

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**SURINAME**

**AGRICULTURAL COMPETITIVENESS PROGRAM**

**(SU-L1020)**

**LOAN PROPOSAL**

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ABBREVIATIONS	
AOP	Annual Operational Plan
APH&FS	Animal and Plant Health and Food Safety
CRF	Corporate Results Framework
EA	Executing Agency
ESA	Environmental and Social Analysis
ESMR	Environmental and Social Management Report
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Strategy
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FFF	Flexible Financing Facility
FSU	Food Safety Unit
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GOS	Government of Suriname
GSSE	General Services Support Estimate
ICAS	Institutional Capacity Assessment
IDB	Inter-American Development Bank
IICA	Inter-American Institute for Cooperation in Agriculture
IMF	International Monetary Fund
INDC	Intended Nationally Determined Contribution
IPM	Integrated Pest Management
IRR	Internal Rate of Return
LAC	Latin America and the Caribbean
LVV	Ministry of Agriculture, Animal Husbandry and Fisheries
MOU	Memorandum of Understanding
MRL	Maximum Residue Limits
NPV	Net Present Value
OECD	Organisation for Economic Co-operation and Development
OIE	World Organization for Animal Health
PEP	Pluriannual Execution Plan
PEU	Project Executing Unit
POM	Program Operating Manual
PSC	Project Steering Committee
PSE	Producer Support Estimate
SBA	Stand-by Arrangement
SFD	Sector Framework Document
SPF	Safeguard Policy Filter
SSF	Safeguard Screening Form
ToT	Training of Trainers
TSE	Total Support Estimate
UIS	Update to the Institutional Strategy

**PROJECT SUMMARY**  
**SURINAME**  
**AGRICULTURAL COMPETITIVENESS PROGRAM**  
**(SU-L1020)**

Financial Terms and Conditions				
Borrower: Republic of Suriname			Flexible Financing Facility <sup>(a)</sup>	
			Amortization Period:	25 years
Executing Agency: Ministry of Agriculture, Animal Husbandry and Fisheries (LVV)			Original WAL:	15.25 years
			Disbursement Period:	5 years
Source	Amount (US\$)	%	Grace Period:	5.5 years
IDB (OC) <sup>(b)</sup> :	17,500,000	100	Supervision and Inspection Fee:	(c)
			Interest rate:	Libor-based
			Credit Fee:	(c)
			Currency of Approval:	US dollars chargeable to the Ordinary Capital (OC)
Total:	17,500,000	100		
Project at a Glance				
Project Objective/Description: The program objective is to increase the competitiveness of the agricultural sector through the improvement of animal health, plant health and food safety and agricultural research and technology transfer services.				
Special Contractual Conditions prior to the first disbursement of the financing: the Executing Agency (EA) shall provide evidence that: (i) it has selected a program coordinator, a financial officer, an environmental specialist, and a procurement officer according to the terms and conditions previously agreed with the Bank (¶3.1); (ii) it has presented the Initial Report, including the Annual Operational Plan (AOP) and the Pluriannual Execution Plan (PEP) (¶2.2); and (iii) the Project Operating Manual (POM) has been approved and entered into effect in accordance with the terms and conditions previously agreed with the Bank (¶3.4).				
Special Contractual Conditions of execution: The program will be executed in accordance with the conditions set forth in Annex B of the Environmental and Social Management Report ( <a href="#">ESMR</a> ) (¶2.7).				
Exceptions to Bank Policies: None.				
Strategic Alignment				
Challenges <sup>(d)</sup> :	SI	<input type="checkbox"/>	PI	<input checked="" type="checkbox"/>
			EI	<input checked="" type="checkbox"/>
Cross-Cutting Themes <sup>(e)</sup> :	GD	<input type="checkbox"/>	CC	<input checked="" type="checkbox"/>
			IC	<input type="checkbox"/>

<sup>(a)</sup> Under the Flexible Financing Facility (FN-655-1), the borrower has the option to request modifications to the amortization schedule as well as currency and interest rate conversions. In considering such requests, the Bank will take into account operational and risk management considerations.

<sup>(b)</sup> Pursuant to Document AB-2990, the disbursement of Bank financing will be subject to the following maximum limits: (i) up to 15% during the first 12 months; (ii) up to 30% during the first 24 months; and (iii) up to 50% during the first 36 months. All these periods will be counted from the time the Loan operation is approved by the Board of Executive Directors (see ¶2.2).

<sup>(c)</sup> The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors during its review of the Bank's lending charges, in accordance with the relevant policies.

<sup>(d)</sup> SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration)

<sup>(e)</sup> GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

## I. DESCRIPTION AND RESULTS MONITORING

### A. Background, Problem Addressed, Justification

- 1.1 **Challenges and opportunities of the agricultural sector in Suriname.** The agricultural sector accounted for 7% of total export earnings (second to mining), 16% of the labor force and 9% of total Gross Domestic Product (GDP) in 2014 (Suriname Central Bank, 2015). Most agricultural production takes place along the coastal plains. While agricultural GDP declined between 1991 and 2002, a growth path was recovered from 2003 to 2014. Nonetheless, agricultural growth has constantly been lower than total GDP growth in recent years (Suriname Central Bank, 2014). The main challenge for the sector is overcoming its low productivity and competitiveness, as measured for instance, by the Total Factor Productivity (TFP) annual growth rate, which was almost zero between 1980-2012 and Suriname's average position in the International Trade Center's General Index Ranking for the export performance of fresh food (98<sup>th</sup> out of 178 countries in the period 2011-2015). This rate is one of the lowest in the region and considerably lower than Guyana's (1.3%) (Nin-Pratt et al., 2015). At a sub-sector level this challenge is manifested by significant gaps in physical yields, vis-à-vis the region's best performers and declining export trends of the exportable goods. For instance, Suriname's average rice yield gaps are 75%, 101% for tubers, 160% for cabbages, and 150% for oranges (FAOSTAT, 2015). Table I-1 provides key statistics on the agricultural sector in Suriname, including yields.

**Table I-1. Key Statistics on Main Agricultural Products of Suriname**

Indicator/Product	Rice	Bananas and plantains	Vegetables*	Citrus	Coconut	Other fruits**	Cassava	Other tubers
Area harvested (ha)	62,211	2,937	1,436	1,629	1099	384	255	209
Output (tons)	275,581	101,702	24,569	22,069	12880	6,543	7,129	2369
Value (million SRD)	452	312	227	227	83	61	20	NA
Yield (kg/ha)	4,430	34,628	17,109	13,548	11,720	17,039	27,957	11,335
Price per ton (SRD)	711	1,331	4,010	4,455	2,810	4,022	1,220	NA
Export (million SRD)	385	253	10	0	NA	2	NA	NA
Percentage of farmers growing this crop	10	30	25	28		25		44

Sources: Ministry of Agriculture, Animal Husbandry and Fisheries (LVV) and FAOSTAT, most recent year available.

\* Vegetables include: Watermelon, hot pepper, pumpkin, carilla, okra, tannia leaves, tomatoes, eggplant, cabbage, Chinese cabbage, cucumber, and string beans.

\*\* Other fruits include: Avocado, cherries, mango, pineapple, passion fruit, and papaya.

- 1.2 These challenges are magnified by climate change impacts, which affect the competitiveness of the agricultural sector. The decrease in agricultural productivity over the last decades has been linked -in part- to climatic events including changes in precipitation patterns and high winds (Second National Communication [Office of the President of the Republic of Suriname, 2016](#)). In the Second National Communication, the agricultural sector is ranked highly vulnerable to climate change,<sup>1</sup> these negative effects represent decreases in crop and livestock productivity, changes in crop growing seasons, damages to crops (i.e. due to sea level rise and higher incidence and magnitude of extreme events), and salinization of land. Main affected sub-sectors include –among others– rice, vegetable crops, and fruit production.
- 1.3 **The agricultural sector policy context.** The average annual total support to the Surinamese agricultural sector amounts to 1.37% of GDP (2012-2014), similar to the average for the Latin American and Caribbean (LAC) Region. Producer Support Estimate (support given to individual producers) in Suriname in 2012-2014 was 12.7% of farm receipts, lower than the Organization for Economic Development and Cooperation (OECD) average level but close to Mexico's. Regional references such as Jamaica (24.04%) and Guyana (16.38%) had higher levels of support to producers. The share of support to agriculture in the form of general services (e.g., infrastructure, research, extension, agricultural health, which are considered mostly public goods) is about 40% of total transfers, higher than in most LAC countries, and close to Chile and USA's levels. While the government's commitment to support public agricultural goods and services is a good policy measure and should be sustained, the medium and long term challenge is to diversify the provision of those services, which at the moment are highly concentrated on irrigation infrastructure for rice production in the eastern part of the country (which is receiving 94% of the general service support, with research and technology transfer receiving 5% and inspection services the remaining 1%).<sup>2</sup>
- 1.4 **Recent reforms.** The Government of Suriname (GOS) has started policy reforms in some sectors that have an impact on agricultural productivity such as trade, infrastructure, and financial markets and has started a divestment strategy of state owned enterprises. In the last three years, the GOS has also embarked on specific agricultural sector reforms aimed at modernizing its agricultural public services through IDB-supported policy loans (Modernization of Agricultural Public Services I [3126/OC-SU] and II [SU-L1032]). The first policy loan (3126/OC-SU) set the basis of the reforms and was approved in 2014. In addition, most of the reforms foreseen in the second policy loan (SU-L1032) have been implemented and the country continues to effectively advance the remaining reforms to modernize agricultural public services.. Particularly, as it relates to agricultural health and food safety, agricultural health legislation has been upgraded, an inter-ministerial coordination working group for food safety has been established to better coordinate investments and activities, a food safety strategy has been approved,

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<sup>1</sup> Climate change impacts that significantly threaten agricultural production in Suriname include: seawater intrusion, variability of rainfall patterns, occurrence of pest and diseases, and extreme weather patterns (Office of the President of the Republic of Suriname, 2016).

