PUBLIC

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

GUYANA

NATIONAL QUALITY INFRASTRUCTURE FOR COMPETITIVENESS

(GY-L1082; GY-L1059)

PROJECT PROFILE

This document was prepared by the project team consisting of: Claudia Stevenson (IFD/CTI), Team Leader, Blanca Torrico (IFD/CTI), Alternate Team Leader, Michael Hennessey (IFD/CTI), Edgar Salgado (IFD/CTI), Alessandra Gonzales (IFD/CTI), Sandra Lopez (IFD/CTI), Genesis Morales (IFD/CTI), Maria Victoria del Campo (SPD/SDV), Yamilee Payen (VPC/FMP), Nalini Shiwram-Kulpa (VPC/FMP), Lucas Hoepel (CCB/CSU), Victor Gauto, Clevern Liddell (CCB/CGY), Monica Centeno Lappas (LEG/SGO), Natalia Almeida (LEG/SGO), Livia Minoja (SCL/SCL) and Mauricio Tapia (VPS/ESG).

PROJECT PROFILE

GUYANA

I. BASIC DATA

Project Name:	National Quality Infrastructure for Competitiveness		
Project Number:	GY-L1082; GY-L1059		
Project Team:	Claudia Stevenson (IFD/CTI), Team Leader, Blanca Torrico (IFD/CTI), Alternate Team Leader, Michael Hennessey (IFD/CTI), Edgar Salgado (IFD/CTI), Alessandra Gonzales (IFD/CTI), Sandra Lopez (IFD/CTI), Genesis Morales (IFD/CTI), Maria Victoria del Campo (SPD/SDV), Yamilee Payen (VPC/FMP), Nalini Shiwram-Kulpa (VPC/FMP), Lucas Hoepel (CCB/CSU), Victor Gauto, Clevern Liddell (CCB/CGY), Monica Centeno Lappas (LEG/SGO), Natalia Almeida (LEG/SGO), Livia Minoja (SCL/SCL) and Mauricio Tapia (VPS/ESG).		
Borrower:	Republic of Guyana		
Executing Agency:	Ministry of Tourism, Industry and Commerce (MTIC)		
Financial Plan:		Approved 3824/BL-GY	Supplementary Financing
	IDB (OC):	US$4,500,000	US$8,000,000
	IDB (FSO):	US$4,500,000	-
	Total:	US$9,000,000	US$8,000,000
Safeguards:	Policies triggered:	ESPS 1; ESPS 2; ESPS 3; ESPS 4; ESPS 5; ESPS6; ESPS 9; ESPS 10	
	Classification:	B	

II. GENERAL JUSTIFICATION AND OBJECTIVES

2.1 **90% of Guyana's production is concentrated in three sectors**. Guyana experienced a 4.5% average economic growth during 2009-2014, primarily due to the expansion of mining and agricultural exports and to the high prices of commodities such as gold [1]. In 2015, as the price of international commodities declined, economic growth slowed to 3% highlighting the vulnerability of the economy to its high concentration. Services (59.7%), agriculture/agro-processing (18.1%) and mining (20.3%) make up more than 90% of Guyana's Gross Domestic Product (GDP) [2]. The discovery of offshore oil reservoirs, with oil production in 2020 has brought new economic opportunities and challenges to Guyana, and changes in the economic structure [3].

2.2 Guyana has a small local market and is dependent on exports, 82% of Guyana exports products are concentrated in less than 10 products, within the mineral and agricultural sectors where 45% of exports in 2016 were attributed to gold, 18% to rice, 6.6% to raw sugar and 3.5% to crustaceans [4]. As the production cost of rice and sugar makes it hard to compete with other countries, with reduced outputs

during 2021 the volatility of the prices of gold and the variability in production of fish products [5] there is a strong need to diversify its economy. Simultaneously, the income shock generated by the oil industry increases input costs for the non-oil part of the economy, especially to SMEs.

2.3 Guyana's private sector is small and fragmented consisting of mainly micro, small, and medium-sized enterprises, with many firms operating in the informal sector [6]. Most firms sell their goods and services in the domestic market, with 15% selling to the Caribbean region and 3.8% selling beyond the Caribbean. Although the percentage of Guyanese SMEs that have a quality certification is close to the Caribbean average (24.5%), the number of certified firms[1] has decreased from 32.5% in 2014 to 29.1% in 2020, revealing a mismatch between the increasing needs and the firms' capacities [7].

2.4 National Quality Infrastructure (NQI) is the ecosystem of public and private institutions, legal and regulations that promote: (i) standards; (ii) accreditation; (iii) metrology; and (iv) conformity assessment (testing, inspection, and certification) [8]. A NQI is comprised of: (i) National Standard Bodies, that develop and adopt standards; (ii) certification bodies that assure that a product conforms to standards; (iii) testing laboratories (both public and private); (iv) inspection bodies; (v) calibration laboratories; and (vi) accreditation bodies that recognize organizations or person as competent to carry out certain tasks [9] (Schematic representation of NQI). Standards help firms reduce costs, adopt technical requirements, and increase productivity, innovation, and efficiency. An NQI ensures that products are fit for consumption and increase safety, decrease environmental impact and provide more effective delivery of goods and services [10].

2.5 Guyana has reported 63,246 COVID-19 confirmed cases since 2020, with the highest average reported on January 2022, forcing the government to take restrictive measures, and disrupting external value chains. However, new sector activities outweighed the negative impact of the disease [11]. GDP increased to 48.7% and 4.8% in the non-oil economy GDP in 2021 [12], with expected GPD growth of 47.7% and 7.7% in the non-oil economy for 2022 [13]. As a resource dependent economy, Guyana faces the risk of lack of diversification and increasing reliance on the state which can affect private sector competitiveness. [14] The increase in the non-oil economy boosts local demand and sectors such as construction[2], engineering, tourisms, hospitality, food and agriculture, specialized business services and health have emerging needs [15]. For local firms to access these emerging sectors, as well as international markets, the compliance with quality standards is a necessary condition.

2.6 The Guyana National Bureau of Standards (GNBS) operates under the Ministry of Tourism, Industry and Commerce (MTIC) and holds responsibility for standardization, formulation and application of standards, technical regulations, conformity assessment procedures and metrology.[3] (see NQI in Guyana). The

[1] Internationally recognized quality certification such as ISO 9001.
[2] Construction growth is estimated to be 29.8% in 2020-2021 period, consisting mostly of industrial, commercial, and residential construction. Wholesale, retail, transport, storage, and services have grown 32.9, 31.8, 10.3 and 7.4 percent respectively in the same period [16].
[3] Conformity assessment bodies include laboratories, inspection, or certification institutions.

GNBS is governed by a National Standard Council (NSC), comprised by private sector organizations, academia, and regulatory bodies.

