

TERMS OF REFERENCE
GROVE TO TIMEHRI ROAD REHABILITATION PROJECT
Financing of the program operation manual

1. Background and Justification

- 1.1.** The Inter-American Development Bank (IDB) is preparing a new loan operation for the upgrading of the East Bank Demerara (EBD) Road from Grove to Timehri Road (23,5km). The loan operation follows on from the recently completed 4-lane widening project from Providence to Diamond (5km) also financed by the IDB. Grove is the neighboring village on the southern side of Diamond so the project, when completed, would provide an improved road corridor from Georgetown to the Cheddi Jagan International Airport (CJIA) located at Timehri (the 4-lane Ruimveldt to Providence leg was completed some years ago). The Grove to Timehri section of the EBD road was last rehabilitated and widened in 1996 through a loan operation financed by the IDB and although there have been maintenance interventions over the years the road has reached the end of its design life as evidenced by a progressively deteriorating pavement structure with cracking, rutting and potholing in places.
- 1.2.** The village at Diamond has developed into a large residential community (infrastructure was financed under a previous IDB loan - Low Income Settlement Program) and is a major generator of traffic, most of which is destined for Georgetown, which creates heavy congestion along the route during the morning and evening traffic peaks. The community of Grove, since the development of Diamond, has turned into an important commercial centre with businesses lining the length of the village creating substantial 'side friction' along the roadway thereby affecting traffic flows. There is a major bottleneck at the intersection of the main Diamond Access Road and the East Bank Demerara Road which backs traffic up in both directions particularly through the village of Grove. The width of the right-of-way in Grove is narrow and restricted due to the presence of properties adjacent to the roadway. Traffic reduces quite substantially from the village of Craig at the southern boundary of Grove through Soesdyke to Timehri.
- 1.3.** In 2013/2014 the IDB financed a feasibility study and detailed design report for the upgrading of the Grove to Timehri corridor however this project has not progressed to date.

2. Challenges

- 2.1** Since the discovery of oil and gas offshore Guyana in 2015 there has been a dramatic increase in the Guyanese economy. This has manifested itself in a marked increase in vehicle registration i.e. increased traffic on the national road network, as well as in a construction boom. A key input for construction is Guyana is white sand and the location of the sand pits are along the Soesdyke-Linden highway. This means that heavily laden trucks many of which are over the legal limit (see *Soesdyke-Linden Highway Feasibility Study and Detailed Design Report* dated 2019) traverse the Grove-Soesdyke section of the proposed project route.
- 2.2** Additionally, in order to address the huge increase in traffic generated by the buildout of the Diamond housing project the Government of Guyana is constructing the following roads in phases:

- 2-lane local road from Diamond to Eccles
 - 4-lane road from Diamond to Mandela Avenue
 - 4-lane road from from Ogle to Diamond and onwards to Timehri
- 2.3** The 4-lane from Diamond to Timehri (3rd bullet) will impact the proposed Grove to Timehri project.
- 2.4** Finally, the Government of Guyana is planning to develop a Second City called *Silica City* somewhere along the Soesdyke-Linden Highway. Needless to say, that the traffic generated from Silica City will be substantial.
- 2.5** Two shore bases to service the oil industry located along the Demerara River are also in their early stages of development and traffic generated from these facilities will use the Grove to Timehri road.
- 2.6** Given the above developments it's imperative that a detailed and comprehensive traffic analysis is conducted as this will impact both the economic feasibility as well as the pavement design of the proposed Grove to Timehri project.

3 Deliverables

- 3.1** A Review Report with updated (i) traffic analysis; (ii) pavement design; (iii) review of drainage design and (iv) cost estimation. Tyhe Review Report should also examine the viability of dueling the existing 2-lane Grove to Timehri road.

4. Reporting Requirements

- 4.1.** Every report must be submitted to the team and the Bank in an electronic file.
- 4.2.** The report should include cover, main document, and all annexes.

5. Acceptance Criteria

- 5.1.** The acceptance of each deliverable will be submitted by the team leader via email to the consultant partner.

6. Supervision and Reporting

- 6.1.** All activities will be coordinated by the IDB project Team Leader Pablo Guerrero, INE/TSP (PABLOGU@IADB.ORG) in coordination with Christopher Persaud (CHRISP@IADB.ORG), Alana Fook (ALANF@IADB.ORG) and Jose Calderón (JOSECAL@IADB.ORG).

TERMS OF REFERENCE

PROGRAM TO SUPPORT CLIMATE RESILIENT ROAD INFRASTRUCTURE DEVELOPMENT (GY-T1184)

Environmental and Social Management System

I. PROJECT DESCRIPTION

1.1 Background

The objective of the project is to improve the quality, accessibility, resilience, and safety conditions of Guyana's road transport infrastructure through an increase in paved road coverage, climate resilient interventions and the rehabilitation and upgrading of national roads that connect the capital Georgetown to the international airport. The program will also promote efficiency improvements in the sector by incorporating the works into road maintenance management systems, investment in technology for traffic and road asset management, and by building capacity at the Ministry of Public Works.