<sup>2</sup> All data in this paragraph comes from the [IDB Agrimonitor database, 2016](#).

and plans to improve technical capabilities have been elaborated. Similarly, in agricultural research and technology transfer, a strategy has been approved, a board composed by public and private actors has been installed, and plans to improve technical capabilities have been formulated. The investment program will allow for the implementation of these reforms through the funding of the plans and strategies prepared for agricultural health, food safety, and research and technology transfer. Complementary to the agricultural policy reforms implemented, the National Development Plan 2012-2016 highlights environmental sustainability and the management of the impacts of climate change as a priority, and the Intended Nationally Determined Contribution (INDC) submitted in 2015 indicates that adaptation to climate change is prominent in Suriname's approach to climate change.

- 1.5 **Status of Animal and Plant Health and Food Safety (APH&FS).** Whilst the institutional and regulatory reforms introduced in APH&FS since 2013 point in the right direction, the health status of Suriname's agriculture and livestock is extremely vulnerable, as the recently approved norms and regulations needed to enforce a scientific risk-based surveillance and control system are not currently being fully applied, due in part to a lag in the implementation of the complementary investments required to accompany the reforms. Prior to implementing some of the reforms highlighted previously, according to the World Organization for Animal Health (OIE) and the Inter-American Institute for Cooperation in Agriculture (IICA)'s assessments of the Surinamese Veterinary and Phytosanitary Services (OIE, 2012 and IICA, 2012), the "performance scores" were 42% and 30%, respectively among the lowest in the LAC region. These assessments concluded that Suriname lacks modern institutional and legal framework, laboratories, equipment, protocols (e.g., traceability, export certification and import regulatory systems), and facilities needed to support a technically-sound agricultural health system (e.g., quarantine and border control facilities). No ISO certification exist for the laboratories nor for their compliance with hygiene codes. In the case of food safety, a recent diagnostic (Food and Agriculture Organization of the United Nations [\[FAO, 2013\]](#) indicated that there was: (i) lack of a legal framework and protocols to support an integrated food safety system with animal and plant health; (ii) a fragmentation of food safety programs across government departments, with minimal coordination; (iii) no clear and formal delineation of competencies among the government agencies; (iv) no human resources and infrastructure plan for an integrated food safety system; and (v) the need to improve food safety international standards (ISOs). The weakness of the food safety services undermines GOS' efforts to implement an integrated sector-wide approach "from farm to table," putting at risk the health of Surinamese consumers as well as that of consumers in trading partner countries.
- 1.6 The economic repercussions of non-adequate a APH&FS services can be significant. In Suriname, for instance, rice blasts affect 70% of rice production determining an average loss of between 10%-30% of yields, which could represent an economic loss of around US\$10 million (SRD64.9 million) annually ([LVV, DAS 2012](#)); an outbreak of foot and mouth disease would lead to a contraction of the livestock sector and an estimated loss of US\$8 million (SRD51.9 million) annually in a 15-year period (FAO, 2013); and agrochemical and contamination of food exports puts in jeopardy US\$30 million (SRD195 million) of annual exports of fruits, vegetables and fish products, as evidenced by 15 alert

notifications received by Suriname exports of such products to the European Union (EU) because of exceeding maximum residue levels in the period 2008-2011 ([RASSE, 2012](#)). In the period 2013-2015, 20% of vegetable and fruit exports to the Netherlands were rejected for exceeding Maximum Residue Limits (MRL) ([Wijngaarde, 2016](#)). Furthermore, integrated pest management and disease control is a specific climate change adaptation measure identified in the Second National Communication as climate change may hamper rice production in Suriname through a frequent incidence of pests and diseases ([Office of the President of the Republic of Suriname, 2016](#)). In addition to the aforementioned cases, the presence of fruit flies has already been detected ([Van Sauers-Muller, 2005](#)) and, although its effects have not yet been quantified, it can have important economic repercussions especially related to accessing international markets.

- 1.7 **Status of the agricultural research and technology transfer system.** An analysis of Suriname's agricultural research and technology transfer system ([Roseboom, 2013](#)) revealed a system that is constrained by insufficient qualified staff, fragmentation, lack of focus, and weak linkages between research and extension, across national research entities, and with national and international research centers in other countries. Apart from some success in rice breeding, there are hardly any documented examples of successful, publicly-funded technology transfers in the Surinamese agricultural sector in recent years. A more in-depth analysis of the agricultural extension system ([Roseboom, 2015](#)), revealed a very traditional extension system spending most of its resources on very costly one-on-one interaction between extension officer and farmer and hardly any resources on mass media such as radio, television and internet. The agricultural extension reorganization plan ([LVV, 2016](#)) proposes a major shift in the composition of extension instruments used by LVV's extension service from predominantly farm visits to more modern media and in particular the use of internet-based communication technologies.
- 1.8 The overall level of investment in agricultural research in Suriname for the period 2012-2014 was 0.6% of agricultural GDP ([Derlagen et al., 2016](#)), lower than the LAC average ratio and below the recommended norm of 1.5% ([GFAR 2011](#)). In the period 2009-2014, research and development represented only 5% of the expenditure on general services ([Derlagen et al., 2016](#)). In addition, a significant proportion (40%) of LVV's research budget was allocated to ancillary laboratory services which, albeit relevant for monitoring and control purposes, are not able to provide short term technological results.
- 1.9 As a result of the fragmentation of the agricultural research and technology transfer system, and lack of international linkages, LVV has had only two agreements with international research entities in the last five years. In its Agricultural Innovation Strategy (2013), LVV puts emphasis on fostering closer interaction among the actors of the system, creating mechanisms to finance result-based research and technology transfer, and generating linkages with other national and international research institutions. This strategy is in line with the findings and recommendations of the World Bank (2012), which highlighted the benefits for a small country of promoting an integrated research and technology transfer system perspective,

closer interaction between research, extension and market development, and better linkages between public and private actors, both locally and internationally.

- 1.10 Additionally, as part of its commitment to implementing the research and technology transfer strategy, the GOS envisions increasing the level of financing of agricultural research to 2% of the Agricultural GDP. However, an increase in the level of investment must be implemented through an effective and efficient use of resources. Proper planning and monitoring and evaluation systems have shown to help improve the performance of agricultural innovation systems ([Gijsbergs et al., 2001](#), and [World Bank, 2008](#)). An increased level of financing will need to be complemented with improved human resources and infrastructure capacities, both in research and extension, which have proven to be critical assets to improve agricultural productivity, which is a main driver of competitiveness ([Pardey, P. et al., 2008](#)).
- 1.11 **Evidence of the relevance of the selected areas of intervention.** Agricultural productivity can be influenced by a wide range of factors such as land tenure status, human capital level, availability of agricultural inputs, access to finance, agricultural services provision (such as information, agricultural research and technology transfer, irrigation, agricultural health and food safety) and macroeconomic and trade policies. A strategy to improve the agricultural sector's performance requires a set of well-defined policies geared towards promoting efficient factor and product markets. The economic literature presents ample evidence of the linkage between agricultural services and agricultural productivity, which is a main driver of competitiveness. Research and technology transfer have been shown to be among the key determining factors of improvements in agricultural productivity over the past 50 years ([Pardey et al., 2012](#)). FAO (2012) reports that research and technology transfers are priorities in order to meet the growing demand for food because of their high returns. Specific studies obtain rates of return ranging from 43% to 67% for investments in research and technology transfer (Alston et al, 2014; Jin and Huffman, 2015). Similarly, a compilation of studies analyzing the impact of different agricultural health and food safety systems financed by the IDB in Peru, Bolivia, Nicaragua and Argentina presents positive evidence of the impact that these interventions have (OVE, 2015). In the case of Peru, the assessments conducted suggest that these interventions reduced the presence of fruit flies, which translated into better yields of agricultural products ([Salazar et al., 2016](#)). Moreover, the implementation of climate change adaptation strategies is associated with increased agricultural productivity (Di Falco et al., 2011). Nonetheless, the effective consideration of climate change usually requires integrated management, combining actions that span on several areas of intervention ([Warner et al., 2013](#); [Baethgen, 2010](#)). For example, promising sources of increased resilience to climate change include scientific knowledge and genetic improvement techniques ([Urcola et al., 2010](#)), as well as the use of climate forecasts to predict pest and/or disease outbreaks (Climate Change SFD, 2015). The internal validity of the mentioned literature is guaranteed by the credibility of the authors, journals and institutions mentioned in this paragraph. As for their applicability to Suriname (external validity), this has been validated by numerous local experts (from LVV, Surinamese universities, and research centers) and a series of international experts hired for the preparation of the program.

- 1.12 **Justification for the operation and the selected areas of intervention.** The selection of the areas of intervention for the proposed program (animal and plant health, food safety and agricultural research and technology transfer) was based on a combination of the government's priorities (research, technology application and efficient agricultural public services, [LVV multi-annual development plan 2017-2020](#)) for the sector, the technical feasibility of the interventions, the lack of private providers of these services, and the empirical evidence on the relevance of these areas for agricultural productivity and competitiveness in Suriname. As a result of the proposed interventions, the general service support (public goods) provided to the agricultural sector in Suriname will be diversified, thus complementing the current emphasis on infrastructure investments in irrigation.
- 1.13 **Lessons learned.** This program considers previous Bank experiences supporting agricultural health and research in the region such as the Animal Health Project (518/OC-UR, 1987); Program Of Agricultural Services (1131/OC-UR, 1998); Food and Agriculture Health and Quality Management Program (CLIPP) (1950/OC-AR, 2008); Agricultural Health and Food Safety Program (2061/BL-BO, 2014); Improvement of Plant, Animal and Forest Health Services (1500/SF-NI, 2003); and the Project for Control and Eradication of Fruit-flies (1647/OC-PE, 2005), as well as the conclusions and suggestions from OVE (Comparative Evaluation of Agricultural and Livestock Health Projects Food Safety, 2002-2014). A summary of these lessons learned from previous Bank operations in the selected areas and the ways these lessons shaped the design of the program is presented in Table I-2.

