

PROJECT PROFILE

GUYANA

I. BASIC DATA

Project Name:	Sustainable Agricultural Development Program		
Project Number:	GY-L1060		
Project Team:	Co-Team Leaders: Juan de Dios Mattos (CSD/RND) and Sybille Nuenninghoff (RND/CBL); Team Members: Onil Banerjee (CSD/RND); Jamie Cotta (CSD/RND); Derise Williams (CCB/CGY); Emilie Chapuis (FMP/CGY); Paula Louis-Grant (FMP/CGY); Rachel Atkinson (VPS/ESG); Escarlata Baza (LEG/SGO); David Cotacachi (SCL/GDI); Gerard Alleng (CSD/CCS); Maja Schling (SPD/SDV); Claudia Stevenson (IFD/CTI); and Lisa Restrepo (CSD/RND)		
Borrower:	Co-operative Republic of Guyana		
Executing Agency:	Ministry of Agriculture		
Financial Plan:	IDB (OC – 50%):	US\$	7,500,000.0
	IDB (FSO – 50%):	US\$	7,500,000.0
	Total:	US\$	15,000,000.0
Safeguards:	Policies triggered:	B1 (OP704, OP765), B2, B3, B4,B5, B6, B7, B9, B11, B16, B17	
	Classification:	B	

II. GENERAL JUSTIFICATION AND OBJECTIVES

A. Productivity and public services

- 2.1 Guyana experienced high rates of economic growth between 2009 and 2013 (4.5% annual average), but decelerated in 2014 and 2015, largely due to the fall in the price of commodities ([Modeste, 2016](#)).¹ Agriculture represents more than 18% of total output, and 20% of employment (70% in rural areas), and is one of the main sources of foreign exchange earnings, representing 19% of total exports (GBS, 2016). Fifty percent of total agriculture production is consumed domestically, mostly produced and consumed by subsistence farmers (FAOSTAT, 2016). Guyana has more than 400,000 hectares of arable land, out of which approximately 161,874 hectares are irrigated, hosting major crops, including sugarcane and rice ([FAO, 2012](#)). Although Guyana harvested a record amount of rice in 2014/15 with a national average yield of 4.99 MT/Ha, even in the export-oriented farms, agricultural productivity is generally low ([FAS/USDA, 2016](#)). Sugar and rice yields are lower than Guyana's closest competitors (33.9% rice; and 78.5% for sugar; FAOSTAT, 2016).
- 2.2 Small farmers produce most of the fruits and vegetables grown in Guyana; they produce 80% of grains, 60% of coconuts, and 40% of coconut oil ([FAO, 2012](#)). Agriculture, largely a subsistence activity with the exception of a few key export crops, is modernizing slowly. In the absence of research and extension services, current agricultural practices have not changed much throughout the years ([Ramrattan, 2015](#)). Small farm productivity is low, compared with other countries

¹ References included in this document can be found in [IDBDocs 40279510](#).

- with similar farm production systems. Yields of corn, beans, and small scale rice are 40% lower than the average in the Caribbean and 60% lower compared with Guyana's South American neighbors. Livestock production is focused on poultry, with cattle and small ruminants produced mainly in small farms, with similarly low productivity ([FAO, 2012](#)). In the aggregate, as a result of the farming structure and low levels of agricultural services, the sector's Total Factor Productivity (TFP) increased at an annual rate of 1.3% from 1981 to 2012, below the average in LAC ([Nin-Pratt, et al., 2015](#)).
- 2.3 Productivity is also affected by changes in weather patterns. The drought of 2014–2015 was one of the longest and most severe of the last two decades (OCC-MP, 2016 and [Hickey and Weis, 2012](#)). Water availability is one of the main constraints to agriculture and livestock development in the hinterlands (Region 9). Climate change is increasing the need to facilitate adaptation and mitigation measures, both for large and small farmers. Climate and agricultural models forecast significant drops in productivity for rice and tubers in Guyana because of temperature rise (IFPRI, 2009). The intermediate savannahs (Region 10) and the hinterlands savannahs (Region 9) have been traditionally the areas of livestock production. However, since 1980, livestock production has declined markedly. One of the reasons is access to markets and the other, lack of genetic material. Region 9 is also home to the largest Amerindian community in Guyana. Amerindian communities practice subsistence agriculture and traditional livestock rearing. Region 9 has the most vulnerable Neighborhood Democratic Councils (NDC), as measured by a poverty index (GSB, 2012, based on 2002 population census).
- 2.4 One of the reasons for the underperformance of Guyana's agricultural sector is the lack of public services, especially research, innovation and extension services ([Trigo, et. al., 2013](#)). The Ministry of Agriculture (MoA) does not have a formal, operational, extension service, although the National Agricultural Research and Extension Institute (NAREI) and the Guyana Livestock Development Authority (GLDA) share the responsibility. Crop – specific research and innovation services have evolved for the sugar and rice industries, given the predominance of large farms engaging in these activities. However, access to technologies and training for small and medium sized farmers do not exist (SOFA, 2015). At the same time, Government authorities and private investors lack enough data upon which to base agricultural policies, strategies and investments decisions. The last agricultural census dates to 1952 and the last household income survey was implemented in 2006. The MoA collects price information through its Monitoring and Evaluation Unit, but there is no data on production or production costs at the farm level. Although SPS protocols were prepared and approved, only 20 products are accepted by the USDA, as showed in the PCR of loan 1929/BL-GY. Another big market, Brazil, has not yet accepted meat and dairy exports from Guyana because domestic production does not comply with Brazilian standards.
- 2.5 Experience in the region and elsewhere shows that investments in public services increase productivity and income for small farmers. Foster et. al. (2015) show that an increase of 10% in investment in public goods for the agricultural sector increases the value added per capita in the agriculture sector by 5%. A systematic review of the causality of research, innovation and extension