The new operation will specifically fund the rehabilitation of the road from Golden Grove to Timehri at 25.1 Km of length. Interventions will include road rehabilitation, supervision costs, and traffic management plan and temporary interventions required during construction. The existing road will be widened by approximately 1m on both sides (within the existing right of way), concrete drains will be constructed at certain sections and the other areas will have earthen drains. The road will remain as a single carriage in each direction thus reducing the potential for adverse impacts to the environment and communities. There was an Environmental and Social Assessment and Environmental and Social Management Plan (ESA/ESMP) prepared between 2014 and 2015. This ESA/ESMP should be updated in accordance with the new IDB Environmental and Social Policy Framework (effective since October 31, 2021) and include any updates on the design. It is worth noting that this ESA/ESMP did not include any baseline or assessment related to resettlement (physical and/or economic displacement).

II. OBJECTIVE OF THE CONSULTING SERVICES

2.1 General and Specific Objectives

The objective of this consulting service is to prepare, with support from the Borrower, the Environmental and Social Management System (ESMS) and appropriate instruments of social and environmental management for compliance with the requirements set forth in the Bank's Environmental and Social Policy Framework (ESPF) that includes the Environmental and Social Performance Standards (ESPS) 1 through 10.

The ESMS will include the Environmental and Social Assessment (ESA) and its Environmental and Social Management Plans (ESMP) of the project.

The specific objectives are:

- i) To prepare the Project's specific Environmental and Social Management System (ESMS) as indicated in ESPS 1 and whose scope adheres to the management requirements set forth in ESPS 2, 3, 4, 5, 6, 7, 8, 9 and 10.
- ii) To update the existing Environmental and Social Assessment (ESA) and Environmental and Social Management Plan (ESMP), according to the scope set out in ESPS 1 and the identification, evaluation and mitigation hierarchy requirements set forth in ESPS 2, 3, 4, 5, 6, 7, 8 and 9.
- iii) To support the preparation and completion of a meaningful, gender sensitive and culturally adequate public consultation process with stakeholders on the project in general, in accordance with the provisions of ESPS 1 and 10, and the specific consultation process in ESPS 5 with those potentially affected by resettlement.

III. DELIVERABLES

Product 1. Environmental and Social Management System (ESMS) specific to the Project.

The ESPF is oriented toward the systematic management of the project's environmental and social performance throughout its complete lifecycle. In ESPS 1 the Borrower is required to carry out this management, which is accomplished through an ESMS specific to the project, based on the cycle of planning, execution, verification and action.

The consulting firm (CF) will develop, in continuous coordination with the Borrower, an ESMS that incorporates the following elements: (i) an environmental and social framework specific to the project, (ii) identification of risks and impacts, (iii) management programs, (iv) organizational training and competency, (v) preparation for and responses to emergency situations, (vi) participation of the stakeholders and (vii) monitoring and evaluation.

The structure proposed for the ESMS, as well as its content and scope, is detailed in Annex 1.

The CF will assure transfer of the basic knowledge required for the planning, implementation, verification and improvement of the ESMS specific to the project. For this purpose, the Borrower must be staffed with competent personnel and the authority and responsibility to collaborate in the planning of the ESMS and subsequent transfer.

Product 2. Updated Environmental and Social Assessment and Environmental and Social Management Plan (ESA / ESMP).

In accordance with the new ESPS 1 regarding the Assessment and Management of Environmental and Social Risks and Impacts, the Borrower must comply with a process of Environmental and Social Assessment (ESA) in a way that establishes and maintains an ESMS that is consistent with the nature and scale of the Project and that is consonant with its level of environmental and social risks and impacts.

In this context, and in accordance with the IDB's impact categorization process for category B projects, an ESA must be carried out, along with a corresponding Environmental and Social Management Plan (ESMP) that includes the most relevant actions, for all phases of the Project.

This product also includes the realization of processes of public consultation (project in general and a specific with potentially affected by resettlement – ESPS 5) and their reports.

The CF must update the ESA previously prepared by the Borrower considering the following elements and in accordance with the new IDB ESPF and associated guidelines:

- (i) an analysis of the scope of the works and project activities;
- (ii) review of existing environmental and social assessment/s, and/or preparation or completion of analysis of alternatives (including an alternative without project option which will be compared and evaluated against the selected option from technical, financial, and social and environmental impacts points of view) in a manner that guarantees compliance with the Bank's ESPF, and applicable legislation, thus guaranteeing the Project's environmental and social sustainability;
- (iii) study the current baseline situation on applicable environmental and social aspects including but not limited to pollution control, natural environment, land use, involuntary land acquisition, resettlement, and disaster and climate change risk. Primary data collection should be conducted when secondary data is not available;
- (iv) identification of the possible environmental, social, labor, health and occupational safety impacts and risk of disasters, distinguishing, whether negative or positive, direct, indirect and cumulative impacts throughout the phases of construction, operations, closure and post-closure, including, as applicable, needs for resettlement and compensation for economic displacement as well as an analysis, if necessary, of the land acquisition processes for the implementation of the Project;
- (v) a review and gap analysis of national standards in comparison with the IDB's environmental and social criteria and procedures set forth in the ESPF (screening, environmental impact assessment, public participation, information disclosure, monitoring and others), and identify how any gaps will be addressed;
- (vi) identify the gap between requirements of the IDB ESPF and relevant laws and regulations in Guyana, and how the gap will be filled in the Project. The list of relevant local/regional permits and/or licenses required for the Project should also be outlined with clear roles and responsibilities for this process and ensuring compliance;
- (vii) identification of the Project's necessary mitigation and control measures (including their costs and responsibility) as well as monitoring plan with regard to environmental, social, labor, health and occupational safety risk factors, in accordance with national legislation and the Bank's ESPF;
- (viii) an analysis of gender-differentiated impacts and the relevance of the gender perspective adopted by the Project, including complementing or development of pertinent measures. In case of relocation, special attention should be given to reduce gaps in land and housing tenure for women and for preventing forms of economic and patrimonial violence, as well as livelihoods. The assessment should also include measures to consider the incorporation of the principles of universal design and access in the Project (i.e., a road infrastructure that can be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design) which will take into account vulnerable groups such as people with disabilities;
- (ix) Identification of stakeholders, participation plans and consultation processes which are necessary for compliance with national legislation and the IDB's ESPF, including the preparation of materials and reports that are adequate for these processes in coordination with the Borrower.