**Table I-2. Lessons Learned**

<b>Lessons Learned</b>	<b>How the lesson shaped the design of the program</b>
Animal Health decisions need to be independent and based on scientific knowledge, given the nature of the threats and the national and international credibility that is needed to counter them.	The program includes the strengthening of the scientific knowledge of LVV staff and its diagnostic capacity. Additionally, the program strengthens the network of laboratories of the country.
Staff of agricultural health institutions need continuous training and updating activities in order to remain in line with the most advanced techniques and practices developed worldwide.	The program promotes short and long term training activities, especially as related to new equipment, new diagnostic techniques and laboratory protocols.
Strengthening of the food safety services is critical.	The program will strengthen the capacity of the laboratories to conduct residue tests and related analyses. Training of producers in GAP is also included to increase the level of food safety.
In small countries, with few qualified research actors, efforts should be made to facilitate the collaboration of national and international institutions to conduct research projects.	The program will support the formation of consortia between national and international research entities in order to maximize synergies.

- 1.14 **Consistency with national sector priorities.** The drafted National Agricultural Strategy (2016-2020) prioritizes the need to improve the provision of public services such as agricultural research and extension, plant and animal health and food safety, and market information. As it relates to the agricultural sector, the National Climate Change Plan (2016-2021) establishes the objective of maintaining and expanding food security, safety and export in the context of a

variable and changing climate”, focusing on the following outcomes: (i) improved knowledge of how climate change will impact Suriname’s agriculture, livestock and fisheries sectors and development of climate resilient products/techniques; (ii) integration of climate resilience into agricultural extension services; (iii) protection of agricultural crops, livestock and fisheries from water shortages, flooding and salt water intrusion; and (iv) decreased greenhouse gas emissions from agriculture. The proposed program is therefore aligned with the national sector priorities and strategies and investments in these areas have been demanded by LVV.

- 1.15 **Bank’s Strategy. Consistency with the Update to the Institutional Strategy (UIS) 2010-2020, the Corporate Results Framework (CRF) 2016-2019 (GN-2727-6), Country Strategy, and Sector Strategy.** The operation is consistent with the UIS (AB-3008) and strategically aligned with the development challenges of productivity and innovation, and economic integration - as improved agricultural health and food safety activities facilitate agricultural trade and integration among trading partners. The program is also aligned with the cross-cutting issue of climate change and environmental sustainability using good agricultural practices and technologies to facilitate climate change resilience. This strategic alignment is reflected by the CRF indicator “number of beneficiaries of improved management and sustainable use of natural capital”; and according to the [joint MDB approach on climate finance tracking](#), an estimated 40% of total IDB funding for this program is invested primarily in climate change adaptation activities. This contributes to the IDBG’s climate finance goal of 30% of combined IDB and IIC operational approvals by year’s end 2020. The operation is aligned with the Country Strategy with Suriname 2016-2020 (GN-2873), contributing to the Strategic Objective “Increase Agricultural Productivity” and its expected result “Increased total factor productivity in agriculture” and “Increase number of farmers adopting new climate change adaptation measures on farms”. The program is also included in the 2017 Country Program Document and Operational Program Report (GN-2884). Likewise, the program is consistent with the Agriculture and Natural Resources Management Sector Framework (GN-2709-5). The additionality on gender and employment is justified by the emphasis given in Component 2 to gender inclusion (specific communication campaigns, focus on gender-sensitive crops, among others).

## **B. Objective, Components and Cost**

- 1.16 The program objective is to increase the competitiveness of the agricultural sector through the improvement of animal health, plant health and food safety and agricultural research and technology transfer services. The expected beneficiaries of the program are the farmers of Suriname. To achieve the above objective, the program includes the following two components:

### **1. Component I. Agricultural Health and Food Safety (US\$9,928,663)**

- 1.17 This component will have four sub-components: Plant Health, Animal Health, Food Safety, and Laboratory Complex Infrastructure. Climate change impacts and adaptation actions will be considered, when appropriate, in selected activities of

this component. For instance, specific training will address the implications of climate change in terms of animal and plant health.

- a. **Sub-component I.1 - Plant Health.** The focus areas of investment are: (i) the financing of the reorganization of the plant health service through appropriate legal, institutional and operational frameworks; (ii) the establishment of pest surveillance system and traceability systems; (iii) the strengthening of the export certification capacity and the import regulatory systems through the implementation of procedures to minimize risks associated with the movement of goods and people; (iv) the improvement of plant quarantine facilities; (v) the establishment of integrated border controls (infrastructure and procedures) for effective pest exclusion; (vi) a pesticide management system for regulating chemicals used in plant health and human health (including the promotion of Integrated Pest Management – IPM); (vii) human resources development through training for staff at all levels of the plant health services; (viii) the equipment and inputs for the LVV Laboratory Complex in order to provide timely diagnoses with a high degree of confidence and support the selection and application of phytosanitary measures; and (ix) the establishing of an area of low fruit flies prevalence, as a pilot program that may be later scaled-up for export purposes.
- b. **Sub-component I.2 - Animal Health.** The focus areas of investment of this sub-component are: (i) the establishment of a disease surveillance system (including identification and traceability of animals and farms for the national registry, training in epidemiology risk analysis; (ii) disease surveillance and control programs, obtaining OIE recognition of disease free status; (iii) the organization of simulation exercises for the technical and logistical preparedness in case of disease introduction; (iv) the establishment of an animal health information system and equipment and materials for the LVV Laboratory Complex as related to animal health activities; (v) specific trainings aimed at increasing the competences of the Veterinary Service Unit; and (vi) awareness campaigns for the general public in order to help preventing exotic diseases introduction and to encourage disease notification, strengthening the collaboration between the public and private sectors.
- c. **Sub-component I.3 - Food Safety.** The focus areas of investment are: (i) financing of the development of national food safety policy; (ii) financing of the establishment of a Food Safety Unit (FSU) within LVV; (iii) financing of the establishment of a National Codex Committee; (iv) development of food safety standards and upgrade to technical regulations following Good Agricultural Practices (GAP) for crops, livestock and aquaculture; (v) the financing of development of hygiene code for processors of crops, meat and fish; (vi) staff training, including Training of Trainers (ToT) sessions on GAP, hygiene code, risk analysis; (vii) master's degrees in agri-food safety and quality assurance abroad; (viii) the strengthening of the diagnostic capacity of the Laboratory Complex through training, equipment, materials for residue testing and testing the content of imported pesticides, developing a quality assurance system (ISO 17025) and having laboratory methodologies validated and accredited; (ix) strengthening of the registration and inspection system through the preparation of procedural manuals for inspection of primary producers,

preparation of procedural manuals for inspection of primary processors, training of plant and meat inspectors, hiring of meat inspectors and plant inspectors, equipment for inspection units (plant, meat, fish) and the development of a quality assurance system (ISO 17020) for inspection units, and accreditation of the inspection units (meat and plant); (x) implementation of a surveillance system for food safety hazards; (xi) awareness campaigns to the general public on food safety, including a solid collaboration with private sector actors in Suriname; (xii) institutional support and training to the Inter-Ministerial working Group of Food Safety, which includes the Ministry of Trade, the Ministry of Health, and the Ministry of Finance (Custom Department); and (xiii) support to the Fish Inspection Institute. This component will directly cooperate with the Bureau of Standards.

- d. **Sub-component I.4 - Laboratory Complex Infrastructure.** The completion of the construction of the Laboratory Complex at LVV (useful for all sub-components) will be included in this Component and will complement animal and plant health and food safety activities included in the other three sub-components.

## 2. **Component II. Agricultural Research and Technology Transfer (US\$5,770,637)**

- 1.18 This component will have four sub-components: Agricultural Research and Technology Transfer Projects, Institutional Capacity Building, Open Funding Window for Climate Change Adaptation, and Cluster Laboratory.

- a. **Sub-component II.1 - Agricultural Research and Technology Transfer Projects.** The sub-component focuses on the strengthening of agricultural research and technology transfer, through the funding of five selected agricultural research and technology transfer projects that will consider climate change adaptation and/or mitigation and will be implemented in collaboration with national and international research and technology transfer centers. The five projects have been identified through a prioritization exercise that took into account the following criteria: economic relevance, market opportunities, yield gaps, and environmental and socio-economic aspects, as well as vulnerability to climate change impacts and contribution to Greenhouse Gas (GHG) emissions.<sup>3</sup> The five pre-selected projects will combine adaptive research, technology validation and technology transfer activities and will focus on the following sub-sectors: rice, open-field vegetables, protected vegetable production, citrus fruits, and minor fruits. Emphasis will be given to gender considerations in the implementation of the projects (specific communication campaigns, focus on gender-sensitive crops, among others) so as to encourage the participation of women.
- b. **Sub-component II.2 - Institutional Strengthening.** This sub-component will focus on staffing and training, considering climate change impacts and

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<sup>3</sup> Rice cultivation, for example, is an important source of emissions (Office of the President of the Republic of Suriname, 2016).

adaptation actions of key research and technology transfer stakeholders (research department of LVV, public research centers such as ADRON, among others) in the country. Scholarships to upgrade the educational level of research staff of LVV will also be covered by this sub-component, as well as the establishment of the media unit.

