

PROJECT PROFILE

SURINAME

I. BASIC DATA

Project Name:	Agricultural Competitiveness Program		
Project Number:	SU-L1020		
Project Team:	Cesar Falconi (CSD/RND), Team Leader; Carmine Paolo De Salvo (CSD/RND), Alternate Team Leader; Sybille Nuenninghoff (RND/CBL); Steven Hofwijks (CCB/CSU); Mariska Tjon A Loi, Rinia Terborg-Tel (FMP/CSU); Monica Lugo (LEG/SGO); Lisa Restrepo (CSD/RND).		
Borrower:	Republic of Suriname		
Executing Agency:	Ministry of Agriculture, Animal Husbandry and Fisheries (MAAHF)		
Financial Plan:	IDB (OC):	US\$	15,000,000
	Total:	US\$	15,000,000
Safeguards:	Policies triggered:	B.01, B.02, B.03, B.04, B.05, B.07, B.10, B.17	
	Classification:	B	

II. GENERAL JUSTIFICATION AND OBJECTIVES

- 2.1 Suriname's macro-economy faltered following the fall in international prices of its main commodity exports (gold, oil, and alumina). The sustained low commodity prices and the closure of the alumina company in late 2015 pushed the economy into a severe recession; and the government embarked on an economic adjustment program through a 2-year IMF Stand-by Arrangement (SBA).¹ The program aims to achieve fiscal and external stability, which would be supported by structural reforms to improve business confidence and promote economic diversification. Of particular importance would be the agricultural sector,² which accounts for 7% of total export earnings, second to mining, 16% of the labor force and for 9% of total GDP in 2014 (Suriname Central Bank, 2015). Most agricultural production takes place along the coastal plains.³ Despite the sector importance, agricultural GDP declined between 1991 and 2002. A growth path was recovered from 2003 to 2014, but agricultural growth has constantly been lower than total GDP growth in recent years (Suriname Central Bank, 2014).⁴ The main challenge for the sector is overcoming its low productivity, as measured for instance by the total factor productivity (TFP) annual growth rate, which was almost zero between 1980-2012. This rate is one of the lowest in the region and considerably lower than Guyana's (1.3%) (Nin-Pratt et al., 2015). Moreover, based on the International Trade Centre's General Index Ranking of Export Performance (ITC), between 2010 and 2014, Suriname's ranking fell from 132nd to 139th out of 180 in terms of competitiveness of its fresh food (ITC, 2015).

¹ <https://www.imf.org/external/np/sec/pr/2016/pr16251.htm>

² Agricultural sector includes: agriculture, livestock, and fisheries.

³ More than 90% of total area under agricultural production lies along the Coastal Plains (Department of Agricultural Statistics of the Ministry of Agriculture of Suriname).

⁴ Further analysis of the evolution of the sector can be found in Roseboom (2012) and FAO (2013).

- 2.2 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. Specifically, 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 programs financed by the Bank in Peru, Ecuador, Uruguay and Belize presents positive evidence on the impact that this kind of intervention has (OVE, 2009). 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). The evidence indicates that an improvement of the quality of agricultural services can be identified as a driver of higher agricultural productivity growth.
- 2.3 The Government of Suriname has embarked on agricultural sector reforms to modernize its agricultural public services through Policy Loans (SU-L1033 and SU-L1032) for the last three years. The first tranche has been approved in 2014 and the second is expected to be approved in 2016. 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, and plans to improve technical capabilities have been elaborated. Similarly, in agricultural innovation, a strategy has been approved, a board composed by public and private actors is to be installed, and plans to improve technical capabilities have been formulated. The policy loans have therefore set up the foundation for the proposed investment operation.
- 2.4 The status of the provision of the most relevant agricultural services in the country, agricultural health, food safety and agricultural innovation, is presented in the following paragraphs.
- 2.5 Agricultural Health and Food Safety. The agricultural health and food safety system is composed by the MAAHF, the Ministry of Health and the Ministry of Trade and Industry. Suriname's agriculture and livestock are currently free of important pests and diseases like banana's black sigatoka, foot and mouth disease, and classical swine fever. However, the current status is extremely vulnerable because surveillance and control systems, border control and quarantine systems are not operating satisfactorily. In addition, human resources capacity is outdated and limited and equipment is obsolete. According to the assessments of the Surinamese Veterinary and Phytosanitary Services conducted by the World Organization for Animal Health (OIE) and the Inter-American Institute for Cooperation in Agriculture (IICA) (OIE, 2012 and IICA, 2012), the "performance scores" of Suriname are 42% and 31%, respectively -- among the lowest in the LAC region and significantly lower than Belize (60% animal health service performance) (OIE,2008) and the Dominican Republic (60% for plant health service performance) (IICA, 2011). In the case of food safety, the recent food safety strategy indicates that there is: (i) an outdated