Additionally, the CF will update the Environmental and Social Management Plan (ESMP), which will contain the necessary socio-environmental measures in accordance with ESPS 1's mitigation hierarchy and all of the guidelines, in order to oversee the Project's environmental and social management, labor and occupational health and safety components, including but not limited to:

- i) update the social baseline of residents living along the project and businesses, including a database of households differentiated by gender. It shall include from a gender perspective, employment conditions and income, education level, livelihoods, and specific questions regarding gender violence, distribution of care activities, and other cultural elements that allow to identify gender gaps;
- ii) application of the Bank's ESPS that are relevant to the project and its specific requirements;
- iii) compliance with the policies and standards of the IDB and the national government;
- iv) measures to mitigate the negative environmental, social, labor, health and occupational safety impacts identified in the ESA, during the construction, operation, closure and post-closure stages, including a description of the environmental and social monitoring plan for these phases, identifying the expected results, the parameters to be measured, the measurement sites, the methods used and the periods/frequency of measurements, costs, and responsible institutions. These should result in compliance with the environmental, social, labor, health and occupational safety requirements that are necessary for the carrying out of the project's activities;
- v) Development of a resettlement or livelihood restoration plan and conducting the required specific consultation process in case these types of impacts are identified.

Annex 2 details the minimum content of the Product in accordance with what is stated in this Section.

Consultation Processes

The consulting firm will support the Borrower in the organization, facilitation, and logistical arrangements of the consultation events. Consultation will be held on the results of the environmental and social assessments of the project activities. It will be coordinated so that the consultations are spearheaded by the Borrower. However, the consulting firm must provide the logistical inputs.

The consulting firm will ensure that the main environmental and social impacts identified, as well as the mitigation measures proposed for the different phases of the project, are presented in a culturally appropriate manner. Likewise, it will verify that the queries of the interested parties are addressed and that, if applicable, their results are integrated into the ESA/ESMP and ESMS. A detailed consultation report should be prepared.

The consulting firm will ensure a gender sensitive consultation process, ensuring equal participation of young, adult, and elderly men and women, and providing tailored support for engagement. The CF has to consider specific requirements for participation of these population groups (for instance, providing childcare, or transportation, adapting meetings to people's available time). In addition, since many people (specially women) have never had the space to raise their voice, guiding the virtual or face-to-face meetings in a gender-sensitive way will be essential for everyone to feel empowered to raise their needs and opinions. Specific consultation groups with only women groups are encouraged. Implementing a participatory design process will be highly valued. Consulting firm must prove the understanding of the cultural and local context.

A Stakeholder Engagement Plan (SEP) and grievance redress mechanism must be prepared as part of the ESMS, in accordance with ESPS 1 and ESPS 10.

The consultation process should include, at a minimum, the following steps:

- Identification of the aspects of the project with the main environmental and social risks and impacts. Understanding of local dynamics (livelihoods, housing tenure and life conditions,

gender gaps, services accessibility, transport conditions, current road use, relation with the territory).

- Stakeholder mapping - identification of the directly affected project people, other stakeholders and relevant organizations for consultation (municipal authorities, social organizations and, where appropriate, NGOs active in the project area).
- Events dynamic and registry.
- Results and recommendations for: i) project design; ii) mitigation measures and iii) support and recommendations to address complaints and disputes.

For these events, it will be necessary to prepare summary materials for the dissemination of information in a culturally appropriate format, taking into account the language and average educational level of the participants in the process.

If impacts related to resettlement are identified, a separate consultation process must be carried out with those potentially affected.

IV. DELIVERABLE REPORTS

The CF will be responsible for the timeliness, content and form of the contracted reports, products and activities that are described as follows, including the coordination of any team that is implicated:

- Deliverable 1: A Work Plan for the execution of the consulting services, to be delivered no more than 10 business days following the signing of the contract.
- Deliverable 2: "Fit for disclosure" versions of the ESA/ESMP including the SEP, Resettlement or Livelihood Restoration Plan and ESMS, to be delivered within 30 calendar days of the signing of the contract.
- Deliverable 3: Final versions of the ESA/ESMP, Resettlement or Livelihood Restoration Plan and ESMS, including reports of public consultations, to be delivered within 30 calendar days of the signing of this contract.

The CF shall prepare these technical reports using appropriate technical terminology, clearly identifying the difficulties, information gaps and results obtained, in accordance with the adopted methodological procedure. Each report shall be delivered in English and shall contain, at a minimum: (i) the relevant electronic files generated during the contract in MS Word, Excel or other software format (these must include all annexes and appendices); (ii) an electronic PDF and .doc file for each completed report; (iii) an associated presentation and (iv) the electronic files of the GIS databases that have been used in the preparation of maps and figures. The reports shall contain graphs, tables, photographs and clear maps for the purposes of illustration and the highlighting of key issues, as well as to allow a better understanding of the content.