- c. **Sub-component II.3 - Open Funding Window for Climate Change Adaptation.** This sub-component will finance 10 to 15 small research and technology transfer projects (up to a maximum of US\$100,000 each), selected through a competitive process. These projects will specifically focus on environmental sustainability and climate change adaptation. Predefined selection criteria will consider at least the following: (i) focus on addressing explicit vulnerability to climate change; (ii) contribution to increase resilience to climate change (i.e. how the research and technology transfer could result in decreased variability, increased income or productivity, improvement in socio-economic variables); (iii) possible contribution to reduce GHG emissions or use of a low carbon technology; and (iv) adequacy and replicability (i.e. how the proposal responds to a pressing need and the potential to apply the technology at a larger scale). LVV departments will join efforts with external research centers, universities, and private sector actors for the implementation of this sub-component. Communication campaigns will ensure maximum visibility of the calls for proposals and emphasis will be given to the inclusion of female farmers in the projects.
- d. **Sub-component II.4 - Cluster Laboratory.** This sub-component will cover the finalization (electricity works and outfitting) of the LVV Cluster Laboratory, necessary for its functionality. This laboratory will be used for research purposes and will be complementary to the research projects financed under Sub-component II.1, as all key tests needed for the research projects will be conducted in the Cluster Laboratory.

## C. Key Results Indicators

- 1.19 The program will contribute to increase the competitiveness of the agricultural sector by encouraging a higher productivity of farmers who will benefit from the program.<sup>4</sup> The Results Framework of the program has been agreed with the GOS and includes the program's objectives, impacts, results and products, as well as their respective indicators. The following table summarizes the program's key impact indicators, measurement periods and selection rationale.

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<sup>4</sup> The program will also contribute to the improvement of public health due to the availability of safer food and the decreased exposure to agrochemicals. However, these impacts could not be included in the results matrix due to lack of data.

**Table I-3. Key Impact Indicators**

<b>Impact indicator</b>	<b>Measurement period</b>	<b>Selection rationale</b>
Position in the International Trade Centre's General Index Ranking of Export Performance in fresh food.	Y5	Measures Suriname's competitiveness in the export of fresh food.
Value of production per hectare of open field vegetables (US\$)	Y5	Measures the increase in agricultural revenue.
Yields of several crops, such as long-yard beans, oranges and rice (tons/ha)	Y5	Measures the increase in agricultural productivity.
Quantities exported of rice, bananas and vegetables (tons)	Y5	Measures the increase in agricultural exports.

- 1.20 The main expected results are the following: (i) position in the International Trade Centre's General Index Ranking of Export Performance in fresh food; and (ii) number of beneficiaries of improved management and sustainable use of natural capital. The Results Framework presents the details on the other expected results.
- 1.21 The main expected impacts and results reflect the logic of the program: strengthened agricultural services will increase agricultural competitiveness, productivity and income generation of Suriname's agriculture, and facilitate exports, as a sector with increased agricultural health and food safety is more likely to comply with international export standards, and a more innovative, more productive sector will increase its ability to compete in international markets.

## **II. FINANCING STRUCTURE AND MAIN RISKS**

### **A. Financing Instruments**

- 2.1 The program is a specific investment operation with a total cost estimated at US\$17,500,000 to be financed with resources from the Bank's Ordinary Capital (OC) under the Flexible Financing Facility (FFF) and is designed to be disbursed in five years. Table II-1 provides the cost summary by investment categories and components. The budget includes all costs associated with risks mitigation measures identified in the Environmental and Social Management Plan (ESMP) and the risk analysis.

**Table II-1. Costs and Sources of Financing (US\$)**

<b>Component</b>	<b>IDB</b>	<b>%</b>
Component 1	9,928,663	56.7%
Component 2	5,770,637	33.0%
Program Administration	1,250,700	7.2%
External Audit	250,000	1.4%
Monitoring and Evaluation	300,000	1.7%
<b>Total</b>	<b>17,500,000</b>	<b>100%</b>

- 2.2 The disbursement calendar is presented in Table II-2 and it is based on the preliminary [Pluriannual Execution Plan](#). Pursuant to Document AB-2990, the disbursement of Bank financing will be subject to the following maximum limits: (i) up to 15% during the first 12 months; (ii) up to 30% during the first 24 months; and (iii) up to 50% during the first 36 months. All these periods will be counted from the time the loan operation is approved by the Board of Executive Directors. These limits may be rendered inapplicable to the extent that the requirements set forth in the Bank's policy regarding said limitations have been fulfilled, provided that the Borrower has been notified of the same in writing. **Presentation by the EA of an Initial Report, including the Annual Operational Plan (AOP) and the Pluriannual Execution Plan (PEP) is a special contractual condition prior to the first disbursement of the financing.**

Table II-2. Disbursement Projections (US\$)

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total
IDB	1,456,350	3,366,371	3,934,915	6,015,757	2,726,608	17,500,000
%	8.3%	19.2%	22.5%	34.4%	15.6%	100.0%

- 2.3 **Economic analysis.** The economic analysis of this program focuses on the evaluation of the incremental benefits that the proposed investments will generate through enhanced agricultural productivity. The economic analysis considers both the overall program and all components and subcomponents in isolation. Additionally, several benefits of the program, that are difficult to precisely estimate, were not quantified and included in the analysis, making it a conservative exercise. Finally, several stress sensitivity scenarios are conducted. In the base scenario, the program shows an Internal Rate of Return (IRR) of 64.17% and a positive Net Present Value (NPV), assuming an opportunity cost of capital of 12%. In all alternative scenarios, the NPV resulting from the program remains positive. Accordingly, the economic rationale of the program and its components is justified.

## B. Environmental and Social Safeguard Risks

- 2.4 The program is classified as Category "B" in accordance to the Bank's Environment and Safeguards Compliance Policy (OP-703) and an Environmental and Social Analysis (ESA) was conducted, incorporating inputs from public consultations. The evaluation concluded that the program will not cause significant adverse social or environmental impacts and risks.
- 2.5 The program is expected to provide overall highly positive impacts since it will improve at all levels, the management of pesticides, small amounts of hazardous chemicals, organic waste, as well as the prevention and control of pests and diseases. It will also support research, knowledge and technology production and dissemination, and the introduction of socioenvironmental sustainability and climate change mitigation/adaptation in agricultural activities in Suriname.
- 2.6 Although the implementation of the program is expected to provide overall positive impacts, during the analysis of the project, it was identified the potential occurrence of minor negative impacts and risks related to: (i) existing diagnostic laboratory

operations and renovations; (ii) waste generation and potential contamination during inspection activities for food safety, animal health and plant health; and (iii) accidental spills, contamination, inappropriate management and use of pesticides and small amounts of hazardous chemicals in laboratories and innovation projects. Such potential negative impacts are likely to be local and short-term for which effective mitigation measures are readily available. In particular, they include: (i) each laboratory will adopt improved written protocols and procedures for the proper management of laboratory chemicals and the resulting hazardous wastes to prevent environmental contamination; (ii) a specified wastewater treatment unit will be installed in the Laboratory Complex, and procedures will be adopted to ensure its proper operation and maintenance; (iii) program implementation will ensure that facilities and farmers that participate in the research and demonstration projects have adequate storage facilities, adopt adequate pesticide management practices, and deploy personal protective equipment in compliance with FAO pesticide use guidelines; (iv) LVV and the Program will ensure that farmers receiving extension services for the projects are trained in proper pesticide handling; and (v) the program will incorporate in the project selection criteria, social and environmental sustainability measures as part of the ESMP, so as to avoid any possible adverse environmental or social impacts or risks on producers and local communities from both the adoption of new and improved production practices, including the utilization of chemical products in a sustainable manner for the soil and water resources.

- 2.7 LVV will be responsible for overall supervision and monitoring of the ESMP through the Project Executing Unit (PEU). A qualified environmental consultant will be hired to work in the PEU and will provide on-the-job training to the LVV environmental counterpart, as an institutional strengthening benefit. The program will be executed in accordance with the conditions set forth in Annex B of the Environmental and Social Management Report (ESMR) ([REL#3](#)).
- 2.8 The program has moderate risks for natural disasters and it will promote risk reduction, mitigation, climate change adaptation by adopting new technologies and best management practices. During the analysis of the program, an ESA and its corresponding ESMP were prepared and disclosed in the Bank's website. During the mentioned analysis of the program, it was found evidence of appropriate consultation and no major non-compliances and liabilities were identified and there are no safeguard policy exceptions or waivers, outstanding assessments, technical issues or reputational risks. The program will not introduce invasive species, cause or induce deforestation or impacts to natural and critical natural habitats and cultural sites; it will not displace families or businesses and will not negatively impact indigenous communities and other vulnerable communities, or women.

### **C. Fiduciary Risk**

- 2.9 An Institutional Capacity Assessment (ICAS) of LVV was conducted by the Bank. The fiduciary risk, as described in Annex III, has been ranked as medium (high for financial management and medium for procurement). In financial management, the high risk identified relates to noncompliance with accounting and reporting requirements. For procurement, the main fiduciary risk relates to delays in

procurement administration. Mitigation actions will focus on: (i) the implementation of an accounting system that will integrate and facilitate the financial reporting and budgeting under the program, according to source of funding and categories of investments (at a minimum); (ii) extensive training will be provided to the financial officer in the implementation of the system and the appropriate application of IDB's financial management, accounting and reporting requirements to mitigate the assessed risk; (iii) provision of extensive training in procurement to support the timely execution of all fiduciary activities; (iv) hiring a full-time procurement specialist as part of the PEU; and (v) the design of a Program Operating Manual (POM) which will contain internal administrative and control processes for procurement and financial management to provide adequate guidance and mitigation measures to discharge all fiduciary duties in accordance with the Bank's rules and procedures.