2.7 Under this economic context, the role of the GNBS in promoting private sector is more relevant, as the demand for its services has increased, including more demand for existing services[4], new services in legal metrology[5] and business development[6], new sectors requesting services, and training in ISO Standards for Guyanese firms. The GNBS has grown from 65 to 130 employees and has temporarily accommodated the increased personnel and equipment in a provisional containerized environment. However, this temporary solution is not sustainable as the GNBS has challenges to provide controlled environments (temperature, humidity, and vibration control), and high energy costs.

2.8 The 2022 Budget Speech, prioritizes economic growth under a diversified, competitive and resilient productive base that translates into employment and entrepreneurship for the Guyanese it highlights the priorities given to enabling framework for the development and expansion and Guyanese companies and job opportunities for Guyanese Nationals, and to the expansion of local value chains to other countries in sectors such as the wood value chains, the developing a of furniture industry for exports, promoting value added opportunities for SMEs and recognizing the importance of agriculture in a non-oil economy. On the other hand, the speech emphasizes economic growth under the principles of the Low Carbon Development Strategy.[7] The reformulation of this program will support the achievement of this goals as firms need assistance for adoption of quality and standards and public inspection bodies need regulatory standards for promoting clean growth.[8]

2.9 **Request for reformulation and supplement.** In November 2016, the Bank approved the operation 3824/BL-GY "Enhancing the National Quality Infrastructure for Economic Diversification and Trade Promotion" (the "Program") for US$9,000,000, with the objective of supporting economic diversification and export through the enhancement of the NQI and through a National Export and Investment Promotion Strategy and specific objectives of: (i) to enhance the capacity of the NQI; (ii) to improve facilities for the NQI; and (iii) to enhance the capability of the Guyana Office for Investment for export and investment promotion. The program had three subcomponents: (i) Modernization of the Institutional Framework of the NQI; (ii) Improving Laboratory Facilities and Equipment and (iii) Implementing National Export and Investment Strategy. Under the new economic context, the demand for services from the GNBS has increased and thus the need to increase the physical scope of the original laboratory facility.

[4] GNBS reports that the number of new customers utilizing the legal metrology services increased 98% from 2020 to 2021.

[5] GNBS is now providing new legal metrology services (meter verification for water and electricity, moisture verification, calibration of high-capacity scales) for sectors such as agriculture, construction, law enforcement, manufacturing, and retail. New customers requiring legal metrology services increased from 66 in 2019 to 120 in 2021.

[6] GNBS is now providing business developing training to public agencies and SMEs in food manufacturing, transportation, health care, agroprocessing, tourism, manufacturing, and services.

[7] Creates incentives for a low-carbon economy, protects against climate change and biodiversity loss and stimulates clean growth.

[8] A survey carried out in 2021 showed that 90% of surveyed firms indicated that ISO9001 standards and other were most important for their businesses [17].

Thus, in order to align the government priorities of a more diversified and productive base, the Ministry of Finance on September 6, 2021 requested additional financing of up to US$3,000,000 as the GNBS has expanded functions related to the integration of Small and Medium Sized Enterprises (SMEs) into new value chains (tourism, hospitality, construction, agribusiness, health among others) and additional requirements for legal metrology [18]. Thus, the laboratory must be expanded to accommodate the new priorities. In addition, the expansion of construction, manufacturing, agriculture, law enforcement and health services as well as environmental and climate regulations to align with the Low Carbon Development Strategy require more legal metrology services. This request was updated on May 11, 2022, adjusting to the increase in construction costs in Guyana for additional financing up to US $8,000,000.

2.10 **Project Status and partial results**. 3824/BL-GY has disbursed US$1,959,641.37 (22%) until March 2022, with commitments and disbursements of US$581,980.67 (28%.) The project has achieved partial results, as of March 2022: (i) All outputs of Subcomponent 1: Modernization of the Institutional Framework of the NQI have been achieved, including the accreditation of five laboratories, training and capacity building activities for stakeholders (laboratories, SMEs and the GNBS), creation and operation of a network of laboratories; (ii) two outputs of Subcomponent 2 Improving Laboratory Facilities and Equipment: the architectural and engineering designs and the provision of equipment for two laboratories. Subcomponent 3: Partial completion of the Export and Investment Strategy and the Go-Invest Trade and Investment Framework. The available funds from Subcomponents 1 and 3 will be transferred to Subcomponent 2, albeit leaving some resources for Subcomponent 1 as the activities of the GNBS promoting certification and accreditation of stakeholders have proven to be successful. Pending actions relate to increased capacity building for SMEs and the building and supervision of the expanded laboratory facility.

2.11 **Rationale for additional financing and a reformulation.** The additional financing will cover the expansion of the laboratory facility, which has increased the construction and supervision costs from US$4.2 million to US$8.2 million. The reformulation will reallocate US$252,245 to Subcomponent 2 from Subcomponent 1 for laboratory equipment and the remaining funds of Subcomponent 3 (US$329,138). Regarding Subcomponent 1, the GNBS already partially purchased the laboratory equipment and will purchase the remaining during the execution period. In Subcomponent 3, the remaining activities of Go-Invest will be carried in house under the new governmental priorities and the reallocation of Go Invest under the Office of the Prime Minister and this subcomponent will be eliminated from the Program with the caveat that some activities were partially completed and US$830,861 have already been spent. (See Proposed Budget). As the expanded laboratory facility is needed to support SMEs under the new economic context, the Project Team recommends the reformulation and inclusion of additional funds. The same instrument as the original loan will be used for purposes of the reformulation.

2.12 **Changes in the Objectives**. The original objectives are adjusted to reflect the changes in the expected outcomes, including an expanded universe of beneficiaries, SMEs that will access the emerging sectors. The new general objective narrowed the scope of the initial general objective by leaving out the

export support aim and focused on economic diversification. Since diversification was closely linked to export promotion, the general objective was further amended to reflect support to economic competitiveness. This is also reflected in keeping the first specific objective only.

2.13 **Objective**. The objective of the reformulated program is to support economic competitiveness. Specific objective is to improve the capacity of the NQI. The new operation keeps the first component of the original operation, which was aligned with the initial first specific objective.

2.14 **Complementarity with other operations.** This operation complements 4659/BL-GY Establishing an Electronic Single Window for Trade as it supports SMEs and non-traditional exporters in reducing time and costs of trade processes. It also gives continuity to the Support for Competitiveness Program (1750/SF-GY) that financed the Gaps and Needs Assessment that recommended a new laboratory facility [19].

2.15 **Sole Component.** National Quality Infrastructure for Competitiveness.

2.16 **Subcomponent 1: Modernization of the Institutional Framework of the NQI (US$362,759**). This subcomponent will support the capacity building of the NQI. It will finance: (i) accreditation of laboratories; (ii) training and capacity building for laboratories; (iii) operation of a network of laboratories; (iv) capacity building for local SMEs in standards; (v) capacity building for the GNBS; and (vi) awareness campaigns on standards and quality among public and private stakeholders.

