) training; and (iii) access to updated information through a peer international public institution regarding international regulations, proposals, country or regional blocks requirements.

4. Drainage and Irrigation Rehabilitation (US\$3,000,000)

- 2.31 This component will finance the rehabilitation of the drainage and irrigation infrastructure for the Canals Polder D&I area. Based on a feasibility analysis and an engineering design, these works will include primary and secondary drainage and irrigation channels, and water control structures. It will rehabilitate: (i) 55 Km of primary channels; (ii) 220 Km of secondary channels; (iii) 86 Km of service roads; (iv) 1 pumping station; and (v) 130 sluice gates.

C. Cost and financing

- 2.32 The Bank's financing will be provided in accordance with the new concessional financial framework, using a blend of resources from the Single Currency Facility of the Ordinary Capital and from the Fund for Special Operations (FSO), in the proportion established in that framework for Guyana.
- 2.33 The Program requires counterpart financing since it will finance recurrent expenditures that requires a medium term transition towards adequate levels of domestic financing to foster sustainability. Thus, the GOG, starting from year 2, will co-finance the costs associated with the activities under Component III in steps of 20% each year, so that at the end of the Program, it will budget 100% of recurrent costs for said component. As to the recurrent costs under Component I of the Program those costs will be assumed by the private sector over the execution of the Program based on the criteria set forth in the ORM.

Table 2: Program cost (In thousands of US\$)

Categories ¹	Bank (FSO/OC)	GOG	Total	%
1. Administration and Supervision	2,358	0	2,358	10.8
2. Direct Costs	16,592	949	17,541	80.0
2.1 Private Sector Entrepreneurship	5,979	0	5,979	27.3
2.2 Agribusiness export and facilitation services	2,541	28	2,569	11.7
2.3 Agricultural Health and Food Safety	5,372	621	5,993	27.3
2.4 Drainage & Irrigation Rehabilitation	2,700	300	3,000	13.7
3. Evaluation and Monitoring	300	0	300	1.4
4. Auditing	120	0	120	0.5
5. Contingencies	230	0	230	1.0
6. Financial costs	1,300	70	1,370	6.2
Total	20,900	1,019	21,919	100
Percentage by source of financing	95.4	4.6	100	

1 Taxes are included. Private sector co-financing is not included.

III. PROGRAM EXECUTION

A. The borrower, guarantor and executing agency

- 3.1 The borrower will be the Co-operative Republic of Guyana (GOG). The executing agency will be the Ministry of Agriculture (MOA).

B. Project execution and administration

- 3.2 The Program Administration: The Agricultural Services Development Unit (ASDU) will be responsible for managing the Program, including its planning, organization, staffing, procurement, finances and control. The ASDU is managed by a Director, who reports to a Steering Committee comprised of representatives from decentralized agencies involved in project execution. **Evidence that the Ministry of Agriculture has hired the additional personnel to the ASDU -a projects coordinator, an agricultural health and food specialist, a procurement specialist, a monitoring and evaluation specialist-, and has appointed as part of the Steering Committee of the ASDU a representative of the Ministry of Health, in accordance with the terms of reference previously agreed upon between the Executing Agency and the Bank will be a condition prior to the first disbursement of Bank resources.**
- 3.3 The ASDU has been created in July 2007 as an administrative body specialized in executing projects from the donor community on behalf of the MOA and its decentralized agencies, paving the way for a SWAp-ready agricultural sector. The ASDU would generate synergies among projects to enhance the diffusion of lessons learned, provide improved execution capabilities for a longer term and reduce overall administrative costs.
- 3.4 Component I: The operation of this component is envisaged as follows: each agribusiness cluster will be represented by a Working Group (WG) that will have a

consultative nature. This will be the instance in which the stakeholders interact both with each other and with the coordinator who will act on behalf of them. The coordinators of the chosen export clusters will in turn interact with the ASDU. Activities and investments are identified by the private sector members of each WG. This process is facilitated by the coordinator who will determine it's the cluster needs, which are to be met either by the activities offered by the Program or by government actions. The coordinator presents to the ASDU an annual plan, which includes: (i) the identification of public goods to be financed (see ¶2.4). The ASDU in turn evaluates this plan, establishing the targets for funding the activities, targets which are to be met by the members of the cluster and by the government agencies that will provide services under the AES and AHFSS components; and (ii) proposals for government actions that may enhance the cluster's business environment that lie beyond the scope of the Program. Responsibility for auditing the use of the instruments and compliance with the conditions lies within the ASDU.

- 3.5 Potential agribusinesses and current exporters will be invited to join the WGs. Eligibility criteria will be: (i) legally established firms; (ii) demonstrated interest in exporting as shown by criteria such as investments carried out in the cluster, experience in related exports, or business plan partially financed by the financial sector, input suppliers and logistic services providers; (iii) willingness to participate and co-finance the activities carried out under this component; (iv) willingness to engage in contract farming; and (v) compliance with domestic regulations and Bank's policies regarding environmental management. Farmers related to the clusters are also eligible.
- 3.6 To facilitate and support the execution of this component, the ASDU will hire the services of a specialized international agency or consulting firm to provide technical and operational assistance to the ASDU to carry out the specific subcomponents as well as to provide the services identified in each agribusiness plan. This specialized international agency or consulting firm will act as cluster coordinators for Component I. The need for outsourcing the activities under this component is based upon the following reasons: (i) public support for these activities will be phased out; which implies that exporters, farmers, and processors should fully pay for these services once the clusters have been consolidated; (ii) know-how and international networks need to be accessed for accessing markets and adapting technology; (iii) private investors require a signal that activities related to them will be executed in a timely fashion; and (iv) the logistics is more efficient since several services will be bundled in just one procurement process. **Evidence that a specialized agency or consulting firm has been hired by the Executing Agency to carry out the activities under this component, will be a condition prior to the disbursement of Bank resources for Component I of the Program.**
- 3.7 Business Plan Implementation Support: The Executing Agency will be responsible for the establishment of an independent expert panel comprised of government officials and private sector specialists, who will select the proposals that could be

funded by the Program. The specialized agency or consulting firm will: (i) keep minutes of the panel's decision and report them to the ASDU; (ii) prepare draft contracts between the beneficiaries and the ASDU. The content of said contract are defined in the Operating Manuals for the Program.; and (iii) supervise the implementation of the agribusiness plans. Once the plans are approved and actual benchmarks and results previously agreed upon between the Executing Agency and the beneficiaries are met, the ASDU will allocate the corresponding funds directly to the beneficiaries. **Evidence that two hundred thousand dollars (US\$200,000) of the resources allocated for the financing of the livestock business plans under component I of the Program, will be a special condition to the disbursement of Bank resources for the construction, equipment and operation for the basic abattoir.**