legal framework to support an integrated food safety system with animal and plant health services; (ii) a fragmentation of food safety programs across government departments and within MAAHF, with minimal coordination; (iii) limited technical capabilities (human resources, equipment, information) to carry out inspection and surveillance of contaminants in agricultural products; and (iv) limited use of good agricultural practices (GAP) (less than 3% of total farmers apply FAO GAP) (*personal communication*, Capricorn Project). The economic repercussions of non-adequate agricultural health and food safety services can be significant in Suriname. For instance, rice blast affects up to 70% of rice production producing an average loss of 10-30% of yields, which could represent an economic loss of around US\$10 million annually (LVV, DAS 2012); and an outbreak of foot and mouth disease in Suriname would lead to a contraction of the livestock sector and an estimated loss of US\$8 million in a 15-year timespan (FAO, 2013). In addition, agrochemical and contamination of food exports could put in jeopardy US\$30 million of annual exports of fruits, vegetables and fish products, as evidenced by 35 alert notifications received between 2010-2015 by Suriname exports of such products to the USA and the European Union for exceeding maximum residue levels (FDA, 2015 and RASSF, 2015).

- 2.6 Agricultural innovation. The agricultural innovation system is composed by MAAHF, as its leader, the University of Suriname, the Center for Agricultural Research of Suriname and the Rice Research Organization. An analysis of Suriname's agricultural innovation system (Roseboom, 2013) highlights that while there is a history of a solid plant breeding program in rice, the system as a whole does not have a good record of collaborative research and extension activities, with limited linkages across national research entities and with international research centers. The overall level of investment in agricultural research in Suriname is 1.1% of Agricultural GDP (2011) (Roseboom, 2013), similar to the LAC average but below the recommended level of 1.5% (GFAR, 2011). As a comparison, Barbados shows a ratio of 2.4% and Trinidad and Tobago a ratio of 7.8% (Stads et al., 2016). As a result of the fragmentation of the agricultural innovation system in Suriname, and its limited linkages, the MAAHF has had only two agreements with international research entities in the last three years. The number of researchers with academic qualifications has shrunk considerably since the late 1970s. In 2015, there were only 3 PhDs in the agricultural innovation system (6% of total researchers) and MAAHF does not have any of them. At the same time, infrastructure and equipment need renovation and upgrades (Roseboom, 2015). As a consequence, Suriname shows yield gaps, vis-à-vis the region's best performer, of 75% for rice, 115% for beef production, 92% for milk, 101% for roots, 160% for cabbage, and 150% for oranges (2013) (FAOSTAT, 2015).
- 2.7 The **Program Objective** is to contribute to increase the competitiveness of the agricultural sector through improving the capacity of animal health, plant health and food safety and agricultural innovation services.
- 2.8 **Components**. To achieve the above objective the following components have been identified: Component 1, which will focus on: (i) Strengthening Animal Health through the establishment of a disease surveillance system, improvement of animal quarantine facilities, formulation of protocols, staff training, and