2.17 **Subcomponent 2: Expanding Laboratory Facilities and Equipment (US$13,981,281).**[9] The objective of this subcomponent is to expand facilities for the NQI, including the building of a new laboratory facility of the GNBS and thus increasing its capacity to serve the increased demand for services (2.5) in a timely and accurate manner. It will finance: (i) architecture and engineering designs of the new laboratory facility for the GNBS; (ii) facility for the GNBS, consisting of a two-story building with two laboratories (Industrial metrology and Legal metrology) an administrative area, a service building, and a truck building;[10] (iii) construction works' supervision; and (iv) furniture and equipment of the new laboratory facility. The laboratory facility will be in the Sophia Exhibition Complex, where the GNBS is currently housed. This facility will be built according to international standards, and following all environmental and social requirements and mitigation activities described in the Environmental and Social Management Plan (ESMP), the COVID-19 measures, the National Energy Code and the Green Certification Principles; and (v) equipment for laboratories.

2.18 **Execution Mechanism**. The executing agency of the program will be the MTIC, through the existing Project Execution Unit (PEU) that has been implementing the original operation. An update of the Institutional Capacity Analysis Platform (PACI)

[9] The total amount does not include former Subcomponent 3, for US$836,861.80 as is being cancelled in the reformulation. The total budget also includes US$1,482,613.86 in Program Administration and US$256,010 for contingencies for a total of US $17 million.

[10] The original estimated budget considered one building of approximately 1800m^2, accommodating two laboratories. The scope of the works was increased to include administrative areas increasing the built surface from 1800m^2 to approximately 2870m^2.

is being carried out to strengthen execution and coordination mechanisms. The disbursement period for the reformulated operation will be two years.

2.19 **Results and Beneficiaries.** The impact of the project is the increased participation of local SMEs in the emerging sectors and in non-traditional exports. These outcomes are expected to have a favorable impact in productivity and access to markets of Guyanese firms. The main beneficiaries of this program are defined as: (i) the treated laboratories of the NQI, both public and private; and (ii) the user of standards, mainly SMEs to reach new markets.

2.20 **Coordination**. The governance of the GNBS is carried out through the NSC. The NSC is comprise for representatives of the government and the private sector, including Ministry of Agriculture, Ministry of Health, University of Guyana, and Chambers of Commerce. The GNBS has also developed a coordination platform through the network of laboratories.

2.21 **Strategic Alignment**. The program is aligned with the Second Update of the Institutional Strategy (UIS) (AB-3190-2), through the development challenge of Productivity and Innovation by supporting Guyanese firms to engage into new, more productive economic activities and the cross cutting areas of: (i) Climate Change and Environmental Sustainability, as the activities of the program contribute to the building of a more environmentally efficient facility; and (ii) Institutional Capacity and the Rule of Law, as it supports strengthening of the GNBS by providing training and capacity building activities. It will contribute to the IDB Group Corporate Results Framework 2020-2023 (GN-2727-12) with the following output indicators: (i) micro, small and medium enterprises financed; (ii) emissions avoided; and (iii) agencies with strengthened digital technology and managerial capacity. The program is consistent with the Innovation, Science, and the Technology Sector Framework (GN-2791-10), as it promotes science and technology by the introduction of standards and certifications that are a necessary condition for innovation. The program is aligned with the strategic objectives of the IDB Group Country Strategy with the Republic of Guyana 2017-2021 (GN-2905),[11] by: (i) support investment in infrastructure for private sector growth. This operation is aligned with IDB's Vision 2025 in the areas of digitalization, climate, and support for SMEs.

III. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

3.1 **Sector Work**. The operation's execution has been supported with Technical Cooperation (TC) resources through ATN/FI-15862-GY, Strengthening the Institutional Capacity of the National Quality Infrastructure (NQI) approved in November 2016 for US$250,000 that provided: (i) a roadmap for certification of laboratories; (ii) a pluriannual strategy for the GNBS; (iii) the design of the laboratory networks; and (iv) the legal and institutional analysis of the GNBS. The ATN/OC-17075-GY Removing Barriers to Growth by Creating More Local Opportunities in the Oil and Gas Value Chains in Guyana, approved in November 2018 for US$400,000 supports the operation by: (i) SMEs integration in value

[11] The current strategy is in transition period until November 2022. The new Country Strategy with the Republic of Guyana is expected to be approved in Q4 2022.

chain; and (ii) strengthening the capacity of the GNBS including the drafting of the five year strategic plan 2022-2027. Studies in the region indicate that entering (and staying) in dynamic value chain requires meeting certain standards (See Sector Work in Quality and Standards).

3.2 **Lessons learned.** Lessons learned from previous operations in Guyana, Support for Competitiveness Program (1750/SF-GY) and Micro and Small Enterprise (MSE) Development and Building Alternative Livelihood (GRT/GF-13725-GY) include the need for sufficient resources for operational expenses and the need to assure "buy in" of participating agencies. For implementation, the project will also incorporate lessons learned from the mid-term evaluation report, such as the need for improving stakeholder buy in and coordination of the original operation 3824/BL-GY. These lessons will be incorporated by reducing the number of stakeholders and including coordination measures in the PACI.

IV. ENVIRONMENTAL SAFEGUARDS AND FIDUCIARY SCREENING

4.1 The Environmental and Social Impact Classification (ESIC) of the operation is "Category B", as it is expected to generate adverse impacts that are moderate in scope and temporary in duration that may be readily managed through available mitigation measures. Impacts are mainly related to temporary pollution such as noise, localized gas emissions, and potential sediment discharge in nearby streams and canals; the generation of traditional and hazardous waste, including related to chemical storage; and temporary impacts related to vehicle and pedestrian access during construction. The Environmental and Social Risk Rating has been classified preliminarily as "Substantial", largely related to a risk of potential impacts on nearby residential populations bordering the lot, including potentially on squatters, and potential indirect impacts on fish spawning areas due to the risk of increased sedimentation of drainage canals. The Disaster Risk and Climate Change Risk Rating has been classified as "Moderate", since while there is a high risk of drought, heat wave, and water supply scarcity in the broader geographical area, the project poses only a moderate risk of exacerbating vulnerability to these risks in nearby communities. An Environmental and Social Analysis (ESA) was developed in 2018 that will be updated during preparation of the operation to confirm these impacts and risks. An Environmental and Social Management Plan (ESMP) was updated in 2021 to include a Grievance Response Mechanism, and together, the ESA and ESMP will serve to complement the existing Environmental and Social Management System that will guide the execution of the operation. As part of the Stakeholder Engagement Plan, an initial, meaningful consultation will take place during preparation of the operation, based on the available information.

4.2 **Retroactive Finance**. The Bank may retroactively finance, up to US$1.6 million, representing 20% of the proposed additional loan amount, of eligible expenses. The eligible expenses may include: (i) construction costs of the laboratory facility; and (ii) supervision of works, provided that all requirements are substantially like those set out in the loan contract. Such expenses must have been incurred from after the date of approval of the Project Profile, but under no circumstances will expenses incurred more than 18 months before the loan approval date be

included. (See GN-2349-9, GN-2350-9) and the Policy on Cost Recognition, Retroactive Financing and Advance Procurement (GN-2259-1).