#### **D. Other Key Issues and Risks**

- 2.10 The design of the program used the methodology Program Risk Analysis for Sovereign Guaranteed Loans. Besides environmental and fiduciary risks, this analysis identified the following risks: (i) the high risk of a lack of human resources in LVV to accompany and sustain program implementation and operations; (ii) the medium risk of inter-institutional coordination between partner agencies (agricultural research and technology transfer projects are based on Memoranda of Understanding (MOUs) between LVV and the participating entity); and (iii) the medium risk of delays in the approval and enactment of appropriate legislation and regulations. Main mitigations measures include: (i) allocation of specific LVV technical personnel and external consultants to each strategic area of the Program and their respective training; (ii) support to inter-institutional collaboration and preparation of legislation through PBLs; and (iii) establishment of inter-ministerial working groups. The sustainability of the interventions has also been taken into account, through the inclusion of several trainings for LVV personnel and farmers, and the analysis of adequate fee levels for key services provided by LVV to Surinamese farmers.
- 2.11 The Government of Suriname expressed high interest for this operation, and committed to maintain and support the new infrastructure and systems introduced by the program after its implementation. This commitment is aligned with the policy reforms the Government of Suriname has been conducting in recent years, in the framework of the IDB-supported policy loans.

### **III. IMPLEMENTATION AND MANAGEMENT PLAN**

#### **A. Summary of Implementation Arrangements**

- 3.1 The Borrower is the Republic of Suriname. The Executing Agency (EA) is LVV, which will implement the program through a Project Executing Unit (PEU) under the Planning and Development Department of the LVV. The PEU will be responsible for all the fiduciary obligations to manage the program, including: (i) planning of the technical and fiduciary aspects related to the program activities; (ii) procurement of goods, works and services for the program; (iii) the oversight

and evaluation of program activities; (iv) financial and accounting management of the program, including the submission of disbursement requests and preparation of financial reports; and (v) risk management, including environmental and social risks. The program will strengthen the PEU to facilitate implementation, through specific implementation training and the financing of specialized personnel dedicated to the program, including among others: program coordinator; technical coordinators for animal health, plant health, food safety and agricultural research and technology transfer, monitoring and evaluation specialist, financial specialist, accountant, procurement specialist, procurement assistant, social and environmental monitoring specialist, and administrative assistant. These personnel will work in coordination with the permanent technical departments of LVV. **The presentation of evidence that LVV has selected a program coordinator, a financial officer, an environmental specialist, and a procurement officer according to the terms and conditions previously agreed with the Bank will be a special contractual condition prior to the first disbursement of the financing.**

- 3.2 **Institutional and donor coordination.** Close donor coordination was conducted during program design, especially with the EU. It has been agreed that a complementary program financed by the EU will focus on the strengthening on food safety services provided by the Ministry of Public Health and the Ministry of Trade and Industry. The update of the food safety legislation and the assessment of the institutional architecture of the agricultural health and food safety system will remain under the EU program, which will be executed through the FAO. A Program Steering Committee (PSC) will be established to oversee the implementation of both operations (funded by IDB and EU) and ensure coordination. Under delegation from the Minister of LVV, the PSC will be chaired by the Permanent Secretary of LVV. The PSC will comprise high level representatives from the Ministry of Finance and from the Planning Office of Suriname in order to ensure the necessary support and guidance to LVV as it relates to its consistency and contribution to the overall national policies and plans. In addition, the PSC will have direct representation from the private sector and academic institutions.
- 3.3 **Program Operating Manual (POM).** The POM, which establishes standards and procedures for LVV with regard to programming activities, procurement audits, and monitoring and evaluation, among others, will govern program execution. The POM will include the following special conditions for execution: (i) prior to the disbursement of resources for each of the research and technology transfer projects, under Sub-component I of Component 2, the Executing Agency shall present evidence of the signature of an Memorandum of Understanding between LVV and partner research institute(s); (ii), prior to the disbursement of resources linked to the Open Window under Sub-component III of Component 2, the EA shall present evidence of the approval of a detailed Operational Manual for the Open Funding Window for Climate Change Adaptation; and (iii) prior to the disbursement of resources linked to the finalization of the electrical and outfitting works for the Cluster Laboratory under Sub-component IV of Component 2, the EA shall present evidence of the finalization of the building of the Cluster Laboratory.

- 3.4 The POM will also include: (i) a detailed description of the implementation agreement of each component; (ii) roles and responsibilities of the agencies involved in the implementation of the program; (iii) criteria and procedures to select and contract goods, services and works; (iv) criteria and procedures for management and financial control of the program; (v) monitoring and evaluation arrangements; and (vi) specific criteria for environmental and social management of the program, as described in the ESMR and ESMP. **Approval and entry into effect of the POM according to the terms and conditions previously agreed with the Bank will be a special contractual condition prior to the first disbursement of the financing.**
- 3.5 **Procurement.** All program-related procurement activities will be performed following Bank's Procurement Policies: Policies for the Procurement of Goods and Works financed by the Bank (GN-2349-9) and Policies for the Selection and Contracting of Consultants financed by the Bank (GN-2350-9) as applicable.
- 3.6 **Auditing.** The program will submit to the Bank the following documents: (i) annual financial statements of the project, audited by an independent auditor to be submitted to the Bank within 120 days at the end of each fiscal year, beginning with the fiscal year in which the first expenditures are incurred; and (ii) a final financial audit report of the program is to be submitted by LVV within 120 days after the date of the last disbursement.

## **B. Summary of Arrangements for Monitoring Results**

- 3.7 It will be the PEU's responsibility to put in place a monitoring system to collect data related to all the indicators in the Results Framework. This system will be instrumental for the PEU to be able to submit to the Bank semi-annual progress reports that will describe: (i) the physical progress of the program (i.e., in terms of output indicators); (ii) the progress made in terms of outcomes and impacts, as stipulated in the Results Framework; (iii) the status of applicable environmental and social mitigation measures; (iv) lessons learned; and (v) any other issues related to the execution of the program.
- 3.8 An impact evaluation plan was agreed upon with LVV. The monitoring and evaluation plan presents the methodology, the data collection plan, the list of indicators, the sample design as well as the budget of the program's impact evaluation. The program's impact on agricultural exports will be measured using a reflexive approach (before-after comparison). Baseline and follow-up data will come from LVV's annual Agricultural Statistics report. The program's impact on agricultural productivity and revenue, on the other hand, will be measured using two different methodologies. While a reflexive approach will be used for those research and technology transfer projects for which there are no control groups (rice, citrus, fruits and protected agriculture), a quasi-experimental technique of difference-in-difference will be used to analyze the impact of the open-field vegetables research and technology transfer project, given the availability of an appropriate control group. For this purpose, a sample of 700 farmers (500 beneficiaries and 200 control) will be surveyed for baseline and a follow-up surveys. The total budget for the impact evaluation amounts to US\$200,000 that will be covered with resources from this loan.

Development Effectiveness Matrix		
Summary		
I. Corporate and Country Priorities		
1. IDB Development Objectives	Yes	
Development Challenges & Cross-cutting Themes	-Productivity and Innovation -Economic Integration -Climate Change and Environmental Sustainability	
Country Development Results Indicators	-Beneficiaries of improved management and sustainable use of natural capital (#)*	
2. Country Development Objectives	Yes	
Country Strategy Results Matrix	GN -2873	2.3 Increase agriculture productivity; 2.4 Increase agricultural exports and their diversification.
Country Program Results Matrix	GN-2884	The intervention is included in the 2017 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		
3. Evidence-based Assessment & Solution	Evaluable	
3.1 Program Diagnosis	9.6	
3.2 Proposed Interventions or Solutions	3.0	
3.3 Results Matrix Quality	3.6	
4. Ex ante Economic Analysis	3.0	
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis	10.0	
4.2 Identified and Quantified Benefits	4.0	
4.3 Identified and Quantified Costs	1.5	
4.4 Reasonable Assumptions	1.5	
4.5 Sensitivity Analysis	1.5	
5. Monitoring and Evaluation	10.0	
5.1 Monitoring Mechanisms	2.5	
5.2 Evaluation Plan	7.5	
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood	Low	
Identified risks have been rated for magnitude and likelihood	Yes	
Mitigation measures have been identified for major risks	Yes	
Mitigation measures have indicators for tracking their implementation	Yes	
Environmental & social risk classification	B	
IV. IDB's Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)		
Non-Fiduciary		
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Gender Equality	Yes	Component II will give particular emphasis to the inclusion of women head of farms in the agricultural research projects.
Labor		
Environment		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	Yes	SU-T1064 and SU-T1084 are two technical cooperations that financed all the preparation work in the areas of agricultural health, food safety and agricultural research and technology transfer. Additionally, these resources have financed policy reforms linked to SU-L1032, which set the base for the implementation of the investments provided by this program.
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan	Yes	There are hardly any documented examples of publicly-funded research technology transfers in the Surinamese agricultural sector in recent years. Also, there is no evidence on any agricultural impact evaluation conducted in Suriname to date. Therefore, the proposed impact evaluation will greatly contribute to the literature on agricultural interventions in Suriname.

Note: (\*) Indicates contribution to the corresponding CRF's Country Development Results Indicator.

The objective of the program is to increase the competitiveness of the agricultural sector through the improvement of animal health, plant health and food safety, and agricultural research and technology transfer services. To achieve this objective, the Program will implement two components: Agricultural Health and Food Safety; and Agricultural Research and Technology Transfer.