- 3.8 Component II: The MOA will execute this component with the support of specialized public agencies. This support is provided by Memorandums of Understanding that have been already agreed and signed between the Ministry of Agriculture and the following decentralized agencies to support the Program's clusters through public services: (i) NARI and NDDP for the implementation of research and development partnerships with farmers and processors; (ii) GLSC and Go-Invest for a pilot project to allocate land to investors within a set of prioritized products by the Ministry of Agriculture; and (iii) NGMC for market information services⁴.
- 3.9 The MOUs define the scope of the work and responsibilities for each party. Each year the ASDU and the decentralized agencies will prepare the AOP for their respective subcomponents.
- 3.10 For the support of research and development partnerships, the draft annual plans for each cluster will be prepared by NARI and NDDP respectively; and will be agreed upon with the WG who will consolidate them to seek approval by the ASDU. The NDDP and NARI will help the WG through the cluster coordinator and the MOA in selecting the International Partner(s) for Technological Assistance (ITA) for each cluster.
- 3.11 NARI's researchers will be involved in the introduction of the genetic commercial material to be screened for selecting the most suitable; the validation of the technology and the implementation of pilot plots. NARI will also be responsible for: (i) multiplication of genetic seeds; (ii) quality control of seeds and seedlings; (iii) sanitary quality of seeds and seedlings, jointly with the Plant Health Unit to assure compliance with sanitary standards; and (iv) storage of germplasm. NARI will also help to organize the private sector to multiply and commercialize seeds and seedling to the growers since it is responsible for furnishing the basic seeds to the private sector for multiplication. NARI will also have the responsibility for supervising the field multiplication as well as the laboratory seed analysis services.

⁴ See technical annex. The MOUs came into effect on signing and remains in force for a duration of five years.

- 3.12 NDDP staff will be in charge of all the activities regarding introduction and validation of beef cattle technology, including the introduction of the pasture varieties, in close partnership with NARI.
- 3.13 Component III: An agricultural health and food safety committee will provide guidance in the development of a comprehensive policy and its strategic plan; define areas of collaboration among agencies and stakeholders; and conduct the process towards a modern and simpler system with fewer organizations.
- 3.14 The National Coordinating Committee for Sanitary and Phytosanitary Matters main responsibilities will be to: (i) recommend legislative initiatives on the matters within its sphere of responsibilities; (ii) establish the measures and processes that best serve the interest of Guyana in cases of consultations and dispute settlement related to international marketing of agricultural and food products; (iii) ensure that Guyana discharges its obligations to the WTO Committee on SPS Measures in Geneva; (iv) facilitate the policy input and technical work required for all projects designed to impact on agricultural health and food safety; and (v) ensure that national and sectoral policies are harmonized and compatible with current international policies and standards.
- 3.15 **Evidence that the National Coordinating Committee for Sanitary and Phytosanitary Matters has been created, its members appointed and its rules of procedure have been approved will be a condition prior to the first disbursement of Bank resources for the Program.** The committee shall consist of senior technical representatives from all health units from the MOA and MOH related to the Program, GNBS, Ministry of Finance, members from the private sector and the ASDU.
- 3.16 Each health unit, on a yearly basis, identifies its activities and related investments. The specialist, who articulates with the health units and determines its needs, facilitates this process and prepares the Annual Plan of Operations for the component. An international agricultural health and food safety agency will provide technical assistance to the ASDU to design the eradication campaigns, provide training services, institutional best management practices in health, design the information systems, the public awareness campaigns, and conduct evaluation services for the component. **Evidence that the specialized international agency has been hired by the Executing Agency to carry out the technical assistance under this component will be a condition prior to the disbursement of Bank resources for Component III of the Program.**
- 3.17 Component IV: The ASDU will rehabilitate the Canals Polder D&I system, benefiting from the execution scheme already in place for the ASSP.
- C. Programme Operating Regulations**
- 3.18 A draft operating regulations manual that establishes basic operating procedures for the Program has been agreed upon between the Bank and the Executing Agency.

This Manual sets forth administrative and financial rules, instruments and procedures for carrying out routine operational tasks. The ORM sections that deals with the WGs and the subcomponent for supporting the implementation of agribusiness plans has been agreed in consultation with private sector stakeholders. **Evidence that the Operating Regulations Manual for the Program has entered into effect will be a condition prior to the first disbursement of Bank resources.**

D. Procurement of goods and services

- 3.19 The procurement of goods and services, the contracting of works, and the selection and contracting of consulting services will be carried out by the Executing Agency in accordance with Bank policies and procedures set forth in documents GN-2349-7 and GN-2350-7. International Competitive Bidding (ICB) will be used for procurements of works in amounts greater than or equal to the equivalent of US\$1 million. Works costing less than US\$1 million and more than US\$100,000 will be contracted through national competitive bidding (NCB) and by price shopping for contracts costing US\$100,000 or less. ICB will be used for procurements of goods and related services in amounts greater than or equal to the equivalent of US\$100,000. For goods and services costing less than US\$100,000 but more than US\$25,000, NCB will be used. For contract in amounts equal to or less than US\$25,000 shopping procedure will be used. Consulting services costing US\$100,000 or more will be announced internationally. Short lists composed exclusively of national consultants may be used for contracts under US\$100,000. The Procurement Plan of the Program in Annex II indicates the procedure to be used for procurement; the cases requiring prequalification; the estimated cost of each contract or group of contracts; the requirement for prior or post review by the Bank; and estimated dates for the publication of specific procurement notices and completion of the contracts included in this Program.
- 3.20 Revolving fund: To ensure that the Executing Agency has timely access to funds for Program execution, it is recommended that a revolving fund of up to 5% of the total loan amount be advanced to the ASDU for eligible expenses to be paid by it.
- 3.21 Special disbursement: After the Loan Agreement has been signed, and has entered into effect, and the Borrower has complied with the conditions prior to first disbursement set forth in the General Conditions of the Loan Contract, the Bank may authorize disbursements up to the amount of US\$500,000 chargeable to Bank resources, in order to help the Executing Agency to comply with the special conditions prior to first disbursement.
- 3.22 The basic abattoir upgradeable for exports markets: The construction of the abattoir will be procured under a public-private participation scheme (i.e. BOTs arrangements) under a Performance-Based Procurement contract. The concessionaire shall be selected under International Competitive Bidding procedures that will use evaluation criteria such as the performance specifications of the facilities offered, and the cost charged to the user. The selected