- equipment and inputs for the veterinary laboratory; (ii) Strengthening Plant Health through the reorganization of the plant health service, establishment of a pest surveillance system and a traceability system, improvement of plant quarantine facilities, establishment of integrated border controls, formulation of protocols, staff training, and equipment and inputs for the plant health laboratory; (iii) Strengthening Food Safety through the establishment of a surveillance, inspection and monitoring system, establishment of a monitoring system for agricultural inputs, improvement of the good agricultural practices program, formulation of protocols, staff training, equipment and inputs for the residue laboratory, and an assessment of the institutional architecture of the agricultural health and food safety system; and Component 2, which will focus on Strengthening Agricultural Innovation through the funding of strategic adaptive agricultural research projects, with emphasis on validation and technology transfer. Innovation projects, identified through a prioritization exercise, will be implemented in collaboration with national and international research and technology transfer centers. Possible prioritization criteria are economic relevance, yield gaps and environmental aspects. The projects, which could be product specific or focused on cross-cutting topics such as natural resource management, will detail technology transfer mechanisms, and will include technology products as expected results.
- 2.9 **Execution Mechanism.** The executing agency of the Program will be the Ministry of Agriculture, Animal Husbandry and Fisheries through a Program Executing Unit (PEU). An Institutional Analysis will be carried out during the design phase in order to define the composition and responsibilities of the PEU.
- 2.10 **Expected Results and Beneficiaries.** The main expected results are the increase of the sector productivity, increase of agricultural exports, avoided production losses and reduction of export rejections. The main beneficiaries of the program are agricultural producers in Suriname.
- 2.11 Consistency with National Sector Priorities. The newly drafted National Agricultural Strategy (2016-2020) prioritizes as one of the drivers for the agricultural sector growth improving the provision of public services such as agricultural research and extension, plant and animal health and food safety, and market information. The Program is therefore aligned with the Strategy.
- 2.12 Consistency with the Update to the Institutional Strategy 2010-2020 (UIS), the Corporate Results Framework 2016-2019 (CRF), Country Strategy, and Sector Strategy. The operation is consistent with the UIS (AB-3008) and aligned with the development challenge of productivity and innovation, increasing agricultural productivity of farmers, and economic integration, as improved agricultural health and food safety activities facilitate agricultural trade and integration among trading partners. The operation thus contributes to CRF indicator of number of beneficiaries of improved management and sustainable use of natural capital. The program also aligns with the cross-cutting issue of climate change and environmental sustainability through the use of good agricultural practices and technologies to facilitate climate change adaptation. The operation is aligned with the 2011-2015 country strategy GN-2637-3, contributing to improved food security by increasing productivity among agricultural producers; and is included in the 2016 Country Program Document. Likewise, the program is consistent with

the Agriculture and Natural Resources Management Sector Framework Document (GN-2709-2).

III. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

- 3.1 The design of this operation will consider lessons learned from similar Bank projects. The following technical issues will be considered during the preparation of the operation:
- 3.2 Interministerial and intra-MAAHF coordination for agricultural health and food safety. An inter-ministerial coordination working group for food safety has been established to better coordinate investments and activities. In order to develop an integrated system of agricultural health and food safety including the MAAHF and other governmental entities, an analysis will be conducted to make the interactions among the diverse departments and entities more efficient and better able to generate the expected results.
- 3.3 Institutional modality for agricultural innovation. A study will be conducted in order to promote the agricultural innovation modus operandi in the country, to define the financial modality of the agricultural innovation projects, and to strengthen the monitoring and evaluation of agricultural innovation.
- 3.4 Impact Evaluation. A rigorous impact evaluation plan will be developed for the Program and an ex-ante cost-benefit analysis will be conducted for the entire Program.
- 3.5 Donor Coordination. The European Union (EU) approved a National Indicative Programme (2014-2020) for enhancing sustainable agricultural development in Suriname through the strengthening of the capacities of the MAAHF and the private sector. The Islamic Development Bank is focusing on strengthening rice research and technology transfer and the World Bank on a national competitiveness study. In order to maximize synergies, avoid duplication and adequately define the activities of the proposed operation, coordination with other donors during the design phase will be necessary.

IV. ENVIRONMENTAL SAFEGUARDS AND FIDUCIARY SCREENING

- 4.1 A “B” classification is proposed, in accordance with the Environmental and Social Safeguards Compliance Policy (OP-703). The project team does not expect to develop activities adversely affecting the environment or vulnerable communities. Specific arrangements will be prepared to monitor the overall environmental and socio-economic benefits of this operation. The Environmental and Social Strategy is presented in Annex III. A fiduciary risk assessment will also be undertaken before POD approval to determine the fiduciary risk level and define the corresponding modalities for the fiduciary management of the program.

V. RESOURCES AND TIMETABLE

- 5.1 Annex V details costs and the timeline for program preparation. The distribution of the POD to QRR is expected on November 3, 2016. The approval of the Draft Loan Proposal by the Operations Policy Committee is expected by December 16, 2016; and the approval by the Board of Executive Directors by March 22, 2017. A Technical Cooperation (ATN/OC-15551-SU) for US\$200,000 and an administrative budget for US\$73,500 will support the preparation of this operation.