The documentation is well structured, with a good diagnosis of the problems faced by the agricultural sector in terms of major weaknesses in the Animal and Plant and Food Safety, and the Agricultural Research and Technology Transfer systems. The diagnosis highlights how these weaknesses undermine the productivity and competitiveness of the agricultural sector.

The proposed solution is related to the magnitude of the problems identified. The results matrix (RM) reflects the objective of the program and captures a solid vertical logic. The key outcome indicators have values that are the result of the ex-ante economic analysis (EA); lower-level indicators reflect the design of the two components. The RM includes SMART indicators at the levels of impact, outcomes and outputs with their respective baseline values and targets and the means to gather information.

The EA is based on a Cost-Benefit Analysis, which is done for each component. The economic cost and benefits are adequately identified and quantified. The overall Internal Rate of Return (IRR) is 64.17%. The EA undertakes a sensitivity analysis based on key variables under five scenarios; the IRR is greater than 12% in all scenarios.

The monitoring and evaluation plan is well designed. A reasonable impact evaluation strategy is proposed based on a quasi-experimental design to measure the effect of a technology transfer project from Component II. Given the lack of rigorous studies done in Suriname, the impact evaluation could make an important contribution to the knowledge base of the sector, the country, and the Bank.

The ten risks identified in the risk matrix seem reasonable. The risks include mitigating actions and compliance indicators.

**RESULTS MATRIX**[\(Complete Results Matrix with Outputs\)](#)

<b>Project Objective:</b>	To increase the competitiveness of the agricultural sector through the improvement of the animal health, plant health and food safety and agricultural research and technology transfer services.
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**EXPECTED IMPACT**

Indicators	Unit of measure	Baseline	Baseline Year	End of Project (year 5)	Means of verification	Observations
<b>IMPACT #1: Increase in agricultural revenue</b>						
<b>Indicator 1.1:</b> Value of production per hectare of open field vegetables	SRD	69,336	2014	77,906	Impact evaluation. LVV reports.	The baseline corresponds to a representative group of open field vegetables that will be targeted by the program. The baseline will be re-estimated when the impact evaluation's baseline data is collected using farmers' surveys. The target refers to program beneficiaries.  The monetary value at baseline and end-line has been estimated in constant values.
<b>IMPACT #2: Increase in agricultural productivity</b>						
<b>Indicator 2.1:</b> Yields of long yard bean	Tons/ha	14	2014	16.1	Impact evaluation. LVV reports.	For long yard bean, baseline values will be re-estimated using a farmers' survey administered as part of the impact evaluation.  In the other cases, before-after surveys will be conducted (referred to as "project surveys" in the M&E plan).  The targets refer to program beneficiaries.
<b>Indicator 2.2:</b> Yields of oranges	Tons/ha	13.2	2014	15.2		
<b>Indicator 2.3:</b> Yields of passionfruit	Tons/ha	15.4	2014	17.7		
<b>Indicator 2.4:</b> Yields of rice	Tons/ha	4.4	2014	4.6		
<b>Indicator 2.5:</b> Average weight of slaughtered pigs	Kgs	71.5	2014	78.7		

Indicators	Unit of measure	Baseline	Baseline Year	End of Project (year 5)	Means of verification	Observations
IMPACT #3: Increase in agricultural exports						
Indicator 3.1: Quantity of rice exports	Tons	103,755	2014	114,131	LVV reports (Agricultural Statistics).	
Indicator 3.2: Quantity of banana exports	Tons	75,261	2014	82,787		
Indicator 3.3: Quantity of vegetable exports	Tons	4,746	2014	5,221		
IMPACT #4: Increase in competitiveness						
Indicator 4.1: Position in the International Trade Centre's General Index Ranking of Export Performance in fresh food	Position	98	2011-2015	65		Baseline reflects the average position Suriname obtained in the ranking, out of 178 countries.

**EXPECTED OUTCOMES**

Indicators	Unit of measure	Baseline Value	Baseline Year	End of Project (year 5)	Means of verification	Observations <sup>2</sup>
<b>OUTCOME # 1: Improved use of natural capital</b>						
<b>Indicator 1.1:</b> Number of beneficiaries of improved management and sustainable use of natural capital	Beneficiaries	0	2016	15,370 (12,296 men and 3,074 women)	Records of beneficiaries of LVV services. Ex post evaluation.	The goal value includes 10,234 crop farmers, 4,856 livestock producers and 280 primary processors. 15,370 is the total number of farmers and processors in the country according to the Agricultural Census 2008.  Gender Tracking
<b>OUTCOME # 2: Increase in exporting ability</b>						
<b>Indicator 2.1:</b> Number of exporting firms.	Firms	9	2016	15	LVV data.	

Indicators	Unit of measure	Baseline Value	Baseline Year	End of Project (year 5)	Means of verification	Observations <sup>2</sup>
<b>OUTCOME # 3: Improve provision of plant health services</b>						
<b>Indicator 3.1:</b> Percentage of annual notifications of exported crops due to noncompliance with plant health requirements	%	7	2013-2015	3.5	Europhyt database and data provided by the Netherlands Food and Consumer Product Safety Authority (NVWA).	The baseline rate was calculated using 2 different sources of information. Even though the Europhyt database includes notifications related to exports to all Europe, the denominator only includes Surinamese exports to the Netherlands because it was the only data available and they represent a good approximation of the total.
<b>Indicator 3.2:</b> Score PVS (Performance Vision and Strategy) developed by IICA	%	Diagnostic capacity: 28% Risk Analysis: 27% Export certification: 21% Surveillance: 28% Human & Financial Capital: 39%	2013	Diagnostic capacity: 42% Risk Analysis: 41% Export certification: 32% Surveillance: 42% Human & Financial Capital: 59%	IICA independent evaluation.	
<b>Indicator 3.3:</b> Achievement of Area of Low Pest Prevalence (ALPP) of Carambola Fruit Fly in orange producing area	ALPP	0	2016	1	LVV Fruit Fly report.	The ALPP will be achieved in year 3, but should be maintained for 3 years before it can be officially recognized as such, so the official recognition will not be achieved during the project life span.
<b>Indicator 3.4:</b> Masters of Science (MSc) degrees obtained by Plant Health Services' employees	Degrees	0	2016	6 (4 men and 2 women)	MSc Diplomas	The fields of the MSc include: crop protection, entomology, plant pathology and nematology.  Gender Tracking

Indicators	Unit of measure	Baseline Value	Baseline Year	End of Project (year 5)	Means of verification	Observations <sup>2</sup>
<b>OUTCOME # 4: Improve provision of animal health services</b>						
<b>Indicator 4.1:</b> Score PVS developed by OIE	Score	Human, physical and financial resources: 2 Technical authority and capability: 1.7 Interaction w/stakeholders: 1.5 Access to markets: 1.7	2012	Human, physical and financial resources: 3 Technical authority and capability: 3 Interaction w/stakeholders: 2.5 Access to markets: 2.5	OIE PVS evaluation.	The baseline levels were calculated including only the competences that are going to be improved by the project. Details are included in the monitoring and evaluation plan. When calculated at end of project, the same set of competences should be included in the estimation.
<b>Indicator 4.2:</b> OIE Disease Free Status recognition for 3 diseases achieved	Recognitions	0	2016	3	OIE Certificate	The recognition of free status will probably target Foot and Mouth Disease, Classical Swine Fever and Pests Des Petits Ruminants.
<b>Indicator 4.3:</b> Self-Declaration to OIE of Disease Free for Tuberculosis and Brucellosis	Self declaration	0	2016	2	OIE website	
<b>Indicator 4.4:</b> Accreditation of the Animal Health Laboratory (ISO 17025)	Accreditation	0	2016	1	ISO Accreditation certificate	
<b>Indicator 4.5:</b> Online master's degrees obtained by VS' Heads of Units	Degrees	0	2016	4 (3 men and 1 woman)	Diplomas	Gender Tracking

Indicators	Unit of measure	Baseline Value	Baseline Year	End of Project (year 5)	Means of verification	Observations <sup>2</sup>
<b>OUTCOME # 5: Improve provision of food safety services</b>						
<b>Indicator 5.1.</b> Percentage of annual rejections of exported food products to the Netherlands due to noncompliance with Maximum Residue Levels (MRL)	%	20	2013-2015.	10	Independent final evaluation, based on data provided by NVWA	The baseline was estimated as the total number of rejections registered between 2013 and 2015, divided by the total number of shipments sent to the Netherlands in the same period.
<b>Indicator 5.2.</b> Number of farmers adopting Good Agricultural Practices (GAP) (male headed/female headed)	Farmers	0	2016	200 / 75	LVV reports	175 crop farmers and 100 livestock farmers will be certified. Following LVV's definition of the different degrees (or categories) of GAP adoption, LVV extension officers will, through field visits, allocate each of the 275 farmers to the most appropriate category. Gender Tracking
<b>Indicator 5.3.</b> Number of primary processors approved by LVV for their compliance with the Hygiene Code	Processors	0	2016	84	LVV reports	The 84 processors represent approximately 30% of total processors in the country.
<b>Indicator 5.4.</b> Accreditation of inspection units (ISO 17020)	Accreditation s	0	2016	2	Accreditation certificates	The ISO 17020 accreditation is expected for the plant and meat inspection units.
<b>Indicator 5.5.</b> Accreditation of the Food Safety Laboratory (ISO 17025)	Methodologie s	0	2016	3	Accreditation certificates	The accreditation of 3 methodologies guarantees the accreditation of the Laboratory.
<b>Indicator 5.6.</b> Food Safety Unit (FSU) established and operational	Unit	0	2016	1	LVV reports	
<b>Indicator 5.7.</b> Master's in Agri-Food Safety and Quality Assurance obtained by civil servants	Degrees	0	2016	2 (1 man and 1 woman)	Diplomas	Gender Tracking