concessionaire in this manner shall then be free to procure the goods, works and services required for the facility from eligible sources, using its own procedures as established in ¶3.13 of document GN-2349-7. The Bank's financing will apply to the design, and construction of the abattoir facility, its equipment, and its operation and maintenance for a defined period of years after its commissioning. A two-stage bidding shall apply⁵.

E. Disbursement schedule

3.23 The disbursement period of Bank resources will be five years.

Table 3: Estimated Schedule of Disbursements by Year of Execution (1000 US\$)

Financing Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total	%
IDB	3,700	5,960	4,860	3,330	3,050	20,900	95.4
GOG	30	110	279	320	280	1,019	4.6
Total	3,730	6,070	5,139	3,650	3,330	21,919	100.0
%	17	28	23	17	15	100.0	

F. Monitoring and evaluation

3.24 The Evaluation and Monitoring System (EMS) allows for the Program to: (i) assess the Program's economic and social impacts on the beneficiaries; (ii) follow-up periodically Program performance, risk management and environmental-social indicators; and (iii) generate learning and feedback processes from the Program that may be useful for similar clusters or for extending the Program.

3.25 The EMS has been implemented and it comprises of a set of guidelines⁶ and resources for its execution. The guidelines establishes: (i) a work-plan for the execution of EMS; (ii) the logical framework attached as Annex I, with an additional Extended Means of Verification module that specifies the sources, method for data collection, and responsible method of analysis frequency and application; (iii) a PERT module that links the dependencies for the Program's events; (iv) quarterly progress reports that will be prepared by the ASDU; and (v) meetings with each WG coordinator to identify implementation issues. This set of instruments will help to detect early execution issues. The EMS will flag an alert if there is lack of compliance or delay on execution of key events.

3.26 The logical framework and the EMS show the baseline for the Program. A farm household survey was completed for the ASSP that complements the baseline with socio-economic data. However, the baseline situation of the pests and diseases that could affect the export plans is not known with certainty, thus its confirmation

⁵ Under a two-stage bidding procedure, invitations are requested for unpriced technical proposals on the basis of a conceptual design or performance specifications, subject to technical as well as commercial clarifications and adjustments, to be followed by amended bidding documents and the submission of final technical proposals and priced bids in the second stage.

⁶ See more details in the technical annex "Guidelines for the Evaluation, Supervision and Monitoring System", which is also an appendix of the Program's ORM.

hinges upon implementing the Program. According to Guyana's health units, the country has a high level of agricultural health in the country since it is free from black sigatoka, moko, mealy bug, fruit flies and foot-and-mouth disease, among others. Program design has taken this as prior information and assumed that these pests are not present.

- 3.27 In addition to the monitoring and evaluation specialist proposed for the ASDU, the clusters' coordinators will carry out activities that will feed into to the monitoring and evaluation system that will be under the responsibility of the ASDU. These activities will be: (i) collect and process the data regarding the indicators that pertain to the PSE component specified in the EMS; (ii) conduct the surveys to farmers, exporters and agribusiness according to the EMS; and (iii) report on the results of the quality of services surveys provided to the WG members.
- 3.28 ASDU will ensure that counterpart funds are requested from the Ministry of Finance according to the budget preparation process. No later than November 30th of each year, the ASDU will submit to the Bank an operating plan for the following year and will update the PERT. This plan will also contain an evaluation of the results obtained during the previous period, and may include a justification and recommended actions regarding the goals not achieved during the analyzed period.
- 3.29 Reports: The Executing Agency will collect, store and retain information, indicators and parameters, including the annual plans, the mid-term review, and final evaluations, to help the Bank prepare the Project Completion Report. During Program implementation, the ASDU will present to the Bank semi-annual progress reports, to be presented within 30 days of the end of the semester, summarizing the execution and financial highlights of the period. The report will also take into consideration the indicators of the Logical Framework and other agreed goals.
- 3.30 Mid-term evaluation: The mid-term review will be undertaken after committing 50% of loan resources, and reaching the following events: (i) at least three technological packages adapted for export markets; (ii) working groups established and operating according to their annual plans for at least two clusters; (iii) animal health and food safety regulations enacted; (iv) eradication program for bovine tuberculosis and brucellosis for regions 1, 2 and 3 completed; (v) at least ten business plans supported; and (vi) sustainability plan for the AHFSC prepared. The ASDU will also undertake the agricultural health evaluation known as PVS – "Performance, Vision and Strategy". A mid-term review mission will discuss with the MOA the results from the implementation of each component and review the plan of the activities for the remainder of the Program.
- 3.31 Final evaluation: A final evaluation comprised of impact evaluations, as well as process evaluations, will be financed with project funds and will take place when 95% of loan resources are disbursed. The evaluation will assess the implementation of the Program and will document outcomes in participating agencies following the EMS guidelines.

- 3.32 Ex-post evaluation: The GOG will conduct an *ex-post* evaluation five years after the project ends. The EMS guidelines specify its budget, data required and methodology.

G. External financial audits

- 3.33 The ASDU shall present to the Bank annual audited financial statements of the program within 120 days of the end of each fiscal year, and a final financial statement, to be submitted within 120 days after the date of the last disbursement for the project. The audit reports will be prepared in accordance with terms of reference previously approved by the Bank. An independent auditor, acceptable to the Bank, will carry out the auditing of the Program's financial statements under the Bank's requirements and will be selected under the Bank's bidding procedures (Document AF-200). The audit costs will be financed with resources of the loan.