The CF shall collaborate closely with the Borrower to assure compliance with the standards and time periods required for the approval and adequate execution of consultation processes. Nevertheless, the CF shall be responsible for collecting information and being informed as to the deadlines and socio-environmental standards required by the country and the Borrower.

V. SCHEDULE OF PAYMENTS

Payments shall be made against invoices presented in accordance with the following schedule:

- First payment: 20% after the signing of the contract and following the Bank's approval of Deliverable 1.
- Second payment: 40% following the delivery and approval by the Bank of Deliverable 2.
- Third payment: 40% following the delivery and approval by the Bank of Deliverable 3.

VI. QUALIFICATIONS

To carry out this consulting services, the consulting firm must have the following profile:

- **General Experience:** Familiar with Guyana or the Wider Caribbean region. Wide experience in developing socio-environmental assessments and social, biotic and abiotic baseline studies. Knowledge and application of the Bank's Environmental and Social Policy Framework, and/or environmental and social policies and/or standards of other multilateral financial institutions.
- **Specific Experience:** Having performed socio-environmental assessment services or the planning of Environmental and Social Management Systems in subjects related to this project. Knowledge of the area of study.
- **Team of Professionals:** The consulting firm shall hold experience on fieldwork data gathering and propose a team consisting, at a minimum, of the following professionals:

Environmental Specialist	Degree in environmental or similar engineering with at least 10 years of experience in socio-environmental evaluation studies and socio-environmental management. Experience in the preparation of at least 2 studies related to the transport sector and related environmental problems, in the context of projects financed by the IDB or other multilateral agencies, is required.
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Social Specialist	Degree in sociology, anthropology or similar area, with at least 10 years of experience with social impact evaluations of infrastructure projects, as well as with projects financed by the IDB or other multilateral financial institutions. Experience in the preparation of at least 2 studies related to the transport sector and related social problems, in the context of projects financed by the IDB or other multilateral agencies, is required. Specific expertise on gender, inclusion and women's rights and economic empowerment.
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VII. CONSULTING SERVICE CHARACTERISTICS

The consulting services shall include the following characteristics:

Category and modality of the consulting service: Consulting Firm with lump sum payments.

Contract Period: It is expected that the consulting services will begin on April 15, 2022.

Work location(s): The services will be carried out in Georgetown, Guyana, and its surrounding areas, including at least one field visit to the area to be analyzed.

Coordinator or Division Leader: The consulting firm will work under the supervision of, and in coordination with, the INE/TSP Division of Transport of IDB: Pablo Guerrero (Project Team

Leader) (INE/TSP), and under the technical supervision of Patricia Henriquez and Jodi Johnson (VPS/ESG).

VIII. TECHNICAL-ECONOMIC PROPOSAL

The interested firms shall present a technical and economic proposal that includes the sections presented below.

- **Scope of Work**
This section shall include a description of the specific activities or tasks whose completion is proposed in order to produce the required products and reports. This includes all of the proposed site visits/surveys, documents to be reviewed, interviews, consultation processes, etc.
- **Experience and Qualifications of the Firm and the Project's Human Assets**
The general and specific experience of the firm shall be set forth in detail. The members of the team shall have all relevant technical skills, previous specific experience with Projects similar to this one, specific experience in and specific knowledge about the country, and specific knowledge of the language. This section shall include the name of any subcontractor.
- **Schedule**
A proposed schedule for the completion of activities shall be presented. The schedule shall indicate the proposed dates for the commencement and completion of each of the tasks required for the consultation and any important or specific Project milestones (i.e., delivery of reports, etc.).
- **Costs**
An economic proposal in US dollars, which includes direct labor costs (i.e., number of hours or days per team member and their associated costs per unit) and indirect labor costs (i.e., travel, per diem, subcontractors, etc.), shall be submitted for each of the tasks of the proposed consultation (i.e., tabular format). All assumptions related to the economic proposal shall be clearly specified. Should any additional task be recommended, it should be included in the proposal.
- **Biosafety Protocols for the COVID-19 Pandemic**
With respect to the current COVID-19 pandemic and related local regulations, the general guidelines that the firm will implement for field visits and consultation and participation between stakeholders shall be described.

ANNEX 1: Environmental and Social Management System (ESMS)

The ESPF and the guidelines for each of the ESPS can be found at: <https://www.iadb.org/en/mpas/guidelines>.

This Annex provides indicative content of the deliverable that shall be adjusted proportional to E&S risks of the project and its scope.

ESPS 1 provides that an effective Environmental and Social Management System (ESMS) is a dynamic and continuous process, which sets in motion and supports the Borrower's project-related activities, and involves collaboration between the borrower, its workers, people affected by the project and, where appropriate, other stakeholders.

The ESMS will incorporate the following elements:

(i) Environmental and Social Framework Specific to the Project

In coordination with the Borrower, the CF will prepare an environmental and social framework that is specific to the project, which will consist of a document that:

- sets forth the values, objectives, principles and goals that will guide the preparation and execution of the project, as well as its environmental and social performance.
- describes the general structure, processes and functions (roles and responsibilities) required for the environmental and social management of the project.
- presents in a concise manner the aspects of the country's normative, institutional and policy framework, including its executing national, sub-national or sectoral level institutions, and the applicable laws, regulations, rules and procedures that are pertinent to the project's environmental and social risks and impacts.
- is concordant with the ESPF's Environmental and Social Performance Standards.
- describes the Grievance Redress Mechanism for complaints and claims related to the project.
- Demonstrates the top management's commitment to the project's achieving of good environmental and social performance.
- can be disseminated and communicated at all relevant levels of its organization.