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¹ The information contained in this Annex is confidential and will not be disclosed. This is in accordance with the "Deliberative Information" exception referred to in paragraph 4.1 (g) of the Access to Information Policy (GN-1831-28) at the Inter-American Development Bank.



Safeguard Policy Filter Report

Operation Information

Operation		
SU-L1020 Agricultural Competitiveness		
Environmental and Social Impact Category	High Risk Rating	
B	{Not Set}	
Country	Executing Agency	
SURINAME	{Not Set}	
Organizational Unit	IDB Sector/Subsector	
Env, Rural Dev & Disaster Risk	AGRICULTURAL HEALTH AND FOOD SAFETY	
Team Leader	ESG Lead Specialist	
CESAR A. FALCONI	{Not Set}	
Type of Operation	Original IDB Amount	% Disbursed
Loan Operation	\$0	0.000 %
Assessment Date	Author	
29 Apr 2016	cesarf Team Leader	
Operation Cycle Stage	Completion Date	
ERM (Estimated)	13 May 2016	
QRR (Estimated)	23 Aug 2016	
Board Approval (Estimated)	{Not Set}	
Safeguard Performance Rating		
{Not Set}		
Rationale		
{Not Set}		

Safeguard Policy Items Identified

[B.1 Bank Policies \(Access to Information Policy– OP-102\)](#)

The Bank will make the relevant project documents available to the public.

[B.1 Bank Policies \(Disaster Risk Management Policy– OP-704\)](#)

The operation is in a geographical area exposed to [natural hazards \(Type 1 Disaster Risk Scenario\)](#). Climate change may increase the frequency and/or intensity of some hazards.



Safeguard Policy Filter Report

B.1 Bank Policies (Disaster Risk Management Policy– OP-704)

The sector of the operation is vulnerable to natural hazards. Climate change may increase the frequency and/or intensity of some hazards.

B.1 Bank Policies (Disaster Risk Management Policy– OP-704)

The operation includes activities related to climate change adaptation, but these are not the primary objective of the operation.

B.1 Bank Policies (Gender Equality Policy– OP-761)

The operation offers opportunities to promote [gender equality](#) or [women's empowerment](#).

B.10. Hazardous Materials

The operation has the potential to impact the environment and occupational health and safety due to the production, procurement, use, and/or disposal of hazardous material, including organic and inorganic toxic substances, pesticides and persistent organic pollutants (POPs).

B.17. Procurement

Suitable safeguard provisions for the procurement of goods and services in Bank financed operation will be incorporated into project-specific loan agreements, operating regulations and bidding documents, as appropriate, to ensure environmentally responsible procurement.

B.2 Country Laws and Regulations

The operation is in compliance with laws and regulations of the country regarding specific women's rights, the environment, gender and indigenous peoples (including national obligations established under ratified multilateral environmental agreements).

B.3 Screening and Classification

The operation (including associated facilities) is screened and classified according to its potential environmental impacts.

B.4 Other Risk Factors

The operation [includes activities](#) to close current “adaptation deficits” or to increase the ability of society and ecological systems to adapt to a changing climate.

B.5 Environmental Assessment Requirements

An environmental assessment is required.

B.7 Supervision and Compliance

The Bank will monitor the executing agency/borrower's compliance with all safeguard requirements stipulated in the loan agreement and project operating or credit regulations.

Potential Safeguard Policy Items

B.4 Other Risk Factors

The borrower/executing agency exhibits weak institutional capacity for managing environmental and social issues.



Safeguard Policy Filter Report

Recommended Actions

Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR. The project triggered the Disaster Risk Management policy (OP-704) and this should be reflected in the Project Environmental and Social Strategy. A Disaster Risk Assessment (DRA) may be required (see Directive A-2 of the DRM Policy OP-704). Next, please complete a Disaster Risk Classification along with Impact Classification. Also: if the project needs to be modified to increase resilience to climate change, consider the (i) possibility of classification as adaptation project and (ii) additional financing options. Please consult with INE/CCS adaptation group for guidance. The project triggered the Other Risks policy (B.04): climate risk.