IV. VIABILITY AND RISKS

A. Institutional viability

- 4.1 The institutional viability analysis focuses on the execution capabilities of the ASDU, the decentralized agencies, private sector readiness and on the sustainability of government services after the project ends.
- 4.2 An Institutional Strengthening Plan (ISP) was prepared and agreed upon with GOG for the ASDU (ex-PEU)⁷ that applies the Institutional Capacity Assessment System (ICAS) methodology. ICAS rated the ASDU as exhibiting an overall medium risk and also showed a medium level of institutional development. The ISP focuses on improving: (i) the financial planning and organization of the ASDU; (ii) the planning and management capabilities of the unit, especially on procurement and human resources; and (iii) the internal control capabilities. The ASDU capabilities are complemented with the outsourcing of entities for Components I and III; as well with the MOUs agreed with semi-autonomous agencies that exhibit good execution track records. The GOG counterpart resources are also feasible for the Project as shown below.
- 4.3 Eligible members of the clusters have agreed to become members by signing a letter of commitment to the Program's basic principles and operating regulations. Indicative first year action plans for the clusters have also been prepared with active participation of the WG's initial members⁸. Furthermore, an agreement was reached within each cluster to initiate coordination activities for the cluster's institutional arrangements. The fruit and vegetable cluster currently comprise of 13 exporters and the Guyana Agricultural Producers Association (GAPA). The livestock cluster comprises of the largest cattle raising farmers in Guyana as well as

⁷ See "Assessment Report for the Programme Executing Unit, Ministry of Agriculture".

⁸ See technical annex "Proposal for Private Sector Entrepreneurship".

the West-Berbice Abary Cattle Rancher Association that has 295 producers, most of them small. The NAAG includes at least 8 private sector entrepreneurs with interests and investment in the sector. It includes Go-Invest, Institute of Private Enterprise Development, and an ex-officio Manager of the pioneering Mon Repos Aquaculture Research Station, of the Ministry of Agriculture.

B. Socioeconomic viability

- 4.4 Except for meat products, which Guyana used to export back in the sixties, the selected products are currently being offered and exported. These products: (i) are not exotic-type products, but well-known with established distribution and export markets; (ii) exhibit a nearly perfect elastic demand for Guyanese exports; and (iii) are being exported by Guyanese firms that hold business relationships with importing countries' fruit and vegetable dealers. These exports may increase from their current low base by focusing in niche markets for the prioritized products⁹. Certain specialized market niches for Guyana were identified as potentially attractive. These include: (i) ethnic market involving slaughter under particular protocols; (ii) organic and natural market; and (iii) special cuts. These niches have growing demand, would not require a high-volume process system, neither advanced equipments nor technologies in the initial stages.
- 4.5 The criteria used to select specific products within each cluster are based upon: (i) on-going embryonic entrepreneurship initiatives; and (ii) high potential returns for products along the supply chain. The analysis concluded that these products offer the greatest export growth potentials in value terms: peppers, pumpkins, pineapples, plantains, tilapia, and meat products.
- 4.6 The scale of the Program's activities has been estimated as derived demands from the value of expected exports. Driver variables related to these expected values were used such as number of beneficiaries for activities related to training, transfer of technology, and business plans; volume of expected exports for the abattoir; number of expected research trials for each of the prioritized products; land area needed for the land access component. The agricultural health and food safety's staff and health infrastructure have been scaled as a function of the minimum needed to provide services to conform to international agreements. The latter investments are lumpy; common health assets that serve other demands such as avian flu programs as shown below. The goods and services needs for agricultural health services have been estimated from the number and size of the eradication and surveillance programs.
- 4.7 The existence of an underlying demand for the activities related to supporting business plans was shown by the CARIFORUM Agribusiness Research & Training

⁹ GMC with the assistance of USAID has prepared rapid reconnaissance surveys for Guyanese products in 12 Potential markets such as Toronto, New York, Northern Brazil, Barbados and London. A detailed meat market studies shows, for instance, that the amount of beef that Guyana can export into the CARICOM region is relatively small and would not influence the price paid for beef within the Region. Best prospects for beef export Trinidad & Tobago, Barbados and, specially, Curacao.

Fund (CARTF) that supported research and transfer of technology. The CARTF ended in 2004. Annual disbursements for Guyana were US\$165,000, where the grants ranged between US\$6,000 and US\$49,000 each to 9 agribusiness applicants out of a total of 28 requests within a two-year execution period.

- 4.8 Total private investment needed for the Programme has been estimated at US\$3.6 million per year. Following a top-down estimation, overall annual investment for agriculture is about US\$28.8 million. Thus, the agriculture's private investment for the programme represents 12.5%, a reasonable share that is currently being financed by domestic financial resources. The Guyanese financial sector is relatively sizeable with a total asset base of US\$1.19 billion, which represents almost 1.5 times its GDP. According to a survey realized with local banks, lending conditions for SMEs are similar to the ones for the corporate sector. The average nominal lending interest rate charged to SMEs is 16% per annum. A bottom-up analysis has also been conducted by identifying the profile of each of the members that have participated in the Program's meetings during preparation that shows that these members do have access to commercial and other financial resources¹⁰. Notwithstanding the above, WG coordinators will support access to financial resources as part of the approval process of the business plans; and will also provide technical assistance for proposing financial arrangements due to existing high collateral requirements and lack of working capital schemes such as factoring and trade credit that are almost non-existent in Guyana. The activities related to promoting access to land for Greenfield investments as well as to the abattoir would channel foreign investment into the clusters. Previous experiences in privatization of state assets such as rice mills, and in new agribusiness investments such as a US\$16.5 million poultry farm, a US\$2 million fruit juice factory, and a US\$0.6 million packing facility, show that private investments have been forthcoming into the diversification initiatives. Applications for EPA permits for agribusinesses have averaged five per year.
- 4.9 Land for promoting livestock investments is available¹¹. In Region 5, there are two areas with potential for cattle development comprising about 23,000 acres. In Region 6, the identified area is located east of the Berbice River, where there are approximately 109,000 abandoned acres that could be rehabilitated. For Region 10 an area of approximately 35,000 acres has been already identified.
- 4.10 A pre-marketing test was conducted aimed at identifying expectations from potential international stakeholders (i.e. producers, exporters, importers, abattoir operators) to participate in Public Private Partnership (PPP) in Guyana within the livestock cluster¹². At this current stage, international private firms' interviewed have shown limited interest in construction works and project management services. Trading interest could be developed in the mid-term, after an initial

¹⁰ A technical file has been prepared for a database that lists each WG potential member with a description of his/her business interests.