([Waddington, et. al., 2014](#)) shows that agricultural revenues and environment management increased by 25% and 60% respectively. This effect is stronger for small farmers, likely to be poor and with limited access to assets and finance ([Salazar, et. al., 2015](#)).

- 2.6 Guyana has improved the governance framework for the agricultural sector. The MoA has created specialized agencies that implement activities and provide public services. NAREI focuses on agricultural production, but with constrained institutional capacity, its activities are limited in scope and mostly concentrated in coastal regions (Region 3, 4, 5). GLDA is responsible for regulating and providing technical assistance to the livestock sub-sector, but concentrates its efforts in Region 3 and 5. A recent paper sponsored by the Bank showed that the provision of public goods through an adequate institutional framework increases the value of agricultural production (Foster, 2015).

B. Results of Bank interventions

- 2.7 The Bank has supported the country in the modernization of the sector through operations 1558/SF-GY and 1929/BL-GY. Also, operations 3106/BL-GY and 3422/BL-GY helped the Government to implement a Low Carbon Development Strategy, which included support for the agricultural sector. 1558/SF-GY improved the competitiveness of the agricultural sector through investment in drainage and irrigation systems and 1929/BL-GY focused on non-traditional agricultural export like aquaculture, fruits and vegetables and livestock. It also facilitated the creation and startup of NAREI and GLDA.

C. Objectives and program description

- 2.8 The main objective of the Program is to increase the productivity of the agricultural sector while maintaining a sustainable and climate resilient use of natural resources in Guyana. Impacts will be achieved through a combination of institutional strengthening, research, extension and support to farmers for technology adoption. It is expected that higher productivity will also reduce pressure on forest and fragile ecosystems, and at the same time, increase incomes for small and medium-sized farmers. Activities will be concentrated in Region 9 and Region 10, where agricultural potential and availability of natural resources is greater. More than 3,500 farmers, including Amerindian communities, which represent more than 89% of the population of Region 9, will benefit from the Program. The Program will be organized in three components:

- 2.9 **Component 1: Generating information for evidence – based policy making and natural resource management (US\$4 million).** This component will include the review and design of an appropriate Agricultural Information System (AIS), including the preparation and implementation of an Agricultural Census; a LIDAR survey of the North Rupununi (Region 9) and Region 10; strengthening of the Monitoring and Evaluation capabilities of the MoA; identification of buffer zones for sensitive wetlands (with potential to designate a RAMSAR site²) in

² RAMSAR is an international convention.. RAMSAR sites are not protected areas, but management areas that aim to protect wetlands and improve resources management.

Region 9; and identification of water catchment sites for improved natural resource management and climate change adaptation in Region 9.