V. OTHER ISSUES

5.1 **Risks**. Because global value chains are having issues with timely delivery of products, construction inputs could be delayed causing delays in construction. This medium-high risk will be mitigated by allowing extra time for construction and including contingencies in the budget. If the stakeholders involved in the execution of the project do not actively participate, the Program Executing Unit will have trouble coordinating and will cause delays in execution. This medium-high risk will be mitigated by establishing and operative Steering Committee streamlined to include only the main stakeholders such as GNBS, the MTIC and Ministry of Finance.

5.2 **Sustainability.** The sustainability of the laboratory facility is incorporated in the contract stability clauses and the maintenance contracts embedded within the equipment. The sustainability of the GNBS, which is a revenue generating institution, corresponds to an increase demand for its services.

VI. RESOURCES AND TIMETABLE

6.1 The following timeline is expected: Distribution of the Proposal for Operation Development to the Quality and Risk Review is expected to take place on May 31, 2022, approval by the Operations Policy Committee on July 19, 2022; and presentation to the Board of Directors on September 8, 2022. The resources needed for project preparation are estimated at US$60,000. Time needed for project preparation will be 1.61 FTEs (see Annex IV).

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.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

GUYANA

NATIONAL QUALITY INFRASTRUCTURE FOR COMPETITIVENESS

GY-L1082

INITIAL ENVIRONMENTAL AND SOCIAL REVIEW SUMMARY

APRIL 4, 2022

ISSUANCE v.1

OCT 2021

This document was prepared by:
Mauricio Tapia and Zachary Daniel Hurwitz (ESG/VPS)
With the support of the Project team:
Claudia Stevenson (IFD/CTI)

Initial Environmental and Social Review Summary	
Operation Data	
Operation Number	GY-L1082
IDB Sector/Subsector	Science And Technology / Sti Policy & Institutions
Type of Operation & Modality	LON/ESP
Initial E&S Impact Classification (ESIC)	B
Initial E&S Risk Rating (ESRR)	Substantial
Initial Disaster and Climate Change Risk Classification (DCCRC)	Moderate
Borrower	Cooperative Republic of Guyana
Executing Agency	GY-MTIC (Ministry of Tourism, Industry, and Commerce)
IDB Loan Amount (and total project cost)	$8,000,000.00 ($8,000,000.00)
Applicable ESPS's with requirements	ESPS 1; ESPS 2; ESPS 3; ESPS 4; ESPS 5; ESPS6; ESPS 9; ESPS 10

Executive Summary

The Environmental and Social Impact Classification (ESIC) of the operation is "Category B", as it is expected to generate adverse impacts that are moderate in scope and temporary in duration that may be readily managed through available mitigation measures. Impacts are mainly related to temporary pollution such as noise, localized gas emissions, and potential sediment discharge in nearby streams and canals; the generation of traditional and hazardous waste, including related to chemical storage; and temporary impacts related to vehicle and pedestrian access during construction. The Environmental and Social Risk Rating (ESRR) has been classified preliminarily as "Substantial", largely related to a risk of potential impacts on nearby residential populations bordering the lot, including potentially on squatters, and potential indirect impacts on fish spawning areas due to the risk of increased sedimentation of drainage canals. The Disaster Risk and Climate Change Risk Rating has been classified as "Moderate", since while there is a high risk of drought, heat wave, and water supply scarcity in the broader geographical area, the project poses only a moderate risk of exacerbating vulnerability to these risks in nearby communities. An Environmental and Social Analysis (ESA) was developed in 2018 that will be updated during preparation of the operation to confirm these impacts and risks. An Environmental and Social Management Plan was updated in 2021 to include a Grievance Response Mechanism, and together, the ESA and ESMP will serve to complement the existing Environmental and Social Management System (ESMS) that will guide the execution of the operation. As part of the Stakeholder Engagement Plan, an initial, meaningful consultation will take place during preparation of the operation, based on the available information.

Operation Description

The operation will finance the construction of a new, two-story laboratory facility for the Guyana National Bureau of Standards (GNBS) to be situated in Sophia Exhibition Complex (SEC), Greater

Georgetown in Administrative Region Four, i.e., Demerara-Mahaica. The laboratory will be financed by the existing, reformulated operation GY-L1059, with supplemental finance of $8 million USD under the new operation GY-L1082. The building (of 3.172 m2) is to be situated on a 2.156 acres plot of state-owned land in a commercial zone that has mainly office buildings or land earmarked for commercial development. The new facility is expected to have three (3) one flat structures and one two-flat structure to house the Administration Block. Additionally, small amounts of chemicals used for testing (such as sulphuric, nitric and hydrochloric acids) will be stored in the Industrial Metrology Building and various fuels (such as diesel and gasoline for a standby generator) will be stored for short durations in a section to be designated in the Legal Metrology Building.

The facility to be built is bordered on the north by the Sophia Juvenile Holding Centre, Sophia Training Centre, the Sophia Special School (SSS) for children with learning challenges, and the Sophia Care Centre for homeless children; on the East by a secondary drain, the A-Field Sophia Dam, and the primary drainage facility in the Downer Canal; on the South by State-owned lands that are currently unoccupied, and on the West by the Eastern Highway. This road is in very good condition and is a public thoroughfare. These borders form the area of direct influence (ADI) within this project. Within the ADI are, inter alia, the current GNBS complex, land designated for the National Toshaos Council Headquarters, the Competition Commission Secretariat, and Sophia Exhibition Complex (SEC) Administration Building, the National Quality Infrastructure (NQI) Project Office and an "Amerindian Village" which is a facility used to showcase the work and life of the indigenous Guyanese peoples largely during the Exhibition Season.

Outside the ADI are a number of communities that fall within the area of indirect influence (AII). For example, immediately west and northwest of the Eastern Demerara highway are two middle income housing communities, namely, Lamaha Gardens and Prashad Nagar. East of the proposed site is the Sophia community, one of the largest housing communities in Guyana that started as a squatter settlement, but which has since been regularised. These communities are only expected to be indirectly impacted, mainly due to increased traffic that may be associated with construction and operation activities of the proposed project.