- Please include sections on how climate risk will be dealt with in the ESS as well as client documents (EIA, EA, etc);
- Recommend addressing risks from gradual changes in climate for the project in cost/benefit and credit risk analyses as well as TORs for engineering studies.

Additional Comments

[No additional comments]



Safeguard Screening Form

Operation Information

Operation		
SU-L1020 Agricultural Competitiveness		
Environmental and Social Impact Category	High Risk Rating	
B	{Not Set}	
Country	Executing Agency	
SURINAME	{Not Set}	
Organizational Unit	IDB Sector/Subsector	
Env, Rural Dev & Disaster Risk	AGRICULTURAL HEALTH AND FOOD SAFETY	
Team Leader	ESG Lead Specialist	
CESAR A. FALCONI	{Not Set}	
Type of Operation	Original IDB Amount	% Disbursed
Loan Operation	\$0	0.000 %
Assessment Date	Author	
29 Apr 2016	cesarf Team Leader	
Operation Cycle Stage	Completion Date	
ERM (Estimated)	13 May 2016	
QRR (Estimated)	23 Aug 2016	
Board Approval (Estimated)	{Not Set}	
Safeguard Performance Rating		
{Not Set}		
Rationale		
{Not Set}		

Operation Classification Summary

Overriden Rating	Overriden Justification
Comments	



Safeguard Screening Form

Conditions / Recommendations

Category "B" operations require an environmental analysis (see Environment Policy Guideline: Directive B.5 for Environmental Analysis requirements)

The Project Team must send to ESR the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports. These operations will normally require an environmental and/or social impact analysis, according to, and focusing on, the specific issues identified in the screening process, and an environmental and social management plan (ESMP). However, these operations should also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.) where necessary.

Summary of Impacts / Risks and Potential Solutions

A [natural hazard](#) is likely to occur or be exacerbated due to climate-related changes and the likely severity of the impacts to the project is [moderate](#).

A Disaster Risk Assessment, that includes a Disaster Risk Management Plan (DRMP) may be necessary, depending on the complexity of the project and in cases where the vulnerability of a specific project component may compromise the whole operation. The DRMP should propose measures to manage or mitigate these risks to an acceptable level. The measures should consider both the risks to the project, and the potential for the project itself to exacerbate risks to people and the environment during construction and operation. The measures should include risk reduction (siting and engineering options), disaster risk preparedness and response (contingency planning, etc.), as well as financial protection (risk transfer, retention) for the project. They should also take into account the country's disaster alert and prevention system, general design standards and other related regulations. For details see the DRM policy guidelines.

The project is located in an area prone to [coastal flooding](#) from [storm surge](#), high wave activity, or erosion and the likely severity of the impacts to the project is [moderate](#).

A Disaster Risk Assessment, that includes a Disaster Risk Management Plan (DRMP), may be necessary, depending on the complexity of the project and in cases where the vulnerability of a specific project component may compromise the whole operation. The DRMP should propose measures to manage or mitigate these risks to an acceptable level. The measures should include risk reduction (siting and engineering options), disaster risk preparedness and response (contingency planning, etc.), as well as financial protection (risk transfer, retention) for the project. They should also take into account the country's disaster alert and prevention system, general design standards, coastal retreat and other land use regulations and civil defense recommendations in coastal areas.



Safeguard Screening Form

The project is located in an area prone to [sea level rise](#) and the likely severity of the impacts to the project is [moderate](#).

A Disaster Risk Assessment, that includes a Disaster Risk Management Plan (DRMP), may be necessary, depending on the complexity of the project and in cases where the vulnerability of a specific project component may compromise the whole operation. The DRMP should propose measures to manage or mitigate these risks to an acceptable level. The measures should consider both the risks to the project, and the potential for the project itself to exacerbate risks to people and the environment during construction and operation. The measures should include risk reduction (siting and engineering options), disaster risk preparedness and response (contingency planning, etc.), as well as financial protection (risk transfer, retention) for the project. They should also take into account the country's disaster alert and prevention system, general design standards and other related regulations.

Transport of [hazardous materials](#) (e.g. fuel) with [minor](#) to [moderate](#) potential to cause impacts on community health and safety.