The minimum content of the Project's Specific Environmental and Social Framework (SESF) is listed as follows:

- Introduction
- Project description
- Objectives and Principles
- Legal and institutional framework
- Institutional training and competency
- Evaluation processes and socio-environmental management
- Participation of stakeholders and mechanism for addressing claims and complaints
- Preparing for and responding to emergencies
- Follow-up and monitoring

The Environmental and Social Framework must be a concise and effective document that provides a roadmap to guide the Project's different environmental and social processes and procedures. It should be written from a viewpoint of high level.

(ii) Identification of Risks and Impacts

Based on the Environmental and Social Assessment of the proposed project, the CF will formulate a process to identify the Project's environmental and social risks and impacts. This process will be documented through a procedure that will integrate:

- Appropriate tools for the identification and assessment of the project's potential risks and impacts (analysis of alternatives, screening, scoping, environmental and social assessment, research, audits, interviews, specialized studies, consultation with experts).
- The identification of direct, indirect and cumulative¹ environmental and social risks and impacts, including the items identified in ESPS 2 through 10.
- Project risks affecting Human Rights.
- Risks and hazards of existing installations.
- Risks and impacts of related installations.²
- Risks and impacts in the project's zone of influence that derive from the actions of third parties, to the extent of the control and influence that it exercises over them.
- Risks and impacts linked to principal suppliers.

(iii) Management Programs

The CF will formulate management programs that describe the mitigation and performance improvement measures and actions aimed at addressing the environmental and social risks and impacts identified in the ESA. The CF will establish environmental and social plans for each program, which define the results and actions that are sought to address the issues raised in the process of identifying risks and impacts.

The programs can consist of a documented combination of operating procedures, practices, plans, and supporting documents that are managed in a systematic manner.

The programs must conform to the mitigation hierarchy³ for addressing the identified risks and impacts: where residual impacts persist and to the extent that it is technically and financially feasible, the prevention of impacts will prevail over measures to minimize them, which, in turn, will prevail over compensation or compensatory measures.

In accordance with the provisions of ESPS 2, 3 and 4, the programs will incorporate the World Bank Group's recognized guidelines on the environment, health and safety.

The CF will integrate guidelines for the environmental and social management of contractors in a manner that assures that this is initiated early in the project and that the process documents for the acquisition of goods and services describe the environmental and social performance that is expected in the carrying out of project activities and that they be a reference framework for the incorporation of environmental and social management costs into contractor proposals.

¹ The project's incremental impact is obtained by combining the impacts of relevant past, ongoing, and reasonably foreseeable future developments, as well as unplanned but foreseeable project-driven activities that may be carried out later at another site.

² New or additional works or infrastructure, regardless of the source of financing, that are essential to the functioning of a Bank-financed project, such as the following: access roads, railway lines, power lines or pipelines, etc.

³ The mitigation hierarchy represents a structured and systematic approach that takes into account the project's social and environmental risks and impacts and includes the following steps: (a) anticipate and avoid risks and impacts, (b) minimize risks and impacts that cannot be avoided, (c) remedy or mitigate residual impacts to an acceptable level, (d) compensate for, or offset, those residual risks that cannot be remedied or mitigated at an acceptable level.

(iv) Organizational Skills and Competency

The CF will support the Borrower in the process of defining functions, responsibilities, and capacities for the application of the ESMS.

The CF will identify the knowledge, aptitudes, and experience, including updated knowledge of applicable regulatory requirements and applicable standards from ESPS 1 through 10, that are needed for the responsible parties to implement the ESMS in the carrying out of their work

(v) Preparing for and responding to Emergency Situations

The CF will develop a system for preparing for and responding to emergency situations so that the borrower is able to respond in an adequate manner to accident and emergency situations related to the project, in order to prevent and mitigate any damage to people or the environment.

The system must be aligned with the requirements set forth in ESPS 2 and 4.

(vi) Monitoring and Evaluation

The CF will develop procedures to allow the Borrower:

- To monitor the management program and measure its effectiveness, as well as its compliance with all legal or contractual and related regulatory requirements.
- To record information for the purpose of monitoring performance and establishing relevant operational controls.
- To plan periodic assessments of the effectiveness of the ESMS, based on a systematic collection and analysis of relevant information.

(vii) Participation of Stakeholders

The participation of the stakeholders is fundamental to the establishment of solid, constructive and receptive relationships, which are essential for the effective management of the project's social and environmental impacts.

The CF will develop procedures to allow the Borrower to plan and implement a continuous process of participation involving the stakeholders that may include the following elements: analysis of the stakeholders and related planning, disclosure and dissemination of information, inquiries and participation, grievance redress mechanisms and the constant supply of information to persons affected by the project and other stakeholders.

The process must accord with the requirements set forth in ESPS 2 through 10.

ANNEX 2: Environmental and Social Assessment / Environmental and Social Management Plan (ESA / ESMP)

This Annex provides indicative content of the deliverable that shall be adjusted proportional to E&S risk of the project and its scope.

Development of the ESA

The **ESA** shall include, at a minimum:

1. Executive summary

The ESA's contents shall be presented in an executive summary that is easy to interpret and representative of the information that is most important to the development of the document. In a general manner, it will present, among other issues and without limitation:

- (i) general and specific objectives, including a brief description of the principal environmental and social impacts, both positive or negative, that have been identified during the construction, operations, closing and post-closing phases;
- (ii) the most relevant necessary actions of mitigation, control and prevention for all phases of the project and their relation to the IDB's ESPF and ESPS
- (iii) recommendations for the improvement of the environmental and social management of the Project's works during all of their phases; and
- (iv) general conclusions and recommendations for the study; among other items of information that are determined to be important.