¹¹ The technical annex "Strengthening land administration for Greenfield land-related investments", identifies land areas for potential investors, the current land use, and current land administration capabilities.

¹² Thirty-seven stakeholders were contacted, from which seventeen responded positively to the interviews.

country's export experience. As a critical point, local investors are expected to participate.

- 4.11 To estimate the economic returns from the Program¹³, the following benefits have been estimated: (i) benefits accruing from increased exports; (ii) benefits generated by the eradication of animal diseases and from the prevention or avoidance of entrance of new diseases; (iii) benefits corresponding to the losses avoided in crop production originated by the operation of the plant health sub component; and (iv) benefits from increased productivity due to rehabilitation of the Canals Polder D&I area. A 20-year time horizon has been assumed for estimating the economic returns. From year 5 to 20, 5% of the total program costs of the initial five-year period in order to keep the program running after the capital costs have been completed. Shadow prices have been used to estimate the economic returns.
- 4.12 The results obtained show that at a 12% annual capital cost, the Net Present Value (NPV) of the project is US\$10.6 million, thus being an acceptable Program. The Internal Rate of Return (IRR) turns out to be 23%¹⁴.
- 4.13 Benefits due to export increases have been estimated as the export volume quantities times the unitary margins for each product. Export benefits are expected to start in year two at US\$519,000, reaching US\$4.3 million by year 20.
- 4.14 Benefits generated by eradication of animal diseases and prevention or avoidance of entrance of new diseases include: (i) eradication of Bovine Tuberculosis (TB); (ii) eradication of Brucellosis; (iii) avoidance of an outbreak of Foot and Mouth Disease (FMD); and (iv) program to prevent the introduction of Avian Influenza (AI). The expected benefits for Guyana regarding eradication and prevention of animal diseases, and plant health are US\$3.9 million and US\$3.1 million in present value terms, respectively. The benefits accruing to the drainage and irrigation infrastructure is US\$3.4 million in NPV terms.

C. Financial viability

- 4.15 The financial viability of the Program has been analyzed in terms of the availability of counterpart resources for the Bank Loan, as well as the capacity of GOG and private sector to meet incremental recurring costs associated with investments in the Program. With respect to counterpart funds, the GOG's annual contribution at most will represent 2.1% of MOA's annual budget. Thus, counterpart obligations are not expected to be a risk to the Program. The estimated incremental costs of the program activities are US\$600,000, which can be considered as a minor increase in the GOG's public expenditure. Cost recovery regarding agricultural health and food safety services would also contribute to the Program's financial sustainability. An analysis of a subset of services suggests that it may reach US\$450,000 annually

¹³ The detailed methodology and computations are shown in the Technical File "Agricultural Export Diversification Programme. Report on Economic and Financial Feasibility".

¹⁴ The computations do not take into account the value of creating real options for export diversification.

once the demand for services is expanded, the tariffs established and the bill collection system is properly organized and implemented.

- 4.16 The MOA manages an annual budget of over US\$10.5 million. Recurrent costs represent approximately 63% of the annual budget. Incremental recurrent costs related to the strengthened health units will amount to US\$280,000 annually. The increasing co-financing share from GOG budget that will reach 100% of incremental recurrent costs will contribute to the Program's sustainability.
- 4.17 Private sector recurrent costs arise mainly from the administrative costs to run the Working Groups for the clusters, which amounts to US\$144,000/year. The cluster members will finance 50% and 80% starting at year 3 and year 4, respectively. It is expected that if the Working Groups are successful, these would evolve towards formal associations where their members should start paying their administrative costs. Similar experiences have been recorded in other settings. Otherwise, the outcomes for the Program will be jeopardized.

D. Environmental and social impacts

- 4.18 An Environmental Assessment (EA) with a complementary Environmental and Social Management Plan (ESMP) were prepared as part of project preparation. The EA looked into the investment plan of the program, evaluated the legal and regulatory framework and assessed the potential environmental and social impacts of the program. The EA identified the various environmental and social direct, indirect and cumulative positive and negative impacts associated with the various components of the Program. In seeking to identify these impacts the report analyzed the Program's main activities. Furthermore, as far as possible, the analysis sought to divide the impacts into those associated with the design, construction and operational phases of the project as the impacts from the closure are anticipated to be negligible. The main positive impacts refer to the environmental improvement of agricultural practices, the increase of the traceability of products, the improvement of genetic quality and the improvement of sanitary and phytosanitary standards of the country. The main negative potential impacts, mostly indirect, are increase of agro-chemical usage causing contamination of surface water with pesticides, generation of residues from pesticide laboratory, increased eutrophication due to over-fertilization of crops, land use conflicts and soil contamination. Special consideration is given to the construction of the abattoir.
- 4.19 Based on the findings of the EA, the ESMP describes mitigation measures for the more significant impacts and explains the monitoring arrangements regarding its main recommendations that will be part of the monitoring and evaluation system of the program. The ESMP states that the positive impacts of this project greatly outweigh the projected negative externalities. Many of these negative externalities will be mitigated through having an effective and efficient environmental and social monitoring program as regards to water and soil quality. Additionally, training and awareness building amongst farmers and ranchers are seen as critical to encourage operatives towards the adoption of best management and

environmental practices. Also, the Plan advocates for greater institutional collaboration and information sharing within a country with limited human resources to ensure the best usage of these resources and protecting the integrity of the biophysical and social environments.