Hazardous Materials Management: The borrower should be required develop a hazardous materials management plan; details of grievances and any independent health and safety audits undertaken during the year should also be provided. Compliance with the plan should be monitored and reported. Depending on the financial product, this information should be referenced in appropriate legal documentation (covenants, conditions of disbursement etc). Consider requirements for independent audits if there are concerns about commitment of borrower or potential outstanding community concerns.

Disaster Risk Summary

Disaster Risk Level

Moderate

Disaster / Recommendations



Safeguard Screening Form

The reports of the Safeguard Screening Form (i.e., of the Safeguards Policy Filter and the Safeguard Classification) constitute the Disaster Risk Profile to be included in the Environmental and Social Strategy (ESS). The Project Team must send the PP (or equivalent) containing the ESS to the ESR.

The Borrower prepares a Disaster Risk Management Summary, based on pertinent information, focusing on the specific moderate disaster and climate risks associated with the project and the proposed risk management measures. Operations classified to involve moderate disaster risk do not require a full Disaster Risk Assessment (see Directive A-2 of the DRM Policy OP-704).

The Project Team examines and adopts the DRM summary. The team remits the project risk reduction proposals from the DRMP to the engineering review by the sector expert or the independent engineer during project analysis or due diligence, and the financial protection proposals to the insurance review (if this is performed). The potential exacerbation of risks for the environment and population and the proposed risk preparedness or mitigation measures are included in the Environmental and Social Management Report (ESMR), and are reviewed by the ESG expert or environmental consultant. The results of these analyses are reflected in the general risk analysis for the project. Regarding the project implementation, monitoring and evaluation phases, the project team identifies and supervises the DRM approaches being applied by the project executing agency.

Climate change adaptation specialists in INE/CCS may be consulted for information regarding the influence of climate change on existing and new natural hazard risks. If the project requires modification or adjustments to increase its resilience to climate change, consider (i) the possibility of classification as an adaptation project and (ii) additional financing options. Please consult the INE/CCS adaptation group for guidance.

Disaster Summary

Details

The project is classified as moderate disaster risk because of the likely impact of at least one of the natural hazards is average.

Actions

Operation has triggered 1 or more Policy Directives; please refer to appropriate Directive(s). Complete Project Classification Tool. Submit Safeguard Policy Filter Report, PP (or equivalent) and Safeguard Screening Form to ESR.

ENVIRONMENTAL AND SOCIAL SAFEGUARD STRATEGY

- 1.1 The program will mainly generate positive social and environmental impacts. The activities considered aim to improve the country's capacity for improving productivity and competitiveness in the agricultural sector; through improving support services sector such as agricultural health and food safety and agricultural innovation (research and technology transfer). Most of the activities of the Program will be carried out along the Coastal Plains, where more than 90% of total area under agricultural production lies.
- 1.2 Potential impacts negative environmental be specific and limited in scope. They will be linked to the remodeling of infrastructure and operation of small laboratories and refurbished and building of small checkpoints frontier and quarantine facilities. Regarding the works they are expected temporary, timely and easily controllable impacts during implementation. No negative impacts are expected to fragile habitats or endangered species due to the construction or renovation of infrastructure. Regarding the operation of laboratories, impacts may be associated with the use of very small amounts of toxic substances (reagents tests and fumigants), disposal of packaging or inputs and the provision of waste, which will follow the national and international standards for management of hazardous waste. Each work of the program will comply with the corresponding process environmental impact assessment and implementation of mitigation measures and management environmental, which will be incorporated in the bidding documents for the works.
- 1.3 Strengthening epidemiological surveillance activities and best communications between the different field units and headquarters of the services contribute to improving knowledge on the distribution of pests and diseases. This will facilitate decision making on measures for adaptation to climate change on animal and plant health and food safety. Strengthening research, validation and transfer technologies in production systems and health protection and making available to producers of alternative management more sustainable will contribute to reducing soil erosion, water pollution, deforestation and the rational use of pesticides through the generation and transfer of more sustainable technologies. The information generated facilitate definition and dissemination of measures for adaptation to climate change Suriname agriculture activities. Social impacts will be positive since the program the program will contribute to increase productivity and therefore the welfare of rural areas. The Program will help increase the national food safety through the dissemination of good practices on agricultural, livestock and manufacturing, training of producers and processors, and the integration of institutions working in food safety along agrifood chains from production to consumption. The program will also help promote the participation of producers and others involved chains productive activities in prevention and control of diseases and pests affect animal and plant health. In addition, by linking technology and innovation support, the program will help to promote the participation of farmers, their organizations, companies and institutions of local and international research in the definition of more sustainable and profitable alternative technologies. In turn, the development of technologies that contribute to increased yields crops will reduce the pressure on the opening of new production areas agriculture.