The executive summary shall not exceed 10 pages.

2. Introduction and Background

This Section shall contain the background and scope of the operation, also including a description of the necessity of the Project in the context of local and national situations and strategies, as well as the effect that it will generate in terms of environmental and social development. Additionally, it is important that this portion of the document includes a brief general description of the different sections and/or chapters contained in the ESA.

3. Project Description

This section details the activities, processes and milestones for each of the construction, operation, closing and post-closing phases for each of the works that are included in the Project.

Based on already-existing designs and profiles, this section will describe alternatives that have been considered prior to the selection of the definitive proposal. Multiple alternatives, including an alternative without project, will be qualitatively and quantitatively (where applicable) examined from an environmental and social costs and benefits point of view. This analysis must be conducted in close harmony with the economic, financial, institutional, social, and technical aspects of projects. It will include the applicable analysis of alternatives for the works. The executing agency will provide all the information necessary for the documentation of the analysis of alternatives.

4. Regulatory Framework

This section will be a summary and reference to the Regulatory Framework section of the portion of the document that relates to the ESA.

This will include a description of national laws, international conventions, as well as the regulations applicable to the Project. It will identify the institutions, from their respective levels of government, that are responsible for the project's execution and environmental and social management, as well as the roles and functions of each of these institutions, including an analysis of the institutional capacity of the executing agency, and, where necessary, will detail the needs for institutional improvement, in order to comply with the ESPF.

It should also include a description of the requirements for an environmental permit and other authorizations that are necessary for each phase of the Project.

5. Socioenvironmental assessment and characterization of the area of influence and beneficiaries

In general, this section should contain a description of the current socio-environmental conditions of the project area, defining the boundaries of the Area of Direct Influence (ADI) as well as those of the Area of Indirect Influence (AII).

The characterization shall be based on quantitative and qualitative data derived from primary and secondary information (including field visits and analytical campaigns) addressing issues such as: (i) geology, geomorphology, edaphology and soil quality; (ii) climatology; (iii) air, noise, vibration and odor; (iv) water quality (surface water and groundwater); (v) natural biodiversity and/or modified or critical habitats (following the provisions of IDB's ESPS 6) and threatened species (flora and fauna), protected areas and natural parks (protected natural areas, sensitive ecosystems and important areas of international importance (e.g. IBAs, RAMSAR wetlands, KBAs, AZEs, etc.), and visual and aesthetic / landscape resources; (vi) protected natural areas and cultural sites; (vii) natural hazards presented in the ADI and the AII. This shall include maps and figures at an appropriate scale.

The social characterization will include demographic, economic, and cultural data, taking into consideration: (i) demographic conditions such as age and gender in the beneficiary population; (ii) socio-cultural conditions such as ethnic distribution (including indigenous and Afro-descendant communities), (iii) the presence of vulnerable or minority groups including sexual and gender minorities, (iv) spoken languages, nationalities or other relevant key cultural aspects; (v) the characterization of socio-economic conditions such as economic sectors, formal and informal employment, and land tenure; (vi) land use and available infrastructure; (vii) information on archaeological resources (discoveries) and historical resources, places of cultural and spiritual interest (tangible and intangible), practices and vulnerabilities; (viii) an analysis of the use of natural resources and ecosystem services by different groups and communities; (ix) a mapping of key institutional and social actors present in the area of influence and other Project stakeholders, including social and environmental organizations at the local and national level; and (x) an analysis of existing consultation and community participation mechanisms. This shall include maps and figures at an appropriate scale.

6. Assessment of impacts and risks

In general, this section of the report will focus on the identification and characterization of the potential environmental, social and occupational health and safety impacts and risks of the project (distinguishing between direct, indirect and cumulative), both negative and positive, as well as the influence of climate change and disaster risks for the construction, operation, closure, and post-closure stages, using methodologies such as overlapping thematic maps, matrix evaluation and work by interdisciplinary groups, and will be in accordance with good international practices in the corresponding sector. The description of the environmental impacts must consider, as a minimum:

(i) Requirements of ESPS 1: Assessment and Management of Environmental and Social Risks and Impacts

- The scope and level of effort dedicated to the process of identifying risks and impacts will be in accordance with the type, size and location of the Project. The scope of this process will be determined through the application of the mitigation hierarchy.
- The risk and impact identification process will be based on recent baseline data derived from environmental and social factors, with an appropriate level of detail.
- This section will identify the project's risks or negative impacts that fall disproportionately on individuals and groups that, due to their particular circumstances, are in a vulnerable position.
- Identification of impacts due to the existence of prejudice or discrimination against people who are vulnerable or disadvantaged in terms of access to the Project's benefits.
- Identification of impacts related to the health, safety and well-being of the workers and communities affected by the project, including risks related to pandemics, epidemics and communicable diseases.
- Greenhouse gas emissions.
- Identification of natural hazards and risks and climate change factors related to or exacerbated by the Project, considering the expected frequency, duration and intensity of the phenomena in the project's geographical area and the infrastructure's level of criticality.
- Possible transboundary impacts.
- Impacts on community safety (safety of the project infrastructure, threats to human safety due to risks of escalation of personal or community conflicts and violence that the project could provoke or aggravate).
- Impacts related to the possession and use of land and natural resources, land acquisition, physical resettlement and/or economic displacement (including classification of the type and degree of impact).
- Risks or threats to the protection, conservation, maintenance and restoration of natural habitats and biodiversity (flora and fauna).
- Risks or effects on ecosystem services, including those related to watershed management.
- Impacts on Indigenous Peoples.
- Risks to cultural heritage.
- Risks of gender exclusion and violence, sexual exploitation, human trafficking and the spread of sexually transmitted diseases.