- 2.10 **Component 2: Strengthening of the agricultural innovation and extension system (US\$7 million).** The program will finance the establishment of agriculture centers, to contribute to local and regional development, including technology transfer, demonstration and training. Two centers have been identified by the MoA: (i) Lethem / Manari (Region 9); and (ii) Ebini (Region 10). In both sites, the program will finance infrastructure (new and upgrades to existing buildings), equipment and technical assistance. The infrastructure will be used for research, training and extension. Land is owned and will be provided by the MoA. Research / demonstration programs, identified through a prioritization exercise, will be implemented in collaboration with national and international centers. These programs will identify specific beneficiary groups, technology packages and monitoring and evaluation mechanisms. Research activities will focus on reducing vulnerability to climate change through multiplication and conservation of genetic material, including drought resistant varieties and protection of traditional knowledge as local adaptation strategy.
- 2.11 **Component 3: Support for compliance with sanitary and phytosanitary standards (US\$2 million).** Access to markets and infrastructure will increase the value and sales volume of meat and dairy products. To this end, the program will finance: (i) the review and update of standards and codes related to products destined for export markets as well as local markets, both current and potential; (ii) the implementation of pilot facilities (infrastructure and equipment) for meat and dairy processing to evaluate the feasibility and unit costs of complying with standards; and (iii) training and technical assistance for the GLDA and producers associations.
- 2.12 The operation will contribute to the CRF (GN-2727-6) in: (i) social inclusion and equality; and (ii) productivity and innovation. This operation will also contribute to two cross cutting themes, as described in the Update of the Institutional Strategy (2016–2019): (i) climate change and environmental sustainability; and (ii) gender equality and diversity. This operation is aligned with the Country Strategy (GN-2690) through the priority area “Natural resources management” and cross-cutting issues related to indigenous population in Guyana. This operation is also aligned with (i) the Food Security SFD (OP-2017), contributing to two sources of food security: (a) access; and (b) availability; (ii) the Agriculture and Natural Resources SFD (OP-2001); and (iii) Gender and Diversity SFD (GN-2800), promoting livelihood opportunities for indigenous peoples.
- 2.13 The executing agency of the program will be the Ministry of Agriculture, through the Agriculture Support Development Unit (ASDU). ASDU is a specialized unit within the MoA in charge of the implementation of projects. NAREI and GLDA will be beneficiaries and participate in the implementation of the Program, but will not manage funds. An Institutional Analysis will be carried out during the design phase in order to define the composition and responsibilities of the ASDU and define modalities for project management. Dialogue is ongoing with FAO to provide technical support for the implementation of the agricultural census. FAO will implement the census through an agreement between the MoA and FAO. This agreement will be prepared during Program design.

III. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

- 3.1 **Impact evaluation.** The Bank has supported LAC countries in the development and implementation of research, innovation and extension services since 1980. Since 2004, 17 operations that represent more than US\$660 million have been approved. Impact evaluations of 1397/OC-DR and 2223/OC-BO show that extension services and access to technology greatly increase productivity and incomes of poor farmers. Accessing extension services are costly for small farmers, especially if distances and transport facilities are considered. Global analyses show that growth in the agricultural sector is highly correlated with investments in research, extension and public goods ([Trigo, et. al., 2013](#)). An impact evaluation will be designed during Program preparation to demonstrate the effects of the intervention.
- 3.2 The final evaluation for 1929/BL-GY indicates: (i) substantial progress has been made in the design of animal health; plant health and food safety systems (including inspection systems; laboratories and procedures); (ii) transfer of technology for the livestock subsector was successful; (iii) direct support to farmers through clusters in specific value chains facilitated the implementation of business plans; and (iv) improvement of productive infrastructure, such as D&I systems and laboratories. Nevertheless, the same evaluation report also highlights: (i) the lack of critical data and gaps in information systems, which resulted in weak baseline data and difficulties to measure results; and (ii) the need to build on the outcomes, such as the implementation of agricultural health and food safety systems designed by 1929/BL-GY.
- 3.3 A survey to collect data on productivity and income for Region 9 and Region 10 will be implemented. During the program design, specific markets and products will be analyzed to facilitate compliance with local and international regulations, especially related to the pilot facilities to be supported by the program. Studies to support the implementation of pilot facilities for meat processing (Region 9 and Region 5) and milk processing will be prepared during the program design. Parallel financing from the Green Climate Fund will be analyzed, to support agricultural mitigation and adaptation, mostly in Region 9. A close coordination with GY-L1059 will be required to optimize investments, especially those related to laboratories and training. GY-L1059 will also finance the compliance with agricultural standards that will need to be included in this loan.
- 3.4 During the design of the program a Program Operating Manual (POM) will be prepared. The POM will include criteria for the selection of the beneficiaries, which will include positive measures to facilitate the participation of indigenous communities.

IV. ENVIRONMENTAL SAFEGUARDS AND FIDUCIARY SCREENING

- 4.1 According to the Bank's Safeguards Policy (OP-703), the operation was classified as "B." An Environmental and Social Analysis (ESA) will be conducted to guarantee that any possible impact from the small works is minimized or

avoided, and that possible risks from climate change impacts, particularly those related to water availability in savannah environments, are considered. The operation will follow the guidelines of the Operational Policy on Indigenous Peoples (OP-765) to secure effective participation of indigenous communities during the design. The program is expected to have positive social impacts in terms of increased incomes due to improved access to technologies and markets.