Rationale for Classifications/Rating	
E&S Impact Classification	The ESIC is "Category B", as the operation is expected to generate moderate adverse impacts that are temporary in scope and duration that may readily managed by the application of available mitigation measures. Impacts are mainly related to temporary pollution such as noise, localized gas emissions, and potential sediment discharge in nearby streams and canals; the generation of traditional and hazardous wastes, including related to chemical storage; and temporary impacts related to vehicle and pedestrian access during construction.
E&S Risk Rating	The ESRR is "Substantial," largely related to a risk of potential impacts on residential populations bordering the lot, including potential squatters; potential indirect impacts on fish spawning areas due to the risk of contamination of drainage canals.
DCC Risk Classification	The DCCRC is "Moderate", since while there is a high risk of drought, heat wave, and water supply scarcity in the broader geographical area, the project

	poses only a moderate risk of exacerbating vulnerability to these risks in nearby communities
Is the use of Borrower E&S Framework being considered?	*No*
Use of the Borrower E+S framework will not be considered.	
Environmental and Social Performance Standards (ESPSs) that apply to the proposed project	
ESPS-1. Assessment and Management of E&S Risks and Impacts	*Yes*
The Guyana National Bureau of Standards (GNBS) holds primary responsibility for standardization, through a process of formulation and application of standards, technical regulations, conformity assessment procedures and metrology. The GNBS reports to the Ministry of Business (formerly named Ministry of Industry, Trade and Commerce) which will be the executing agency for the program. The Ministry of Business has recent experience executing Bank projects and has been working with the preparation of GY-L1059, which will be reformulated. Within the Ministry, the Project Execution Unit (PEU) will be responsible for execution; the Unit has one environmental and social expert to carry out environmental and social monitoring of the program and assist in the preparation of environmental and social studies, which will be developed by the contractor. An Environmental and Social Assessment (ESA) and Environmental and Social Management Plan (ESMP) were developed in 2018 in compliance with Bank policies at the time. The ESMP was updated in 2021 to include i) updated Roles and responsibilities for project monitoring, ii) a Grievance mechanism, iii) Training and capacity building strategies, iv) Reporting obligations; and other annexes including on COVID-19 prevention, exclusions of pesticide use, worker code of conduct, and hazardous waste management. Together, the ESA and updated ESMP comply with certain aspects of the requirements of an Environmental and Social Management System (ESMS) as defined by ESPS1. However, the ESA and ESMP must be further updated both to reflect the final project design and works performed on access roads, as well as to comply with the new Environmental and Social Policy Framework of the Bank. The Executing Agency will therefore update the ESA, ESMP, and prepare a referential ESMS, in accordance with the provisions of the ESMF and the ESPS 1 to 10. The ESMP update will construct on additional aspects like labour management procedures, community health and safety, supply chain risks (if necessary) and stakeholder engagement. The ESMS will consider its seven fundamental pillars: (i) an environmental and social management framework specific to the Project, (ii) the identification of risks and impacts, (iii) environmental and social management programs, (iv) organizational capacity and competence, (v) emergency preparedness and response, (vi) stakeholder engagement plan, and (vii) monitoring and evaluation of environmental and social performance. The Stakeholder Engagement Plan will be updated by the Executing Agency to reflect the current social context of the area, and one meaningful consultation will be implemented prior to approval of the operation.	
ESPS-2. Labor and Working Conditions	*Yes*
The 2018 ESA stated that it was expected that most of the labour for the construction phase will be short-term and recruited from the communities within a 5-kilometer radius of the project site, i.e., Sophia, Prashad Nagar, Campbellville, Lamaha Gardens, Turkeyen, etc. Although there is a low risk of forced or child labour in the context of the project, there is a substantial risk of poor working conditions and/or terms of employment, and/or a lack of implementation of existing occupational health and safety	

standards. There is also a substantial risk of labour discrimination according to sex, gender, race, age, or other factors.

Labor Management Procedures (LMP) have not been developed to date and will be included in an update of the ESA/ESMP in order to mitigate these risks. Likewise, other potential risks related to working conditions and terms of employment will be evaluated in terms of non-discrimination and equal opportunities based on inherent requirements for the execution of the works, the existence of grievance mechanisms available to workers and the provision of safe and healthy work environments, given the characteristics of the projects.

Supply chain risks are moderate and will be analyzed in detail in the updated ESA/ESMP. The government has expressed interest in applying green building code parameters to the laboratory, and the final design may therefore include measures for resource efficiency such as the provision of solar PV panels. However, this has not been defined yet, and will be confirmed during due diligence.

ESPS-3. Resource Efficiency and Pollution Prevention	*Yes*

Construction of the laboratory is expected to generate the typical types of pollution associated with the sector: gaseous emissions, dust, noise, wastewater, and solid waste. The ESMP updated in 2021 has identified readily available mitigation actions and plans in order to prevent and reduce pollution.

Regarding hazardous materials and waste, according to the 2018 ESA, it is expected that the facility will have bins where waste separation and collection will occur. The area is serviced by private contractors using compactors under private arrangements. As of 2018, a private contractor that services the proposed project site collects waste from the GNBS under a private contract at a cost of G$4,000 (US$19.50) per month. This contract is expected to remain in place when the new facility is built. The collection of waste is driven by demand, with the private collector collecting waste twice weekly. The frequency will also impact the price for collecting waste. The GNBS generates on average approximately three (3) 170-kilogram barrels of waste per week. This waste is disposed of at the Haag Bosch Landfill Site at Eccles on the East Bank of Demerara which is approximately 5.5 kilometres from the proposed project site.

Given that this area falls within the area classified as Greater Georgetown, there is no central sewerage system. Each business or office building is expected to install its own sewage facility during construction. These septic tanks tend to be located in the ground, built out of concrete material and are built with the possibility of flooding in mind. Once filled, private contractors are contracted to drain and clean these tanks. It would be important that effluent from this system does not get into the nearby drains, resulting in foul odor or pollution of the freshwater system, particularly, given the proximity of the proposed facility to residential communities.

The new laboratory facility will focus heavily on testing, metrology and certification. In its testing, it will continue to utilise sulphuric, nitric, and acetic acids in small ammounts. The facility will continue to test textiles, gold and concrete blocks. However, currently, the primary environmental issue that affects the operations of the GNBS is its inability to effectively dispose of chemical/hazardous waste; currently, there are no existing standards for the storage of hazardous chemicals and disposal after use. This situation has resulted in chemical waste being stockpiled at the facility. Dilution has also been utilized for the disposal of nitric acid. The diluted solution is poured in drains at the current GNBS facility. However, the Bureau reported that the amount of chemical waste stored is not of a large volume. Proposed mitigation measures to arrest this practice are outlined in the ESMP and will need to be implemented given the increase in volume of activities the facility will be expected to process, with the projected increase in

economic activities associated with the emerging oil and gas sector. This last point becomes even more critical should Guyana decide to refine some of its petroleum within the country.

Additionally, the 2018 ESA reported that liquid waste and the disposal of petroleum is also an issue of concern. In some instances when oil tankers are presented for examination small volumes of oil remain in the tanks which are washed out into the drainage network, as are the other liquid wastes. This does have the potential to pollute and clog the aquatic ecosystems in the location, while simultaneously impacting human health. These matters are taken up further in the 2018 ESA and the ESMP. Old scales and other tested products are disposed of at the municipal landfill site at Eccles. The GNBS will need more environmentally friendly ways of disposing of these hazardous wastes, the volume of which is expected to increase with the operation of the new laboratory.

The updated ESMP in 2021 establishes a framework for Hazardous Waste Management that complies with the requirements of ESPS3. The measures for hazardous waste management will be further defined in the updated ESA/ESMP and will be required of the winning bidder who is contracted to construct and manage the laboratory.