- 4.20 The ASDU will work with the MOAs' extension division to train farmers on pesticide handling and management and to prepare a system involving the pesticide providers to recycle pesticide containers and safely dispose them. The variable to be monitored is the number of events of pesticide poisoning and percent of recycled containers. The ASDU will carry out public awareness campaigns on pesticide management and pathways for chemical poisoning, unsafe use of drainage canals for recreation (fishing and swimming), safe methods for non-edible carcass solid wastes and wastewater disposal and disclosure of water and sediment quality data for community awareness.
- 4.21 As part of the monitoring plan of the program, in the case of the water quality parameters, there will be collection of samples in the drainage canals before and after as representative samples of residential areas and drainage outfalls. Parameters for water quality will include total suspended solids, pH, total nitrogen, phosphates, nitrates and biological oxygen demand for the fruits and vegetables sub-sector; and fecal contamination for the cattle sub-sector. Regarding soil samples, focus will be put on identifying network benchmark sites established on farms fields across the agricultural sites in project areas. These sites will represent soil landscape patterns common to the entire project areas and will be conducted by NARI that has the equipment to do so currently.
- 4.22 In addition to the sample analysis of water and soil, the monitoring framework includes environmental clearance for the Program from EPA; compliance with local legislation for the construction of the abattoir, which will require an Environmental License; and the inclusion of environmental considerations in the progress reports to be submitted by the ASDU, among others (full details are in the ESMP that is also included in the Program's ORM as an appendix).

E. Benefits and Beneficiaries

- 4.23 Program's expected benefits are: (i) non-traditional agricultural exports increased; (ii) additional foreign markets accessed by Guyanese exports; (iii) private investment on non-traditional agribusiness sector increased; (iv) food safety enhanced to protect consumers from health hazards; and (v) agricultural productivity increased due to better technology and health services.
- 4.24 Main expected results for the Program's components are: institutional arrangements implemented for promoting and managing the agricultural diversification process; critical support services for agricultural diversification strengthened; shared-facilities related to non-traditional exports implemented and operated under private-sector participation schemes; administrative procedures for entering into agribusiness initiatives improved; readiness for becoming an incipient beef exporter

in the fifth year of the Program completed; and agricultural health and domestic food safety improved.

- 4.25 Project beneficiaries include: (i) 12,400 rural households; (ii) 1,630 farmers trained in good agricultural practices; (iii) 10 agro-processors; (iv) 100 agricultural technology educators; (v) 170 technicians trained in GLP; (vi) 40 officers from research and transfer of technology institutions; and (v) domestic consumers of fruit, vegetable and meat products.

F. Risks

- 4.26 The technical annex “Risk Assessment” elaborates on the full set of risks, including a risk analysis process, a risk rating matrix, and mitigation measures. The main Program specific risks and their respective mitigations measures are:
- 4.27 Institutional coordination failures: The Program’s activities may exhibit relevant lags, when coupled with the highly complex task of coordinating each step in the introduction of new varieties and breeds, which may jeopardize reaching the outcomes at the expected timeline. The hiring of the specialized agency, the application of the institutional strengthening plan for the ASDU and the specification of the monitoring system will mitigate this risk.
- 4.28 Sustainability after the Program ends in terms of funding and retaining adequate staff to carry out the provision of public export services: This risk depends upon two main issues: (i) the legal framework to retain experts and pay competitive salaries; and (ii) the budget needed to support the increase in personnel expenses. Regarding the first issue, the agencies that will participate in the Program’s execution already have semi-autonomous status, except those related to the health units. The establishment of semi-autonomous agencies, supported by the Program for the agricultural health services, would ensure the sustainability for these services since this regime allow competitive salaries. Previous experiences from semiautonomous agencies that were formerly administrative units within the MOA, showed that the semiautonomous status helped these agencies to achieve financial sustainability as well as retain their technical experts. However, in lieu of its creation, the hiring of experts under temporal contracts is another open legal option common in Guyana. Regarding the budget resources, the incremental annual funding needed to keep the experts and pay for other concurrent costs is no more than US\$500,000. As shown in the financial feasibility, the GOG should have the resources to cover this incremental expenditure. Program design will help mitigate this risk by: (i) strengthening the private sector, who ultimately are those who will demand effective services as shown from lessons learned in other settings; and (ii) requiring a Sustainability Plan to be prepared by midterm evaluation to elaborate on the sources of funding, including those from charging services to users.

GUYANA
AGRICULTURAL EXPORT DIVERSIFICATION PROGRAM (GY-L1007)

ANNEX I – LOGICAL FRAMEWORK

SUMMARY	INDICATORS	MEANS OF VERIFICATION ¹	ASSUMPTIONS
GOAL			
Contribute to increase Guyana's export growth rate and reduce its volatility.	<p>Five years after the Project ends:</p> <ol style="list-style-type: none"> Exports under contract farming for supported products increase from US\$216,000 to US\$5.6 million. Meat exports increases from US\$60,000 to US\$US\$7.2 million exports. Aquaculture exports increases to US\$ 6.5 million Private investment in the prioritized products for the Project's areas increases to US\$ 19 million. Foreign investors or traders with technical expertise engaged in joint ventures with local farmers. 	<ul style="list-style-type: none"> Sector statistics. Reports prepared by the Agricultural Sector Development Unit. Statistical impact evaluation model as specified in the Evaluation and Monitoring Guidelines. Go-Invest annual reports 	<ul style="list-style-type: none"> Country free of catastrophic flooding disasters. Real exchange rate is aligned with market fundamentals. Political establishment supports the project.
PURPOSE			
Establish services and institutions for a sustainable increase in the income derived from the export of non-traditional agricultural exports in the aquaculture, fruits and vegetables, and livestock subsectors; enhancing the protection of domestic consumers from illness, and domestic production from disease and contamination.	<p><u>Program:</u> (Indicators to be used at the end of the Project)</p> <ol style="list-style-type: none"> Country kept free from fruit fly and pink mealy bug; and from foot-and mouth (FMD) disease. Autonomous agricultural health agencies, established and providing health services for exporters. 	<ol style="list-style-type: none"> Reports from health agencies surveillance systems. Standardized Evaluation PVS "Performance, Vision, and Strategy" for health services. Acts granting semi-autonomous status approved and enacted; budget allocated for agencies; and rates charged for agricultural health services. 	<ol style="list-style-type: none"> Infrastructure and logistic services are non-binding restrictions to increase exports. Willingness to cooperate among cluster members.

¹ See the "Evaluation and Monitoring Guidelines" report for a section on "Extended Means of Verification" that elaborates on data sources and methods for carrying out the evaluations.