V. RESOURCES AND TIMETABLE

- 5.1 Annex V details costs and timeline for program preparation. The POD Due Date (PODDD) is expected by August 31, 2016; approval of the Draft Loan Proposal is expected by October 25, 2016; and approval of the Loan Proposal by the Board of Executive Directors is expected on November 30, 2016. The GoG has requested the Bank a TC to prepare feasibility studies and other documents needed for Board approval. The TC GY-T1126, with funding from FOD (US\$200,000) will finance part of the studies and data collection for the preparation of the program.

CONFIDENTIAL

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 Screening Form

Operation Information

Operation		
GY-L1060 Sustainable Agricultural Development Program (SADP)		
Environmental and Social Impact Category	High Risk Rating	
B	{Not Set}	
Country	Executing Agency	
GUYANA	{Not Set}	
Organizational Unit	IDB Sector/Subsector	
Env, Rural Dev & Disaster Risk	SUSTAINABLE AGRICULTURAL DEVELOPMENT	
Team Leader	ESG Lead Specialist	
JUAN DE DIOS MATTOS	{Not Set}	
Type of Operation	Original IDB Amount	% Disbursed
Loan Operation	\$0	0.000 %
Assessment Date	Author	
11 May 2016	jmattos Team Leader	
Operation Cycle Stage	Completion Date	
ERM (Estimated)	27 May 2016	
QRR (Estimated)	31 Aug 2016	
Board Approval (Estimated)	{Not Set}	
Safeguard Performance Rating		
{Not Set}		
Rationale		
{Not Set}		

Operation Classification Summary



Safeguard Screening Form

Overriden Rating	Overriden Justification
A	Reduce: other (enter details in comments)
Comments	
<p>This operation is classified as 'A' because it takes place in the Rupununi wetlands of Guyana, an area with high biodiversity value and proposed as a RAMSAR site. However, the impact of the project is likely to be small as the project footprint is very small and impacts will be minor. In addition, part of the project component is to demarcate the RAMSAR site, and improve the sustainability of agriculture in the region, both of which will help mitigate any future impacts.</p>	

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.

Conversion or [degradation](#) of [critical natural habitat](#) causing [minor](#) to [moderate](#) impact on [migratory species](#).



Safeguard Screening Form

As there is a significant risk of non-compliance with IDB policy OP-703 directive B9, justification must be provided that the conversion is unavoidable, the cost-benefit analysis favours the project, and that mitigation measures are acceptable:

The borrower must provide evidence that: (a) there are no feasible alternatives acceptable to the Bank; (b) project benefits substantially outweigh environmental costs; and (c) mitigation and compensation measures are acceptable to the Bank

Without this evidence, the Bank cannot support any operation that is predicted to lead to minor or moderate conversion or degradation of critical natural habitat. The mitigation measures should be presented in the Biodiversity Management Plan (included in the ESMP) and should follow the mitigation hierarchy: impacts to biodiversity should be avoided in the first instance (i.e. proposed activities relocated or reconfigured); if avoidance of all impacts is not possible, those remaining should be minimized, mitigated by restoration, or compensated for. The BMP should also explain what consultation activities are planned. The BMP must define how these measures will be implemented (roles and responsibilities, monitoring, budget, etc.). Confirmation should be obtained from competent experts that they are confident that the BMP can mitigate impacts and that approval has been granted by relevant authorities. Regular (bi-annual or annual) reporting is required, in addition to independent audits of BMP. Depending on the financial product, the BMP should also be referenced in appropriate legal documentation (covenants, conditions of disbursement, project completion tests, etc.).

Conversion or [degradation](#) of [critical natural habitat](#) causing [minor](#) to [moderate](#) impact on [protected areas](#) or areas of high conservation value

As there is a significant risk of non-compliance with IDB policy OP-703 directive B9, justification must be provided that the conversion is unavoidable, the cost-benefit analysis favours the project, and that mitigation measures are acceptable:

The borrower must provide evidence that: (a) there are no feasible alternatives acceptable to the Bank; (b) project benefits substantially outweigh environmental costs; and (c) mitigation and compensation measures are acceptable to the Bank

Without this evidence, the Bank cannot support any operation that is predicted to lead to minor or moderate conversion or degradation of critical natural habitat. The mitigation measures should be presented in the Biodiversity Management Plan (included in the ESMP) and should follow the mitigation hierarchy: impacts to biodiversity should be avoided in the first instance (i.e. proposed activities relocated or reconfigured); if avoidance of all impacts is not possible, those remaining should be minimized, mitigated by restoration, or compensated for. The BMP should also explain what consultation activities are planned. The BMP must define how these measures will be implemented (roles and responsibilities, monitoring, budget, etc.). Confirmation should be obtained from competent experts that they are confident that the BMP can mitigate impacts and that approval has been granted by relevant authorities. Regular (bi-annual or annual) reporting is required, in addition to independent audits of BMP. Depending on the financial product, the BMP should also be referenced in appropriate legal documentation (covenants, conditions of disbursement, project completion tests, etc.).