Indicators	Unit of measure	Baseline Value	Baseline Year	End of Project (year 5)	Means of verification	Observations <sup>2</sup>
<b>OUTCOME # 6: improve agricultural research and extension system</b>						
<b>Indicator 6.1.</b> Percentage of targeted open field vegetable farmers that adopted best practices recommended by the projects (male headed/female headed)	%	0/0	2016	50/50	Farmer survey administered to a sample of beneficiaries of the innovation component at the end of the project as part of the impact evaluation.	The best practices include topics such as integrated crop and pest management, organic production techniques, etc.
<b>Indicator 6.2.</b> Amount of chemical pesticides used in the production of rice	SRD/ha	800	2016	720	Farmer survey administered to a sample of beneficiaries of the innovation component at the end of the project.	The amount of pesticides used will also be estimated for other crops using farmer surveys that will be conducted at the beginning and end of the program.  The monetary value at baseline and end-line has been estimated in constant values.
<b>Indicator 6.3.</b> Number of technologies adapted to local conditions	Technologies	0	2016	28	LVV research reports.	The technologies will be designed as part of the agricultural research component. Their adaptability to local conditions will then be validated by LVV. Last, LVV will define different degrees of technology adoption.
<b>Indicator 6.4.</b> BSc to MSc or HBO degrees obtained by research and extension staff	Degrees	0	2016	18 (10 men and 8 women)	Project progress report. Diplomas.	Gender Tracking

## **FIDUCIARY ARRANGEMENTS**

**COUNTRY:** Suriname  
**PROJECT N°:** SU-L1020  
**NAME:** Agricultural Competitiveness Program  
**EXECUTING AGENCY (EA):** Ministry of Agriculture, Animal Husbandry and Fisheries (LVV)  
**FIDUCIARY TEAM:** Rinia Terborg-Tel, Fiduciary Financial Management Specialist and Mariska Tjon A Loi, Fiduciary Procurement Consultant

### **I. EXECUTIVE SUMMARY**

- 1.1 The program objective is to increase the competitiveness of the agricultural sector through the improvement of animal health, plant health and food safety and agricultural research and technology transfer services. The project execution period is five years. The project will be funded with IDB loan financing of US\$17.5 million. There is no local counterpart funding and no co-financing.
- 1.2 The governmental entity responsible for implementing the program will be the LVV. A Project Executing Unit (PEU) will be established within the existing institutional structure of the LVV. The PEU will be responsible for financial management, procurement, and program management of the project. To this end, the PEU will be strengthened with qualified and specialized personnel fully dedicated to the program.
- 1.3 An institutional capacity assessment was carried out based on the Institutional Capacity Assessment System (ICAS) tool. The procurement, financial management, internal and external control systems were evaluated and analyzed. The results of the ICAS show that LVV is capable to implement the investment loan, and assume incremental responsibilities directly associated to the administration of the program. Notwithstanding, a number of factors and limitations were identified and the risk level assessed is categorized as medium, which point to the need for the design and execution of institutional strengthening actions aimed at building and enhancing the organizational and fiduciary capacity of the Ministry.

### **II. EXECUTING AGENCY'S FIDUCIARY CONTEXT**

- 2.1 The fiduciary context of the Government of Suriname and its line ministries are documented in the Public Expenditure Financial Accountability (PEFA) report of 2011 and the draft PEFA Report of 2014 indicating that the legal framework and practices for Public Financial Management Systems (PFMS) and procurement are outdated and not consistent with best practices and international standards. Some specific features of LVV in the area of the procurement and financial management system are:

- a. The Purchase Unit of the General Affairs Division of the Administrative Services Department is responsible for the procurement of goods, services and works in LVV.
- b. LVV has not adopted an internal norms and procedures manual for procurement administration. It discharges such responsibilities in compliance with the stipulations contained in the “Comptabiliteitswet” (budget law) and the “Procurement Rules of Suriname” (UWS 1996), updated in 2011, and the “Tender Rules of Suriname” (AWS 1996) of the Ministry of Public Works.
- c. Weaknesses and limitations with regards to procurement are: (i) the lack of updated and effective process control checklists for routing, provision of supporting documents, and authorization/signatories, applicable to all procurement and payment processes and steps; (ii) the absence of systems mapping and critical path process engineering to identify and effectively address any possible sources of delays in the procurement administration processes; (iii) the lack of an annual procurement plan to guide the overall procurement administration and process for goods, services and works; and (iv) the need to formalize the composition and proceedings of the evaluation commissions, taking into consideration concrete internal controls related to the segregation of authority, balance of power, and independency in their composition.
- d. Under the guidelines and support from the Ministry of Finance, LVV has implemented and is deploying the platform Integrated Financial Management Information System (IFMIS) for its overall budget, accounting and treasury administration activities under five main modules: (i) purchasing and requisition; (ii) public expenditure management (budget and credit); (iii) payment management; (iv) accounts receivable; and (v) accounts payable. IFMIS contains LVV’s specific chart of accounts based on its operating, technical and administrative characteristics, including those specific to the institutions of the central administration of the Government of Suriname (GOS).
- e. Accounting and treasury management. The Ministry accounts for all internally-generated revenues collected in the course of its operations. All revenues are collected and deposited within a period of two to three days in the Ministry’s account in the account at the Central Bank of Suriname, and ultimately transferred to the Treasury Single Account (TSA) i.e. the general fund of the Ministry of Finance. However no internal procedures are in place.
- f. Bank reconciliations are performed monthly to the Central Bank of Suriname. One of the limitations in the present cash-based accounting system represents the parallel control of commitments which must be performed outside IFMIS and requires the use of alternative Office-based systems so as to follow the overall budget and payment cycles beyond the current/fiscal year.
- g. With respect to financial reporting and, monthly preparation of revenue and expenditure reports that are submitted to the Ministry of Finance for review and consideration it is noted the IFMIS platform presents concrete limitations

with respect to required formats and templates, which determines that financial reports are prepared in Excel, from information obtained in IFMIS.

- h. Internal Control System (SCI). There is a limited level of progress in the implementation of the IFMIS platform, which requires for financial reporting to be based on Excel applications/worksheets; this in addition the limited number of licenses/authorizations issued by the Ministry of Finance to LVV. The lack of internal processes and procedures which can lead to ambiguities in the management and decision making structures, including those related to the internal control systems.
- i. External Control System (ECS). The Central Land Audit Department (CLAD) of the Government of Suriname is an autonomous/parastatal agency that reports to the Ministry of Finance and is charged for the external audit review of all agencies of the GOS; in particular, with respect to the financial statements and the internal control environment that surrounds their preparation. The Auditor General of the State Audit Institution (Rekenkamer) in turn conducts its external audit functions based on the CLAD reports.

### III. FIDUCIARY RISK EVALUATION AND MITIGATION ACTIONS

- 3.1 The overall fiduciary risk rating of the project is medium. The implementation of the actions indicated below can mitigate the risk for the execution of the program. The main mitigation measures or fiduciary arrangements will include definition and establishment of the functions, roles and responsibilities of the PEU staff responsible for the sound execution of the program.

**Table 1. Risks and Mitigating Measures**

Risks Identified	Risk	Mitigating Measures
Lack of (i) formal assignment of functions and responsibilities for financial management and procurement responsibilities and functions; and (ii) internal norms and procedures, process flows for planning, organizational and financial management and procurement activities.	Medium	<ul style="list-style-type: none"> <li>a. Establishing specific fiduciary functions and responsibilities assigned to Financial and Procurement Officers.</li> <li>b. Overall policies, procedures and internal control requirements of the program areas of planning, budgeting, cash flow, accounting, procurement and reporting processes will be detailed in the Operation Manual.</li> <li>c. Financial planning activities for the IDB funding need to be clearly designed and finalized for eligibility of the financing. The financial plan will serve as the basis for the IDB's disbursement projections.</li> <li>d. IDB fiduciary supervision plan will include initial semi-annual inspection visits to ascertain the proper financial management i.e. adequate functioning of the accounting systems, and the adequacy of the internal control system and execution of procurement activities.</li> <li>e. Extensive and ongoing financial management and procurement training will be provided by the IDB to support timely and adequate execution of fiduciary activities.</li> </ul>

Risks Identified	Risk	Mitigating Measures
Failure to comply with accounting and reporting requirements	High	<p>a. An accounting system that will integrate and facilitate the financial reporting and budgeting under the program, according to source of funding and categories of investments (at a minimum) will be implemented for the program.</p> <p>b. Extensive training will be provided to the Financial Officer in the implementation of the system and the appropriate application of IDBs financial management, accounting and reporting requirements to mitigate the assessed risk.</p>
Delays in the Program's procurement administration	Medium	<p>a. Program's administrative resources will be allocated to hire a procurement specialist who will form part of the PEU, with full-time responsibilities for purchase and contract administration for goods services and works as per the Procurement Plan (PP) of the Program, following IDB procurement policies.</p> <p>b. The POM will contain the administrative and internal control processes for procurement management, including target processing times for each procurement modality.</p> <p>c. From a technical perspective, the PEU through its Component and Subcomponent coordinators, will directly participate in the preparation of terms of reference, technical specifications and other, while providing the necessary training to animal health, plant health and food safety personnel of LVV to effectively participate and discharge their responsibilities as part of the procurement processes.</p> <p>d. Procurement training will be provided by the IDB</p>

#### IV. ASPECTS TO BE CONSIDERED IN THE SPECIAL CONDITIONS OF CONTRACT

- 4.1 In order to move forward the contract negotiations by the project team, herein are those fiduciary arrangements that must be considered in the special conditions:
- a. Special conditions precedent to first disbursement of the financing:
    - i. The presentation of evidence that the LVV has selected a program coordinator, a financial officer and a procurement officer according to the terms and conditions previously agreed with the Bank.
    - ii. Presentation of the Initial Report, including the Annual Operational Plan (AOP) and the Pluriannual Execution Plan (PEP).
    - iii. A Program Operating Manual (POM) including, among others, administrative, procurement, financial management policies, procedures, internal control requirements, the Environmental and Social Management Plan (ESMP), in terms previously agreed with the Bank.