SUMMARY	INDICATORS	MEANS OF VERIFICATION ¹	ASSUMPTIONS
PURPOSE			
	3. Private sector institutional arrangements for aquaculture, livestock, and fruit and vegetables clusters, consolidated. 4. NARI, NDDP, and the Aquaculture Research Station at Mon Repos services to support private sector research and transfer of technology needs, strengthened. 5. Procedures and systems for facilitating access to land for agribusiness investors, and standard incentive regime for the sub-sectors, approved and implemented by GLSC and Go-Invest. 6. Public awareness on good sanitary practices, ratings increased from poor to fair. 7. Bovine Tuberculosis (BT) and Brucellosis, eradicated in regions 1,2 and 3. 8. Shared-facilities related to non-traditional exports implemented and operated under private-sector participation schemes 9. Samples for trial beef exports to higher-value markets, ready.	3. Annual Reports prepared by each cluster showing activities, financial statements, and members contributions. 4. Project reports from the Project's monitoring and evaluation system. 5. Procedures and standardized procedures approved by GLSC, and GO-Invest. Project reports from the Project's monitoring and evaluation system. GO-Invest reports. 6. Surveys conducted to farmers, city dwellers, agro processors, fresh wholesale markets, food retail stores. 7. Reports from the animal health unit agencies. 8. Project Completion Report 10. Project Completion Report	
1. Private Sector Entrepreneurship into agribusiness promoted: To support the organization and foster private initiatives to increase exports of the Aquaculture, Fruits & Vegetables and Beef Cattle clusters.	<u>Program:</u> (indicators to be used at intermediate evaluation) 1.1 Institutional arrangements established and operating for the three chains. 1.2 Communications Plan designed and implemented.		

SUMMARY	INDICATORS	MEANS OF VERIFICATION ¹	ASSUMPTIONS
	<p><u>Fruit & Vegetable Productive Chain:</u> (intermediate evaluation)</p> <p>1.3 At least 9 contractual arrangements among exporters, farmers, and processors agreed.</p> <p>1.4 At least 7 business arrangements facilitated between importers and Guyanese exporters.</p> <p>1.5 At least 4 Research and Development Partnerships established.</p> <p>1.6 At least one Quality Improvement Program for the domestic market developed.</p>	<ul style="list-style-type: none"> • Project progress reports. • Annual Quality of service surveys/in-depth interviews conducted to stakeholders for each chain. • Annual farm, processing units, and consumer's surveys as specified in Evaluation and Monitoring System. • Surveys conducted to government officials. • Intermediate Evaluation • Project Completion Report. 	<ul style="list-style-type: none"> • Drainage and irrigation systems well managed. • Adequate overall business climate.
	<p><u>Fruit & Vegetable Productive Chain:</u> (end of the project)</p> <p>1.10 At least 16 business plans supported.</p> <p>1.11 At least 5 new varieties and technological packages for the prioritized products adopted by the beneficiaries.</p> <p>1.12 70% of the procurement contracts among farmers and exporters rated as satisfactory by both parties.</p> <p>1.13 At least 4 annual plans carried out with satisfaction for both parties (PEU and WGs).</p>		
	<p><u>Livestock Productive Chain:</u> (intermediate evaluation)</p> <p>1.16 Identified parcels . for the cattle enclave in Regions 5 or 6 (Intermediate Savannahs).</p> <p>1.17 At least one Research and Development Partnership established.</p> <p>1.18 At least 2 Technological Missions completed.</p> <p>1.19 At least 180 beneficiaries trained in best practices management.</p>	<ul style="list-style-type: none"> • Project progress reports. • Surveys conducted to members of each chain. • Surveys conducted to government officials. • Intermediate Evaluation. 	<ul style="list-style-type: none"> • Other local abattoirs will raise their standards or lose market share.

SUMMARY	INDICATORS	MEANS OF VERIFICATION ¹	ASSUMPTIONS
	<p>1.20 Marketing test for PPP mechanisms in livestock sector, conducted.</p> <p>1.21 At least three contractual arrangements to supply cattle to the abattoir.</p>	<ul style="list-style-type: none"> Project Completion Report. 	
	<p><u>Livestock Productive Chain:</u> (end of the Project)</p> <p>1.22 At least 7 business plans implemented.</p> <p>1.23 Technological package for beef cattle-raising adopted by beneficiaries.</p> <p>1.24 An abattoir implemented that comply with basic international sanitary standards with a capacity of at least 12,000 animals per year, expandable through increase in labor shifts to up to 30,000 animals, managed and owned by the private sector.</p> <p>1.25 At least 4 annual plans carried out with satisfaction for both parties (PEU and WGs). At least 250 beneficiaries trained in best practices management.</p>		
	<p><u>Aquaculture Productive Chain:</u> (intermediate evaluation)</p> <p>1.26 Newly formulated feed on-farm tested.</p> <p>1.27 Optimal hatchery conditions and practices established.</p> <p>1.28 Best practices for farm production of semi-intensive tilapia aquaculture established</p> <p>1.29 At least 40 technicians trained under the new certificate course in aquaculture offered by Guyana School of Agriculture.</p>	<ul style="list-style-type: none"> Project progress reports. Certification Bodies (WWF, Aquaculture Certification Council) 	
	<p><u>Aquaculture Productive Chain:</u> (final evaluation)</p> <p>1.30 At least 5 business plans implemented.</p> <p>1.31 Industrial standard certification obtained from certification bodies.</p>		

SUMMARY	INDICATORS	MEANS OF VERIFICATION ¹	ASSUMPTIONS
	1.32 At least 4 annual plans carried out with satisfaction for both parties (PEU and WGs).		
2. Agribusiness export and facilitation services provided: Its purpose is to focus on strengthening public services needed to support the selected agribusiness productive chains, specifically: i) technology development and transfer; ii) market information; and iii) access to land.	<u>Support to technology development & transfer:</u> (intermediate evaluation) 2.1 At least two agreements in place between International Institutional Partner for Technical Assistance (ITA) and national research institutions (NARI-NDDP). 2.2 Breeding station and manipulation laboratorial facilities built and operative for the NDDP. 2.3 Seed Laboratory equipment acquired for NARI. 2.4 Forty staff from NARI and NDDP trained.	<ul style="list-style-type: none"> • Project progress reports. • Intermediate Evaluation. • Project Completion Report • Agreements between NARI and peer institutions signed and implemented. • Agreements to adapt and transfer technological packagers among DIAs, and NARI. • NARI's research and evaluation reports. • NARI's Printed and on-line publications. 	
	<u>Support to technology development & transfer:</u> (end of the project) 2.5 Genetic banks of improved cattle (bulls and cows) for breeding purposes, established by NDDP. 2.6 Technological package for beef cattle-raising validated and transferred to beneficiaries by NDDP. 2.7 NARI's capacity strengthened to serve productive chains: at least 5 new varieties and technological packages for the prioritized products acquired, adapted, transferred, and disseminated for the prioritized products	<ul style="list-style-type: none"> • NDDP's research and evaluation reports. • NDDP's Printed and on-line publications. • NGMC publications and reports. • Consultant's report. 	