Conversion or [degradation](#) of natural habitat causing [minor](#) to [moderate](#) impact on ecological function.



Safeguard Screening Form

Mitigation measures presented in the Biodiversity Management Plan must be acceptable: The mitigation measures should be presented in the Biodiversity Management Plan (included in the ESMP) and should follow the mitigation hierarchy: impacts to biodiversity should be avoided in the first instance (i.e. proposed activities relocated or reconfigured); if avoidance of all impacts is not possible, those remaining should be minimized, mitigated by restoration, or compensated for. The BMP should also explain what consultation activities are planned. The BMP must define how these measures will be implemented (roles and responsibilities, monitoring, budget, etc.). Confirmation should be obtained from competent experts that they are confident that the BMP can mitigate impacts and that approval has been granted by relevant authorities. Regular (bi-annual or annual) reporting is required, in addition to independent audits of BMP. Depending on the financial product, the BMP should also be referenced in appropriate legal documentation (covenants, conditions of disbursement, project completion tests, etc.).

Generation of solid waste is [moderate](#) in volume, does not include [hazardous materials](#) and follows standards recognized by multilateral development banks.

Solid Waste Management: The borrower should monitor and report on waste reduction, management and disposal and may also need to develop a Waste Management Plan (which could be included in the ESMP). Effort should be placed on reducing and re-cycling solid wastes. Specifically (if applicable) in the case that national legislations have no provisions for the disposal and destruction of hazardous materials, the applicable procedures established within the Rotterdam Convention, the Stockholm Convention, the Basel Convention, the WHO List on Banned Pesticides, and the Pollution Prevention and Abatement Handbook (PPAH), should be taken into consideration.

Likely to have [minor](#) to [moderate](#) emission or discharges that would negatively affect [ambient environmental conditions](#).

Management of Ambient Environmental Conditions: The borrower should be required to prepare an action plan (and include it in the ESMP) that indicates how risks and impacts to ambient environmental conditions can be managed and mitigated consistent with relevant national and/or international standards. The borrower should (a) consider a number of factors, including the finite assimilative capacity of the environment, existing and future land use, existing ambient conditions, the project's proximity to ecologically sensitive or protected areas, and the potential for cumulative impacts with uncertain and irreversible consequences; and (b) promote strategies that avoid or, where avoidance is not feasible, minimize or reduce the release of pollutants, including strategies that contribute to the improvement of ambient conditions when the project has the potential to constitute a significant source of emissions in an already degraded area. The plan should be subject to review by qualified independent experts. Depending on the financial product, this information should be referenced in appropriate legal documentation (covenants, conditions of disbursement, etc.).

Project activities will moderately impact [water quality](#), [water quantity](#) and/or [water availability](#).

Water Resources: A targeted Water Resources Assessment should be undertaken, which in addition to undertaking the relevant analyses, must include justification for assigning a moderate risk classification. Project activities (and any associated facilities) will be required to be constructed and operated so as to avoid impacts to water quality, water quantity and/or water availability. Evidence of appropriate stakeholder consultation should also be provided. Monitoring requirements should be included in relevant legal documentation.



Safeguard Screening Form

The project is located in an area prone to [droughts](#) 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.

The project is located in an area prone to [inland flooding](#) 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. This must take into consideration changes in the frequency and intensity of intensive rainfall and in the patterns of snowmelt that could occur with climate change. The DRMP includes risk reduction measures (siting and engineering options), disaster risk preparedness and response (contingency planning, etc.), as well as the financial protection (risk transfer, retention) of the project. The DRM Plan takes into account existing vulnerability levels and coping capacities, the area's disaster alert and prevention system, general design standards, land use regulations and civil defense recommendations in flood prone areas. However, the options and solutions are sector- and even case-specific and are selected based on a cost analysis of equivalent alternatives.

The project will result in a [minor](#) to [moderate](#) increase in community [risks](#) from disease or natural resources [risks](#).

Manage Increased Risk of Disease:Where a project will generate environmental health risks (such as increased risk from disease and environmental hazards), the borrower should be required to develop a environmental health risk plan (this will require input from professionally competent advisers/ consultants). There should be engagement with affected communities and compliance with the plan should be monitored and reported. Where specific diseases are endemic in communities in the investment area of influence, the borrower is encouraged to explore opportunities to reduce their incidence.

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.