- b. Exchange rate agreed on with the EA for accountability: the application of the exchange rate will be as follows:
    - i. Reimbursement of expenses made: the effective rate of exchange on the date of payment of each expenditure, as published by the Central Bank of Suriname.
    - ii. Reporting on accounts or justification of the advance of funds: the effective rate of exchange used in the conversion of the currency of the operation to the local currency.
    - iii. Disbursements in alternate currencies from the US Dollar and the Suriname Dollar: in cases of direct payment and reimbursement of a guarantee of letter of credit, the equivalent of the currency of the operation will be fixed in accordance with the amount effectively disbursed by the IDB.
  - c. Financial reports and audit financial statements (indicate whether they are required and specify the type of report):
    - i. Semi-annual financial reports are to be included in the semi-annual progress report which will be submitted by the EA to the Bank.
    - ii. Annual financial statements of the project, audited by an independent external audit firm acceptable to the Bank, are to be submitted to the Bank within 120 days at the end of each fiscal year, beginning with the fiscal year in which the first project expenditures are incurred.
    - iii. Final financial statements, audited by an independent audit firm acceptable to the Bank, are to be submitted to the Bank within 120 days following the last disbursement date of the program.
- 4.2 Pursuant to Document AB-2990, the disbursement of Bank financing will be subject to the following maximum limits: (i) up to 15% during the first 12 months; (ii) up to 30% during the first 24 months; and (iii) up to 50% during the first 36 months. All these periods will be counted from the time the loan operation is approved by the Board of Executive Directors. These limits may be rendered inapplicable to the extent that the requirements set forth in the Bank's policy regarding said limitations have been fulfilled, provided that the Borrower has been notified of the same in writing.

## **V. FIDUCIARY ARRANGEMENTS FOR PROCUREMENT EXECUTION**

- 5.1 The procurement fiduciary arrangements establish the conditions applicable to all procurement execution activities in the project.
- A. Procurement Execution**
- 5.2 Procurements for the proposed program will be carried out in accordance with the Policies for the Procurement of Works and Goods Financed by the

Inter-American Development Bank (GN-2349-9) of March 2011, and the Policies for the Selection and Contracting of Consultants Financed by the Inter-American Development Bank (GN-2350-9) of March 2011, with the provisions established in the Loan Contract and the Procurement Plan (PP).

- a. **Procurement of Works, Goods and Non-Consulting Services:** The procurement plan for the Agricultural Competitiveness Program covering the first 18 months of project execution will indicate the procedure to be used for the procurement of Goods, the contracting of Works and Non Consulting Services. The contracts for Works, Goods, and Non-Consulting Services<sup>1</sup> generated under the project and subject to International Competitive Bidding will be executed through the use of the Standard Bidding Documents (SBDs) issued by the Bank. The processes subject to National Competitive Bidding (NCB) will be executed through the use of National Bidding Documents satisfactory to the IDB. Where these are not available, IDB' Standard Bidding Documents will be used. The review of technical specifications in all cases, during the process of selection is the responsibility of the sector specialist of the program.
- b. **Procurement of Consulting Services:** The procurement plan for the Agricultural Competitiveness Program covering the first 18 months of project execution indicates the procedure to be used for the procurement of Consultancy Services, and the method of selecting Consultants. The Borrower is responsible for preparing the Terms of Reference (TOR), short lists, selection of Consultants, and awarding and subsequently administering the contract, with Bank supervision. Review of TOR for the selection of consulting services is the responsibility of IDB's sector specialist.
- c. **Selection of Individual Consultants:** Individual Consultants will be selected for assignments for which: (i) teams of personnel are not required; (ii) no additional outside (home office) professional support is required; and (iii) the experience and qualifications of the individual are the paramount requirement. Individual Consultants are selected on the basis of their qualifications for the assignment. Advertisement is not required and Consultants do not need to submit proposals. Consultants shall be selected through comparison of qualifications of at least three candidates among those who have expressed interest in the assignment or have been approached directly by the Borrower. Individual Consultants may be selected on a sole-source basis with due justification in exceptional cases. This will be carried out in accordance with Section V (Selection of Individual Consultants) of GN-2350-9 ¶5.1-¶5.4.
- d. **Recurrent Expenses:** This category includes the payment of salaries of the PEU staff. The complete PEU team will include a program coordinator; technical coordinators for animal health, plant health, food safety and agricultural research and technology transfer, monitoring & evaluation specialist, financial specialist, accountant, procurement specialist, procurement assistant, social and environmental monitoring specialist and administrative assistant.

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<sup>1</sup> Policies for the Procurement of Goods and Works Financed by the Inter-American Development Bank ([GN-2349-9](#)) paragraph 1.1: The services different to consulting services have a similar process as procurement of Goods.

e. **Thresholds:**

**Table 2. Thresholds**

<b>International Competitive Bidding Threshold*</b>		<b>National Competitive Bidding Range ** (Complex Works and non-common goods)</b>		<b>Consulting Services</b>
Works	Goods	Works	Goods	International Short List
≥1,000,000	≥100,000	100,000 – 1,000,000	25,000 - 100,000	≥100,000

\* When procuring simple works and common goods and their amount is under the International Competitive Bidding thresholds, Shopping may be used.

\*\* When procuring complex works and non-common goods with amounts under the NCB range, Shopping shall be used Country Thresholds Table (US\$) [www.iadb.org/procurement](http://www.iadb.org/procurement).

**B. Procurement Plan (PP)**

- 5.3 The PP indicates the procedure to be used for the procurement of Goods, the contracting of Works and Services, and the method of selecting Consultants, for each contract or group of contracts. It also indicates cases requiring prequalification, the estimated cost of each contract or group of contracts and the requirement for prior or post review by the Bank. The PP will be posted on the Bank's website and will be updated annually or whenever necessary, or as required by the Bank ([REL5](#)).

**C. Procurement Supervision**

- 5.4 The review method for all procurement activities will be ex ante. If a procurement activity is moved to ex post, the ex post procurement supervision should take place at least once every 12 months, in accordance with the supervision plan of the program.

**D. Records and Files**

- 5.5 All records and files will be maintained by the PEU, according to accepted best practices, and be kept for up to three (3) years beyond the end of the operation's execution period.

## **VI. FINANCIAL MANAGEMENT**

**E. Programming and Budget**

- 6.1 For the purposes of the program, the PEU will start with a strategic planning process that is the basis for the annual budgeting. It will prepare and implement an operational plan, which will include the budget plan, procurement plan and financial plan, consistent with a 12-month financial plan that will be required from the PEU on an annual basis. Additionally, the PEU will report on a semi-annual basis on implementation matters via a comprehensive report that covers actual versus planned operational, financial and procurement matters.

**F. Treasury disbursements and flow of funds the PEU**

- 6.2 The PEU will establish adequate banking arrangements at the Central Bank of Suriname for the management of the program resources. The financial plan will serve as the basis for the disbursement of funds to the PEU to cover the program's needs and for the purpose of maintaining IDB's projections. The main disbursement methodology will be the advance of funds to cover a period up to 180 days, based on liquidity needs of the program. The funds will be advanced through the Treasury Single Account. Other disbursement methodologies that will be used on a smaller scale are the reimbursement of payments made and direct payment to supplier.

**G. Accounting and Information Systems**

- 6.3 The PEU will procure and utilize an off the shelf accounting and financial management software for the accounting and financial reporting of the program.

**H. Internal Control and Audit**

- 6.4 The PEU will establish an internal control system documented in the Operating Manual (OM) that should provide reasonable assurance that: (i) the program funds are used for their intended purpose; (ii) program assets are properly safeguarded; (iii) program transactions, decisions and activities are properly authorized and documented; and (iv) program transactions are executed in accordance with the established policies, practices and procedures delineated in the legal agreements.

**I. External Control and Reporting**

- 6.5 The external audit of the program will be performed by an independent audit firm acceptable to the IDB. Audits will be performed in accordance with IDB's Guidelines for Financial Reports and External Audit. The PEU will be responsible for contracting of an external auditor eligible to the IDB to perform the program audit as follows: (i) an annual financial audit to be submitted within 120 days of the end of fiscal year; (ii) semi-annual financial statements as part of the semiannual progress report of the program; and (iii) one final financial audit of the program to be submitted within 120 days after the date of last disbursement.

**J. Financial Supervision Plan**

- 6.6 IDB fiduciary staff will conduct inspection visits on a semi-annual basis to ascertain the proper functioning of the accounting systems, the adequacy of the internal control system and follow up the fiduciary risk initially assessed.

**G. Execution Mechanism**

- 6.7 A PEU will be established within the Ministry under the Planning and Development Department of LVV. The PEU will be responsible for carrying out all the planning, fiduciary (including procurement, financial management) and technical responsibilities necessary for the program. Allocation of a core team of consultants and LVV personnel to the PEU for program coordination, technical

coordination, planning, monitoring and evaluation is included. To this end, the PEU will be strengthened with qualified and specialized personnel as mentioned above which will be financed with resources from the loan.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/17

Suriname. Loan \_\_\_\_/OC-SU to the Republic of Suriname  
Agricultural Competitiveness Program

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Republic of Suriname, as Borrower, for the purpose of granting it a financing to cooperate in the execution of an agricultural competitiveness program. Such financing will be for the amount of up to US\$17,500,000 from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on \_\_\_\_\_)