- 1.4 Based on the above, it is proposed that the operation is classified as B. social and environmental strategy for the operation proposal will focus on preparing a Environmental and Social Analysis, to consider: (i) the identification, evaluation and mitigating the risks and impacts and opportunities (positive impacts) that program strategy could trigger in the environment, society and the sustainability of uses of natural resources; (ii) identification of indicators environmental and social to be incorporated into the project monitoring system, with baseline establishment, and frequency measuring means, responsibilities and costs; (iii) the design of a system of consultations with potential beneficiaries and affected groups with the intention of improving the mechanism program execution; (iv) assessment of capacities in environmental management central and local levels for the implementation of project activities and strengthening recommendations; and (v) recommendations of actions for the Operating Regulations include the actions required to avoid, minimize and / or mitigate potential impacts identified. Furthermore, identification will be provided and adoption of opportunities for inclusion of vulnerable groups such as people indigenous and women in program activities.
- 1.5 As a result of environmental and social analysis, the Environmental and Social Management Plan for the program will be prepared, which will include mitigation measures, the activities to implement mitigation measures, responsibility for the implementation, schedule and costs.
- 1.6 On the final draft of the Environmental and Social Impact assessment (EIS) a consultation process with stakeholders will be held to be organized by the MAAHF. Based on studies an Environmental and Social Management Report (ESMR). The measures prioritized in the ESMR be incorporated into the POD and they will be part of the loan conditions, if it merited its relevance.

INDEX FOR COMPLETED AND PROPOSED SECTOR WORK

Topic	Description	Estimated Dates	References and Electronic Links
Technical options and design aspects	National Food Safety Strategy	Completed	IMWGFS Food Safety Strategy
	Food Safety Human Resource Plan	Completed	Food Safety Human Resource Plan
	Food Safety Infrastructure and Equipment Plan	Completed	Infrastructure and equipment plan report
	Food Safety Legislation Plan	Completed	IMWGFS Food Safety Legislation Plan
	Food Safety Protocols Plan	Completed	Food safety protocols plan
	Plan for improving technical capabilities for diagnostic, risk analysis and emergency preparedness, epidemiological decision making, surveillance and monitoring, international health regulations, quarantine and border control, and inspection and traceability, data management	Completed	Improving the performance of animal health services in Suriname
	A National Animal Disease Surveillance and Monitoring Plan	Completed	National Animal disease Surveillance and Monitoring Plan
	Protocols and rules of procedures for border control and quarantine activities	Completed	Manual of operations for the inspection of live animals, products and sub-products
	Plan Health Strategy	Completed	Plant health Strategy
	Preliminary Five-Year Plan for Improving the Plant Health Service	Completed	draft 5-year preliminary plan for improving the PMS january 2016
	A proposal on organizational structure for Plant Health services	Completed	Proposal plant health system
	A National Plant Pest Surveillance and Monitoring Plan	Completed	Preliminary plant pest & surveillance plan
Protocols and rules of procedures for border control and quarantine activities developed	Completed	Preliminary phytosanitary protocols and procedures for border control	

Topic	Description	Estimated Dates	References and Electronic Links
	Strategy to determine the status of major plant pests in Suriname	Completed	strategy to determine the status of major plant pests in Suriname
	A Human Resource Plan for agricultural innovation developed with the participation of CELOS, ADRON, University of Suriname,	May 2016	
	A National Infrastructure Plan for agricultural innovation developed with the participation of CELOS, ADRON, and the University of Suriname	May 2016	
	Plant Health Analysis	September 2016	
	Animal Health Analysis	September 2016	
	Food Safety Analysis	September 2016	
	Agricultural innovation analyses	September 2016	
Cost analysis and economic viability of the Program	Program cost-benefit analysis	September 2016	
Financial management and fiduciary issues	Annex III of the POD	September 2016	
Data collection and analysis for reporting the results	Monitoring and impact evaluation plan	September 2016	
Environmental and Social Safeguards	Environmental and Social Management Report (ESMR)	September 2016	

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