Safeguard Policy Filter Report

Operation Information

Operation		
GY-L1060 Sustainable Agricultural Development Program (SADP)		
Environmental and Social Impact Category	High Risk Rating	
B	{Not Set}	
Country	Executing Agency	
GUYANA	{Not Set}	
Organizational Unit	IDB Sector/Subsector	
Env, Rural Dev & Disaster Risk	SUSTAINABLE AGRICULTURAL DEVELOPMENT	
Team Leader	ESG Lead Specialist	
JUAN DE DIOS MATTOS	{Not Set}	
Type of Operation	Original IDB Amount	% Disbursed
Loan Operation	\$0	0.000 %
Assessment Date	Author	
11 May 2016	jmattos Team Leader	
Operation Cycle Stage	Completion Date	
ERM (Estimated)	27 May 2016	
QRR (Estimated)	31 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 (Indigenous People Policy– OP-765)

The operation offers opportunities for indigenous peoples.

B.11. Pollution Prevention and Abatement

The operation has the potential to pollute the environment (e.g. air, soil, water, greenhouse gases).

B.16. In-country Systems

In-country systems will be used based on results from equivalency and acceptability analyses.

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

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.6 Consultations



Safeguard Policy Filter Report

Consultations with affected parties will be performed equitably and inclusively with the views of all stakeholders taken into account, including in particular: (a) equal participation by women and men, (b) socio-culturally appropriate participation of indigenous peoples and (c) mechanisms for equitable participation by vulnerable groups.

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.

B.9 Natural Habitats and Cultural Sites

The operation will result in the degradation or conversion of Natural Habitat or Critical Natural Habitat in the project area of influence.

Potential Safeguard Policy Items

[No potential issues identified]

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]

Environmental and Social Strategy (ESS)

Project Description

The program is aimed at increasing agricultural and livestock productivity for local populations in Guyana while maintaining a sustainable use of natural resources and enhancing climate change adaptation and mitigation in strategic parts of the country's Regions 9 and 10. The program consists of three components: (i) generating information for evidence-based policy making and natural resource management; (ii) strengthening of the agricultural innovation and extension system; and (iii) supporting compliance with sanitary and phytosanitary standards. The operation is expected to have positive environmental and social impacts, given that the activities to be financed will strengthen government's capacity for: (i) sustainable agricultural production and natural resource management, disaster risk management and climate change adaptation; and (ii) incorporating the local population, including lower income households and indigenous groups, into the development of the agricultural sector.

Institutional and Regulatory Context

Compliance with applicable national and international Environmental, Social, Health & Safety and Labor regulatory requirements

The executing agency for this project is the Ministry of Agriculture, through the Agriculture Support Development Unit (ASDU). The ASDU will work with Guyana's EPA and other relevant Government agencies to meet EPA and Bank safeguard standards for environmental assessment and management, including mechanisms for implementation in projects facilitated by the support to this operation. All project activities will be carried in accordance with Guyana's EPA guidelines, which require an Environmental Impact Assessment, which includes an Environmental Management Plan and public consultations. Environmental Authorizations and Environmental Permits will be sought from the EPA and all other National Standards will be followed for the construction of infrastructure and any processing facilities.

Compliance with IDB Environmental and Social Safeguard policies

The project is classified as a "Category B" based on its potential environmental and social impacts and risks, Policies triggered are as follows B1 (OP704, OP765), B2, B3, B4,B5, B6, B7, B9, B11, B16, B17.

The most important of these areas: B4 (the borrower exhibits weak institutional capacity for managing environmental and social issues), B1 (the area is prone to flooding and droughts) B11 (potential pollution risks from the meat processing plant) and B9 (the area is a proposed RAMSAR site). Mitigation measures and approaches will be developed in an Environmental Assessment and Disaster Risk Assessment.

ENVIRONMENTAL AND SOCIAL SETTING AND CONTEXT

Most program activities will be concentrated in Region 9 and Region 10, where very little agricultural research and extension have been concentrated to date. Intermediate Savannas in Region 10 are utilized for small-scale agriculture and cattle-rearing. The region also contains substantial hilly sand and clay areas and much of the local population engages in wage labor associated with bauxite mining. Some highland forest exists where small-scale forestry is carried

out. Groundwater resources are abundant in Region 10 and the Dakoura Creek Watershed, with an estimated annual flow of 52mm³, replenishing the freshwater supply for Region 4 and most of Guyana's coastline. Region 9 is sparsely populated and boasts extensive shrub and flooded savannahs, bisected by the rainforest-covered Kanuku Mountains. The wetlands of Region 9 constitute a hotspot of biodiversity and endemism. Agriculture, livestock, NTFPs, wild fish, and game from savannah and forest environments are all important for local subsistence. The three main cash income generating activities include wage labor, logging and agro-processing. Community-based eco-tourism enterprises have also begun to develop in recent years. Due to the presence of grassy savannahs, the region offers strong potential for livestock expansion, which is reflected in Region 10's Development Plan. Though prospects exist to improve agricultural and livestock productivity in the region, increasing drought severity poses a significant threat to livelihoods in the region due to seasonal water scarcity.