Regarding resource efficiency, the Executing Agency has expressed the desire to build the laboratory according to resource efficiency and green building codes and best practices, but these have yet to be defined. Gross estimates of GHG emissions expected from the project will be calculated prior to the Analysis Mission.

There is a low risk of the use of pesticides related to construction and operation of the project, as the 2021 updated ESMP includes a pesticide exclusion list.

The newly updated ESA and ESMP will confirm the above risks, impacts, and mitigation measures prior to Analysis Mission.

ESPS-4. Community Health, Safety, and Security	*Yes*

There are moderate risks related to Community Health and Safety, primarily related to potential exposure of adjacent neighborhoods to the moderate amounts of hazardous substances transported to and from the laboratory, and exposure to traditional and hazardous waste generated at the facility.

There is a moderate risk related to exposure of adjacent communities to disease, including water-related and contagious diseases such as COVID-19 and others. The updated ESMP from 2021 included a Project Continuity Plan that obligates the contractor to manage COVID-related risks among its workforce, including through the acquisition of sanitation materials for project staff (hand soap, alcohol-based hand sanitizer), masks for project staff and visitors, installation of sanitation station in the yard of the Project Executing Unit (PEU), training materials and events to raise awareness of COVID Protocols for project staff, training for all workers on respiratory hygiene, cough etiquette and hand hygiene using demonstrations and participatory methods, and sanitation of the project office at regular intervals.

According to the 2018 ESA, vandalism and theft are common in the area, and proposes fencing the construction site, erecting signs, establishing no go zones, and hiring vigilant security personnel in order to mitigate security concerns. As a result, there is a moderate risk of the use of security forces during construction and operation of the laboratory. The updated ESA and ESMP will evaluate whether security forces will be used, and if confirmed, will require, as needed, the creation or improvement of codes of conduct for these security personnel.

The updated ESA and ESMP will confirm the above impacts and risks and establish mitigation measures in compliance with the requirements of ESPS4.

The Disaster Risk and Climate Change Risk Rating has been set as “Moderate”. While there is a high risk of drought, heat wave, and water supply scarcity in the broader geographical area, the project construction type poses only a moderate criticality in relation to the sector, and only a moderate risk of

exacerbating vulnerability to disaster and climate change risks in nearby communities. Although the project lot is bordered on the East and West by drainage canals, there is a low risk of riverine flooding (see Annex A), and low risk of precipitation changes or hurricane or tropical storm force winds. These drains empty into the main access drain that runs parallel and south of Dennis Street and then empty into the Downer Canal that empties into the Atlantic Ocean via the Liliendaal Pumps. The entire Sophia Exhibition Complex (SEC) is serviced by internal drains, which may become susceptible to flooding. The 2018 ESA states that the project site is located in a flood plain, and as a result must comply with the building code of Georgetown, and be raised at least 4 feet above ground level, while the drains must be deepened to cater for the greater overland flow.

The updated ESA will include a Disaster Risk and Climate Change Risk narrative according to the methodology of the Bank and will confirm whether the project design minimizes risk of flooding according to the Bank´s ESPF and the Georgetown Building Code.

ESPS-5. Land Acquisition and Involuntary Resettlement	*Unknown*

Preliminary data indicates that the plot of land where the laboratory will be built is already owned by the government, and as a result no land acquisition is required. Nonetheless, the 2018 ESA for the operation stated that access road improvements would be necessary to begin construction of the laboratory. At the time, various options for access road improvements were available, and the Executing Agency had not yet decided on which one to implement; one of those options, via Garnett Street and A-Field Sophia, would have required significant investment in building at least two bridges, building an access road from Dennis Street, and possibly having to relocate some squatters. The IDB was informed in March 2022 that the government chose an access road improvement option that would not require resettlement of the squatters, and already completed the required access road improvements using their own resources.

The updated ESA will verify the access selected access route and road improvements made and confirm whether any squatters were affected, whether any resettlement was implemented, and whether any outstanding livelihood restoration or compensation is required.

ESPS-6. Biodiversity Conservation and Sustainable Management of Living Natural Resources	*Unknown*

During construction, there is a low risk of impacts on biodiversity, ecosystem services, or living natural resources due to construction of the laboratory. Construction will take place entirely within government-owned land that is heavily intervened and where office buildings exist. Land cover in the lot consists of very few secondary vegetation species that are maintained. Vegetation within 10m of the roadside is dominated by Congo Pump (*Cecropia sciadophylla and C. obusa*), Fire rope (*Pinzona coriacea*) with strong patch dominance by cowtail - *Andropogon bicornis*, razor grass – *Scleria spp*. and savanna grasses (*Panicum pilosum*), all of which are not species of conservation interest.

The ESA of 2018 identified a low to moderate risk of contamination of surface and subsurface water resources due to a potential increase in sediment discharge to streams and drains located downstream. This may potentially generate indirect impacts to fish spawning areas.

The updated ESA/ESMP will confirm these potential impacts and available mitigation actions.

ESPS-7. Indigenous Peoples	*Unknown*

According to the 2018 ESA, while the project site does not fall within an Amerindian area or on Amerindian lands, it is in close proximity to an Amerindian Village Exhibition site and a site designated for the headquarters for the National Toshaos' Council. The Amerindian Village Exhibition site is approximately 200 yards southwest of the proposed project site. The Village has the capacity to house one hundred individuals at any one time comfortably. The ESMP of 2018 outlines possible mitigation

measures to alleviate any negative impacts that may be experienced be these two areas, mostly related to air and water quality, and potential use of security forces. The updated ESA and ESMP will verify the risk of direct or indirect negative impacts to the two sites and propose any additional mitigation measures that may be required in compliance with the requirements of ESPS7.

ESPS-8. Cultural Heritage	*No*
The 2018 ESA did not identify any tangible or intangible cultural heritage in the Area of Direct Impact and Area of Indirect Impact. There is a low risk of any impact to cultural heritage related to construction and operation of the laboratory. This information will be confirmed in the updated ESA/ESMP. The ESMP will include a Chance Finds Procedure in the case that any tangible cultural heritage is found during construction and operation.	

ESPS-9. Gender Equality	*Yes*
There are still sharp differences in participation in the labor force in Guyana, with the lowest female participation rate in the region, and the widest gender participation gap (World Bank, 2009). Even considering other factors that affect the decision to join the labor force (marital status, ethnicity, or area of residence), the participation gender gap remains strong, especially in construction activities. The updated ESA/ESMP will include a gender equity plan and a Code of Conduct for the works that include inputs to prevent or correct potential adverse impacts with a gender perspective for the population that could be employed in the works, preventing and sanctioning workplace harassment and gender violence and inputs to avoid gender discrimination for job applications.	