(ii) Requirements of ESPS 2: Labor and Working Conditions

- Identify any risk of child or forced labor in the project area of influence and develop measures in accordance with the ESPS.
- Identify working conditions for women to develop a work environment free of gender-based violence.
- Identify and assess inherent risks related to the project and specific classes of hazards, including physical, chemical, biological, and radiological hazards, and specific threats to women, people of diverse sexual orientations and gender identities, persons with disabilities,

children (of working age), young and migrant workers in accordance with this and any other applicable ESPS.

- Identification of potential hazards to workers, particularly those that may be life-threatening in a manner consistent with good international industry practice, as reflected in various internationally recognized sources including the World Bank Group Environmental, Health and Safety Guidelines.

(iii) Requirements of ESPS 3: Resource Efficiency and Pollution

- Identify hazards, impacts and risks associated with the nature of the project in relationship with: (i) consumption of energy, water and other resources and material inputs, (ii) GHG emissions, (iii) release of pollutants to air, water and land due to routine, non-routine and accidental circumstances, (iv) generation of hazardous and non-hazardous waste materials, (v) use of hazardous materials, (vi) use of chemical pesticides

(iv) Requirements of ESPS 4: Community Health and Safety

- This subsection shall identify specific risks that could pose adverse effects on the health, safety, and well-being of people with sensitivities related to age, gender, disability, or short-term or long-term health conditions; if necessary, a more detailed risk assessment shall be carried out.
- Perform a simplified qualitative risk assessment to assess the project's level of exposure to natural hazards, its vulnerability and criticality to determine the potential impacts of disaster and climate change risks to the project and to third parties. To perform this assessment please follow the Step 3 of the Disaster and Climate Change Risk Assessment Methodology for IDB Projects⁴.
- The project's potential direct, indirect and cumulative risks on priority ecosystem services, which may be exacerbated by natural hazards and climate change and may generate risks and adverse impacts for the health and safety of people, will also be identified (See ESPS 6).
- With respect to employees or contractors being hired to provide security to personnel or property, the risks that their security arrangements may imply for those inside or outside the project site will be evaluated.

(v) Requirements of ESPS 5: Land Acquisition and Involuntary Resettlement

- Identify, when necessary, feasible alternative project designs to avoid or minimize physical and/or economic displacement, while balancing environmental, social, and financial costs and benefits, paying particular attention to impacts on the poor and vulnerable.
- Identify from a gender perspective any possible impacts or risks of (i) project-related land acquisition, (ii) resettlement of project-affected people, (iii) physical or economical displacement
- Where involuntary resettlement is anticipated as unavoidable, either as a result of a negotiated settlement or expropriation, a census needs to be carried out to collect appropriate socioeconomic baseline data to identify people who will be displaced by the project, determine who will be eligible for compensation and assistance.

⁴ Available here: <https://publications.iadb.org/en/disaster-and-climate-change-risk-assessment-methodology-idb-projects-technical-reference-document>

(vi) Requirements of ESPS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

- The Project's direct, indirect and cumulative impacts on biodiversity and ecosystem services should be taken into account, and any significant residual impacts identified.
- The identification and assessment process will take into account relevant threats to biodiversity and ecosystem services, with a special emphasis on habitat destruction, degradation and fragmentation, invasive alien species, overexploitation, hydrological changes, nutrient loading and pollution.
- It will also take into account the different values attributed to biodiversity and ecosystem services by people who may be potentially affected by the Project and, where appropriate, other stakeholders.
- If an adverse impact on ecosystem services is identified, a systematic review will be carried out to identify priority ecosystem services.
- Identify any project components that could be undertaken inside protected areas that are specifically designated by laws or ordinances for the conservation of nature and determine if: (i) feasible alternatives have been considered, (ii) the development is legally acceptable and in compliance with local regulations, (iii) a consensus needs to be made with stakeholders including organizations responsible for managing the protected area and (iv) additional programs need to be performed to ensure that the protected areas are effectively managed for its conservation

(vii) Requirements of ESPS 7: Indigenous Peoples

- With regard to each of the communities of Indigenous Peoples that may be located in the Project's area of influence and who may be affected by it, a process of assessing social and environmental risks and impacts, as well as the nature and magnitude of the direct, indirect and cumulative economic, social, cultural (including cultural heritage) and environmental impacts anticipated for these peoples, shall be completed and carried out in a culturally appropriate manner and based on a gender approach.

(viii) Requirements of ESPS 8: Cultural Heritage

- Identify risks and impacts related to tangible and intangible cultural heritage.
- Identify the areas that have cultural and archeological value within the area of the project (formally protected or not).
- This identification should include secondary data and as well primary, which is of particular importance when there is cultural heritage not formally recognized.