The program beneficiaries will include Amerindian communities, which represent more than 89% of the population of Region 9, and small subsistence farmers and other farmers characteristic of Region 10. The operation is expected to have significant positive social impacts in terms of income generation through increased agricultural yields and increased inclusion of the rural poor and marginalized in the agricultural value chain.

Impacts Risks and Control Measures

Component 1: Information for evidence-based policy making and natural resource management

The main environmental dimension of Component 1 activities relates to the application of a LIDAR survey in Region 9 (North Rupununi) and Region 10 (intermediate savannahs). Program activities could indirectly affect the surrounding environment/watershed in the following ways: LIDAR data may be utilized in the future to identify suitable water catchment sites to establish a handful of small-scale water catchments on small farms in Region 9. Though marginal alterations in water availability/flows are not anticipated to have a significant impact on ecological processes or wildlife populations in the savannah/wetland mosaic, an Environmental and Social Assessment will evaluate the extent to which such catchments may impact the local ecosystem. LIDAR data will also be utilized to identify buffer zones for sensitive wetlands (with potential to designate a RAMSAR site); this use of the data will promote positive impacts for program activities with potential environmental influence.

Component 2: Strengthening of the agricultural innovation and extension system

Improved agricultural research and technology transfer is expected to have long term positive environmental benefits, as the technologies developed will prioritize sustainable practices and long-term management of water resources for enhanced agricultural production while conserving natural capital for long-term sustainability. Potential negative environmental impacts related to the enhancement of research centers will be temporary in nature and of limited geographic scope. The latter will be associated primarily with small-scale infrastructure for agricultural research centers. The works which are limited in scale are expected to have only short-term impacts during construction associated with earth removal and levelling over small parcels such as sediment runoff for which prevention and mitigation measures are readily available. The construction of each new facility will comply with the corresponding environmental impact analysis and the execution of preventive and mitigation measures will be incorporated in the bidding documents. No impacts are expected on critical or natural habitats or on endangered or threatened species in association with either the construction or operation of the facilities. With respect to the operation of facilities, impacts could be associated with the disposal of waste products for which reuse solutions can be sought and energy consumption for which renewable energy solutions have been tested in the

region. Component 2 activities related to agriculture centers will focus on reducing vulnerability to climate change through multiplication and conservation of genetic material, including drought resistant varieties. The promotion of ecosystem-service based agricultural risk reduction and climate change adaptation and the building of resilience to natural disasters and climate change for future development will also generate both positive social and environmental impacts. No invasive species will be used in the landscaping of new facilities or in any research programs (this includes pasture grasses).

Component 3: Supporting compliance with sanitary and phytosanitary standards

The construction and installation of small-scale meat and milk processing pilot facilities could potentially pose significant environmental risks, which include pollution of land and water from waste, hygiene risks to meat consumers. In the case of the meat-processing facility, where animals will be slaughtered, further risks include animal disease, waste and byproducts with potential for pollution, additional resource consumption and emissions related to increased cattle production, and poor animal welfare. An operations plan will be developed in line with training of personnel to ensure that the facility is run to high standards of health and safety, that pollution is minimized and good animal welfare is practiced. This plan will follow guidelines produced by IFC.

In light of the fact that Program activities will be carried out in drought-prone regions which are experiencing increasing drought frequency and intensity related to climate variability and change, a Disaster Risk Assessment will be conducted to determine any potential climate change/natural hazard risks, and to develop a management plan for their mitigation.

Given the nature of the activities and investments foreseen, the environmental and social impacts, including disaster risk and climate change impacts are expected to be low, thus the Program has been attributed a “B” classification in accordance with the Environmental and Social Safeguards Policy (OP-703) (see Annex II). However, due to the sensitivity of region 9, mitigation measures must be adequate to ensure that any impacts to the habitat are minimized. Given this attribution and the aforementioned agreement between the Government of Guyana and the Bank, the proposed strategy consists of undertaking an Environmental and Social Assessment that will provide the necessary diagnostic and geographically specific guidelines for each Program site. The geographic scope of the Environmental and Social Assessment will be the intermediate savannahs of Region 10 and Region 9. With growth projections derived from the analysis of potential agricultural production (‘with Program’ scenario), the Environmental and Social Assessment will identify the requirements for environmentally and socially sustainable project activities including the installation of infrastructure and pilot processing facilities, as well as the eventual use of LIDAR data for watershed management; these requirements will include land use, water use, pollution and other policies, restrictions and guidelines, basic infrastructure requirements, introduction of technology and several other enabling factors that will maximize the intervention of the Bank’s loan.