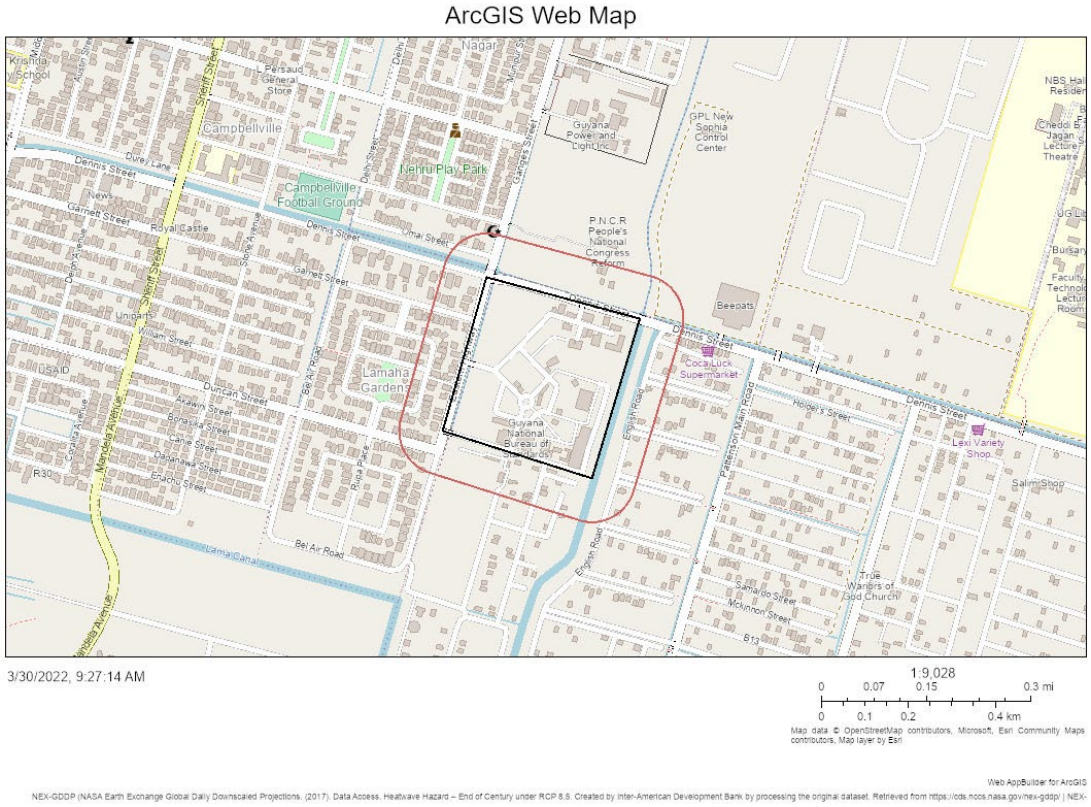
ESPS-10. Stakeholder Engagement and Information Disclosure	*Yes*
The 2018 ESA included information on consultations made at the time with stakeholders within the Area of Direct Influence and with institutions whose operations could be impacted by the establishment of the new facility. The 2021 updated ESMP included general Stakeholder Engagement and Participation guidelines, including a Complaint Procedure and Grievance Resolution Mechanism. However, a Stakeholder Engagement Plan must be developed as a part of the updated ESA/ESMP that includes a mapping of stakeholders and that reflects the needs of all of them. Said Plan must include the public consultation process, the grievance redress mechanism and the protections to avoid retaliation against any complainant.	

IDB Environmental and Social Due Diligence	
For co-financed operations, is a common approach with other lenders being considered?	*N/A*
The operation will not be co-financed.	

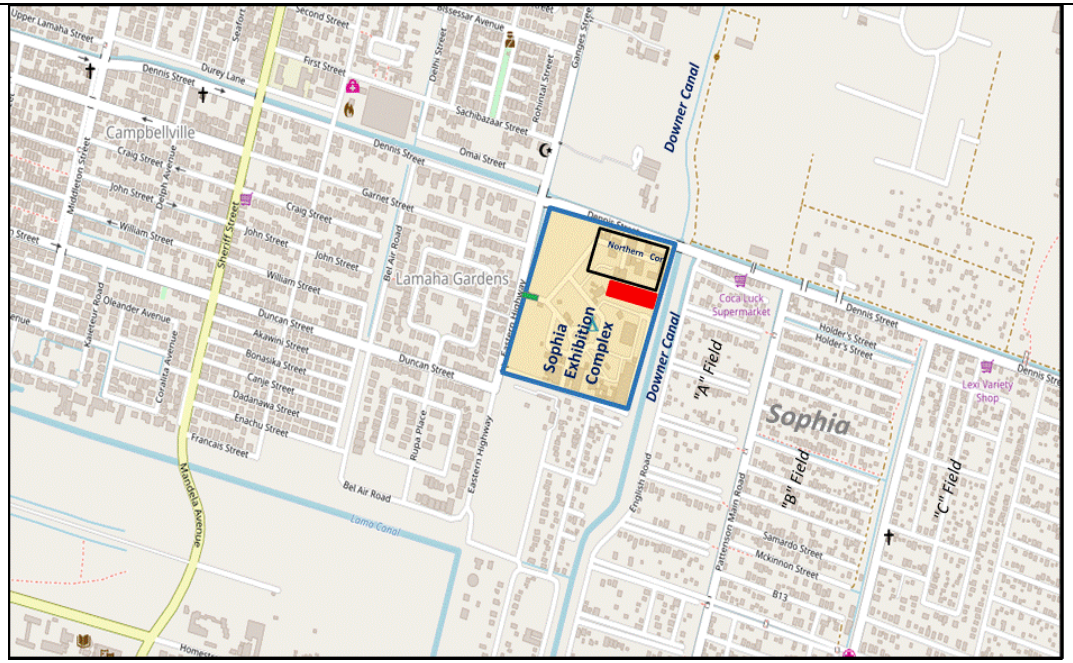
Strategy for Due Diligence			
E&S Assessment requirement	*Status of development*	*Estimated resources to finalize (specify Bank or Borrower cost)*	*Estimated timeline to finalize (inc. consultation)*

Environmental and Social Management System (ESMS)	Aspects of an ESMS already exist in the 2018 ESA and 2021 updated ESMP. These must be complemented to fulfill the 7 pillars of an ESMS, and as a result must updated the Stakeholder Engagement Plan; update information on Executing Agency capacity; create a specific Environmental and Social Management Framework for the operation; and further develop details on Emergency Response and Preparedness.	To be updated by the Executing Agency (US$0k).	Execution: 1 month Intended start: Early April 2022
Updated Environmental and Social Assessment (ESA)	An ESA was developed in 2018. Updates needed on project design and access roads; social baseline; social impacts; indirect impacts; impacts related to worker and community health and safety; labor procedures; and waste management.	To be updated by the Executing Agency (US$0k).	Execution: 1 month Intended start: Early April 2022 Consultation: May 2022.
Example: Environmental and Social Management Plan (ESMP)	An ESMP was developed as part of the ESA in 2018 and updated in 2021. The ESMP again requires to be updated based on the updated ESA as listed above.	To be updated by the Executing Agency (US$0k).	Execution: 1 month Intended start: Early April 2022 Consultation: May 2022.
Annexes			
Annex A.	E&S Maps		