SUMMARY	INDICATORS	MEANS OF VERIFICATION ¹	ASSUMPTIONS
	<u>Land Access:</u> (at intermediate evaluation)		
	2.8 Public land databases in GIS format developed and readily available to the public, including information on: land tenure, soil capacity, hydrology, forest and vegetation cover and infrastructure.	<ul style="list-style-type: none"> GLSC land information system document, and GO-Invest data room and land allocation process report. 	
	2.9 Public land investment opportunity promotion system for livestock and non-traditional crops developed and implemented with multi-institutional user network.		
	2.10 Pilot program for allocating large land plots under new process completed.		
	2.11 Public Land lease application tracking system developed and implemented in GLSC.		
	<u>Market Information and Market Access:</u> (At the end of the Project)		
	2.12 A simple information market network designed and implemented.		
	2.13 At least three sanitary protocols signed with trading partners (one at IE).		
3. Agricultural health and food safety strengthened and consolidated: The purpose of this component is to improve the effectiveness of the animal health, plant health and food safety units of the Ministers of Agriculture and Health, transforming them in a integrated system to protect domestic consumers from	<u>Sanitary surveillance and control system:</u> (intermediate evaluation) 3.1 Joint work-plans among agencies, prepared and approved. 3.2 Updating and enactment of Plant Health Legislation. 3.3 Updating and enactment of Animal Health Legislation & Develop Animal Health Policy. 3.4 Updating and enactment of Food Safety Legislation and Food Safety Policy. Regulations, standards, and operating procedures, reviewed and implemented 3.5 Common information systems implemented.	<ul style="list-style-type: none"> Project progress reports. Intermediate Evaluation. Project Completion Report. Survey conducted to farmers, agro processors, and technicians. Agencies annual reports. Standardized Evaluation PVS 	<ul style="list-style-type: none"> Willingness to reach agreements by third countries. No political issues on raising border control measures.

SUMMARY	INDICATORS	MEANS OF VERIFICATION ¹	ASSUMPTIONS
illness, and domestic production from disease and contamination while ensuring that Guyana's exports meet international standards.	3.6 Quarantine stations to detect pests and diseases on points of entry established. 3.7 5 Mobile Control Post Units built and deployed. 3.8 Rapid reaction procedures against diseases breakout established 3.9 AHFSS sustainability plan prepared.	"Performance, Vision, and Strategy" for health services. • Assessment of Agricultural Health and Food Safety Committee	
	<u>Sanitary surveillance and control system:</u> (end of the Project) 3.10 4 advertising campaigns to create public awareness completed 3.11 170 technicians in hazard analysis and good laboratory practices (100 at IE) trained. 3.12 HACCP systems in 4 agroprocessing facilities, implemented. 3.13 Pesticide Laboratory for the PTCB providing services using Good Laboratory Practices. 3.14 Biocontrol laboratory improved and upgraded using Good Laboratory Practices.		
	<u>Fruit and Vegetable Productive Chain:</u> At the end of the Project 3.15 Coverage from 5 points of entry on a 24-hour basis to all points of entry to the country (coverage at 2 points of entry on a 24-hour basis at IE). 3.16 Rapid reaction procedures against quarantine insects and diseases breakouts established. 3.17 From none to 460 annual pesticide residues analyses conducted (100 at IE). 3.19 Livestock Productive Chain: At intermediate evaluation:		

SUMMARY	INDICATORS	MEANS OF VERIFICATION ¹	ASSUMPTIONS
	3.20 Regulations for animal movement, and for handling and slaughtering beef improved		
	3.21 Sanitary enclave defined.		
	3.22 Veterinary Diagnostic Laboratory rehabilitated and using Good Laboratory Practices.		
	<u>Livestock Productive Chain:</u> At the end of the Project:		
	3.23 Coverage from five points of entry on a 24-hour basis to all points of entry to the country on a 24-hour basis. (coverage at 3 points of entry on a 24-hour basis at IE).		
	3.24 Rapid reaction procedures against diseases breakouts established for FMS, BT, rabies bovine, and Brucellosis.		
	<u>Food Safety</u> At intermediate evaluation:		
	3.25 FDD Building-Instrument Room/Food Chemistry laboratorial capacity, rehabilitated and using Good Laboratory Practices.		
	<u>Food Safety</u> At final evaluation:		
	3.26 International accepted risk assessment systems implemented for prioritized products in their productive chains.		
	3.27 International accepted effective response methods to avoid hazards from food borne illness established.		
	3.28 At least five food education programs and public awareness campaigns completed		

SUMMARY	INDICATORS	MEANS OF VERIFICATION ¹	ASSUMPTIONS
<p>4. Drainage and irrigation rehabilitated</p> <p>The purpose of this component is to rehabilitate drainage and irrigation infrastructure for the Canals Polder D&I area. These works will include primary and secondary drainage and irrigation channels, and water control structures.</p>	<p><u>At intermediate evaluation:</u></p> <p>4.1 Drainage and Irrigation works under rehabilitation.</p> <p><u>At final evaluation:</u></p> <p>4.2 55 kilometres of primary channels; 220 kilometres of secondary channels; 86 kilometres of service roads; 1 pumping station; and 130 sluice gates, rehabilitated.</p>	<ul style="list-style-type: none"> • Supervising engineering report. • ASDU monitoring reports. • NDIA construction supervision reports. • Final evaluation. 	