As a result of the Environmental and Social Assessment, an Environmental and Social Management Plan will be prepared which will include: the procedures for environmental and social impact evaluation and mitigation applicable to the Agriculture and Environment sectors; preventive and mitigation measures for the infrastructure to be financed, including environmental, health and safety measures during the operations phase; and a monitoring plan including environmental indicators. For development of the Environmental and Social Assessment, government agencies and potentially affected parties will be consulted to obtain input in the identification and analysis of strategic environmental and social issues, actions, and alternatives. The Environmental and Social Assessment report will present the potential impacts and risk in order of the different Program phases (preparation, construction, operation). The ESA will also address Climate Change /

vulnerability assessment and Disaster Risk Management. The Program will include a communications strategy for the general public and culturally appropriate targeted campaigns for key actors including producers for the dissemination of good practice. This information will be incorporated in the Environmental and Social Management Report (ESMR). Priority measures in the ESMR will be incorporated in the POD with corresponding contractual conditions where appropriate.

Environmental Strategy for Due Diligence

An identification mission was carried out from April 11 to April 19 2016, which included meetings with Dr. Indarjit Ramdass, Executive Director Environmental Protection Agency; Mr. Joslyn McKenzie, Permanent Secretary, Ministry of Natural Resources; Ms. Janelle Christian, Head Office of Climate Change Ministry of the Presidency and visits to Region 9 and Region 10. An ESG specialist was not able to attend this mission.

A Due Diligence mission is planned for August 2016 to determine whether key impacts and issues have been correctly identified and whether plans for their mitigation are satisfactory. This will be carried out after completion of the Environmental Assessment

The principle issues to be assessed are:

- Compliance to national social and environmental regulations, occupational health and safety;
- Compliance with the environmental and social safeguard policies (OP-703), disaster risk management (OP-704), gender equality (OP-761) and access to information (OP-102);
- Evaluation of the capacity of the executing agency to manage social and environmental issues;
- Analysis of the suitability of mitigation measures to manage any social and environmental risks of the project as reflected in the ESMP.

Following completion of the ESDD, the Project Team will prepare an Environmental and Social Management Report (ESMR) which summarize the key impacts and risks and will provide a final assessment of the project's compliance with the Bank's safeguard requirements. The ESMR will indicate how the environmental and social management measures are expected to be covered by borrower commitments in the loan agreement and other contractual documents, and how the Bank will supervise their implementation.

Index for completed and proposed sector work

Topic	Description	Expected Date	References and link to files
Producer Support Estimates	Country Producer Support Estimates (PES) analysis	June 20, 2016	
Research, innovation and extension services	Preliminary report that includes description of needs, expectations and institutional arrangements	June 27, 2016	
	Draft final report	July 15, 2016	
	Report of workshops	July 15, 2016	
	Final report (Component 2)	July 31, 2016	
Agricultural information system	Review of existing information	June 27, 2016	
	Draft final report	July 15, 2016	
	Draft agreement between MoA and FAO	July 15, 2016	
	Final report (Component 1)	July 31, 2016	
Sanitary and phytosanitary review, including food safety	Review of existing information	June 27, 2016	
	Draft final report	July 15, 2016	
	Final report (Component 3)	July 15, 2016	
Feasibility of pilot – demonstration facilities for dairy and meat processing	Review of existing information	June 27, 2016	
	Draft final report	July 15, 2016	
	Workshop with livestock associations	July 15, 2016	
	Final report (Component 3)	July 31, 2016	
Environmental and social assessment	Review of existing information	June 27, 2016	
	Public consultations	July 10 - 15, 2016	
	Draft final report	July 15, 2016	
	Final report (two reports: Monitoring and impact evaluation plan; and Strategic Environmental and Social Analysis)	July 31, 2016	
Gender and diversity analysis	Review of existing information	June 27, 2016	
	Draft final report	July 15, 2016	
	Final report	July 15, 2016	
Economic analysis and proposal	Review of existing information	June 3, 2016	

Topic	Description	Expected Date	References and link to files
for impact evaluation	Field survey	June 10 - 30, 2016	
	Draft final report	July 15, 2016	
	Final report	July 31, 2016	
Financial and fiduciary analysis	Review of existing information	June 23, 2016	
	Draft final report (including PEP, PA, POM)	July 15, 2016	
	Final report	July 31, 2016	
Review of infrastructure needs and feasibility	Review of existing information	June 23, 2016	
	Draft final report (including unit costs; diagrams; blueprints)	July 15, 2016	
	Final report	July 31, 2016	

CONFIDENTIAL

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.