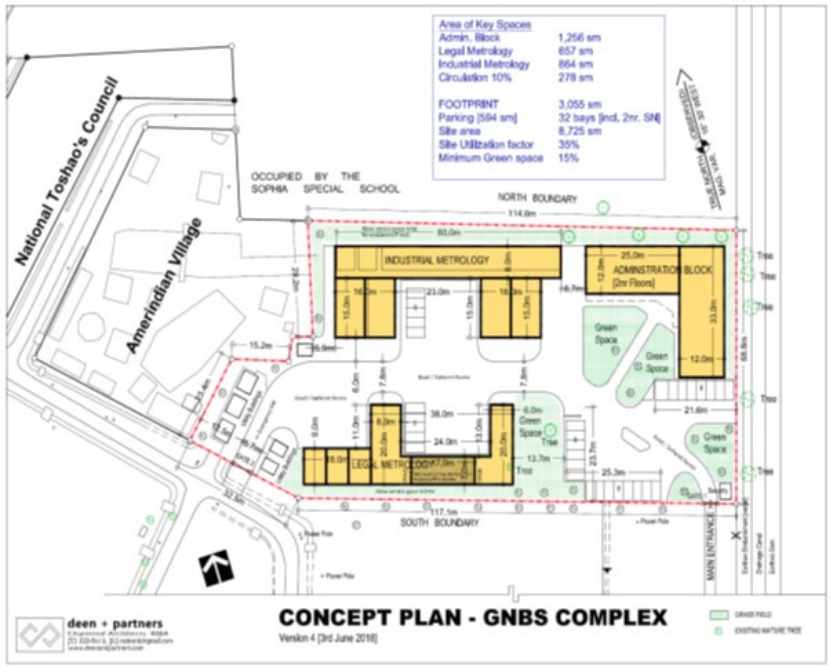
Annex A. E&S Maps



Location of the government-owned lot destined for construction of the laboratory.

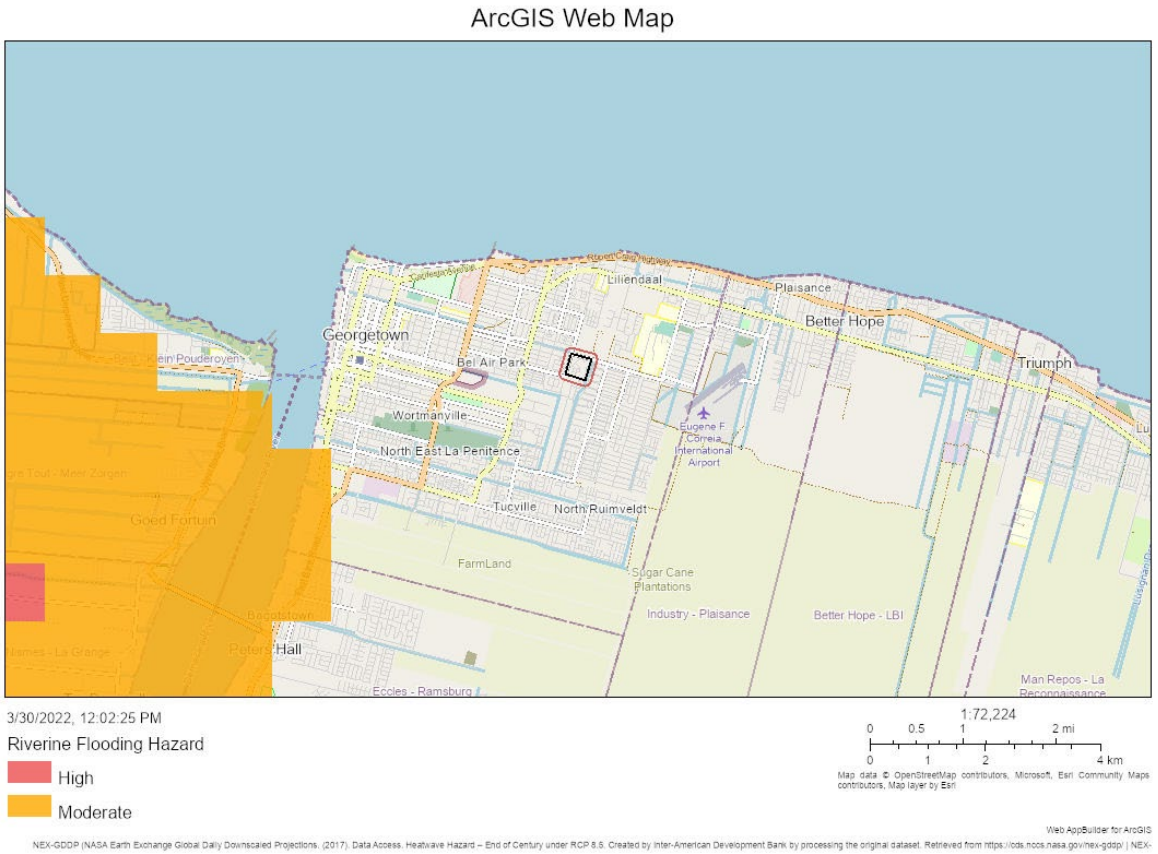


Exact location of the proposed laboratory (in red) within the government-owned lot.



Project design site map in the 2018 ESA, showing Demonstration Amerindian Village and National Toshao´s Council bordering the lot.

Aerial view of the proposed laboratory site in the government-owned lot.



The project site is not exposed to riverine flooding risk.

ANNEX III

Index for completed and proposed sector work

Issues	Description	Expected Dates	References & hyper links to Technical files
Country Strategies	2022 Budget Speech	Completed	Link
	Country Report 2021	Completed	Link
	Low Carbon Development Strategy	Completed	Link
Technical options and design	Organizational Structure of the GNBS	Completed	Link
	Road Map for Accreditation of Laboratories	Completed	Link
	Network of Laboratories	Completed	Link
	Five Year Strategic Plan for the GNBS 2017-2021	Completed	Link
	Five Year Strategic Plan for the GNBS 2021-2026	September 2022	In preparation
	SME Opportunities for Growth	Completed	Link
	SME Mapping	Completed	Link
	Sector Work on Quality and Standards	Completed	Link
	Midterm Evaluation	Completed	Link
	Construction Specifications for the Laboratory Facility	Completed	Link
IDB Strategies	Update to the Institutional Strategy 2010-2020, Partnering with Latin America, and the Caribbean to Improve Lives	Completed	Link

Issues	Description	Expected Dates	References & hyper links to Technical files
	Guyana Country Strategy 2017-2021	Completed	Link
	Innovation, Science and Technology Sector Framework Document	Completed	Link
Economics Documents	Updated Cost Benefit Analysis	April 2022	In preparation
	Updated ESMP	April 2022	In preparation
	Data mining and analysis.	April 2022	In preparation
Bibliographical References			Link

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.