(ix) Requirements of ESPS 9: Gender Equality

- For the gender analysis under ESPS 9, whose objective is to identify, prevent, mitigate and/or compensate for the risks and adverse impacts that may disproportionately affect women and sexual minorities (LGBTQI+ people), it will be necessary to apply a differentiated gender outlook. Depending on the risks identified, the gender analysis may require a stand-alone document.
- The requirements related to ESPS 5 (Land Acquisition and Involuntary Resettlement) should also be considered in all cases involving the possibility of involuntary physical resettlement or economic displacement. This may include the following: (i) internal analyses of households to identify gender differences in sources of livelihood, including informal sources; (ii) an analysis of women's rights in relation to land and its use, as well as for housing and land tenure,

including co-ownership and use rights related to communal lands and other assets; and (iii) an analysis of the impact of resettlement on women's ability to work, and to assure family access to services like education, health and public transport.

- (x) Requirements of ESPS 10: Participation of Stakeholders Information Disclosure
 - o Stakeholders, including both people affected by the project and other parties who, due to their circumstances, may have disadvantages or vulnerabilities related to the project, should be identified and documented.
 - o Documented records of stakeholder engagement should include a description of the stakeholders consulted, a summary of the feedback received, and a brief explanation of how the feedback was taken into account. Information about the stakeholders must be disaggregated by gender.

7. Conclusions and Recommendations

The ESA shall present a conclusion on the environmental and social viability of the project, identifying the main impacts and risks and highlighting the most important issues to be incorporated into the corresponding Environmental and Social Management Plans (ESMP) as well as opportunities for the Project's improvement, with a view to reducing the impacts that have been identified and that can be discussed in the course of developing its components.

Development of the ESMP

For the works in the Project an Environmental and Social Management Plan (ESMP) must be prepared, which contains the specific environmental management measures that are necessary in light of the completed ESA and that may contribute to the potentiation of positive impacts and avoid, reduce, mitigate and/or offset negative impacts in accordance with the mitigation hierarchy. A clear relationship must be established between works in the Project potential risks and impacts, the proposed mitigation measures and applicable ESPS from the IDB.

This Plan will also contain all the necessary guidelines to direct the environmental, labor, social management and occupational health and safety of the Project, including, but not limited to: (i) the different environmental and social plans or programs that will comply with the environmental, social, labor and health and safety requirements that are necessary to carry out the activities of the project's works in compliance with the policies and regulations of both the IDB, and the national government, (ii) obligations and institutional responsibilities for the preparation and implementation of the required measures, (iii) a description of the environmental and social monitoring plan for the project's construction, operation, closure and post-closure stages, identifying the expected results, the parameters to be measured, the places of measurement, the methods and tools used (including monitoring templates) and the periods / frequency in which the measurements will be made, costs, and responsible institutions, (iv) an implementation schedule for each of the proposed measures, a definition of responsibilities and the preparation of a reference budget.

Specifically, the ESMP shall consider, at a minimum:

- (i) Requirements of ESPS 1: Assessment and Management of Environmental and Social Risks and Impacts

- The mitigation and performance improvement measures, as well as actions aimed at addressing the environmental and social risks and impacts that have been identified in the project, shall be described.
- There shall be a definition of Plans or Programs that may consist of a documented combination of operating procedures, practices, plans and related supporting documents (including legal agreements) that are managed in a systematic way.
- For the execution of the Project, the breadth of these Programs will encompass the Borrower's entire organizational structure, including the main contractors and suppliers, or specific places, facilities or activities, over which the organization has control or influence.
- The Programs will take into account the results of the process of interaction with the people affected by the Project and other relevant stakeholders.
- The mitigation hierarchy shall be taken into account in addressing identified risks and impacts, so that, where residual impacts persist and where technically and financially feasible, the prevention of impacts will prevail over measures to minimize them, which, in turn, will prevail over compensation or compensatory measures.
- The mitigation and performance measures and relevant actions must be designed to ensure that the Project operates in accordance with applicable laws and regulations and meets the requirements of ESPS 1 through 10.
- Environmental and social action plans (general or thematic) will be established, which will define results and actions that are sought to address the issues raised in the risk and impact identification process.
- In view of the dynamic nature of the project, the Management Program must be able to react to changes in circumstances, unforeseen events and the results of monitoring and evaluation activities.
- Procedures must be established to monitor the Management Program and measure its effectiveness, as well as its compliance with all legal or contractual obligations and related regulatory requirements.
- Prepare and execute a stakeholder participation plan, in accordance with the Project's risks and impacts, that is adapted to the characteristics and interests of the people affected by the Project and other relevant stakeholders.
- Shall be included a meaningful consultation and participation process commensurate with the project's risks and adverse impacts and the concerns of people affected by it as well as other stakeholders.
- A grievance redress mechanism adapted to the Project's risks and adverse impacts will be designed, to receive concerns and complaints related to its environmental and social performance and to facilitate their resolution.
- The gender approach should be transversal to all processes.

(ii) Requirements of ESPS 2: Work and Working Conditions

- Measures shall be included (e.g., an Occupational Health and Safety Plan) to prevent accidents, injuries and illnesses that may arise from, be associated with, or occur during work, reducing to a minimum, as far as reasonably practicable, the causes of factors that contribute to danger in the workplace. In the case of pandemics or epidemics, health and safety measures and protocols at work must be developed and applied to protect Project workers from the risk of exposure.
- The measures will include the elimination, substitution or modification of dangerous conditions or substances; the training of workers and the keeping of related training records; the documentation and reporting of occupational accidents, injuries, illnesses, and incidents; arrangements for emergency prevention, preparedness, and response; processes to report

- unsafe or unhealthy work situations, as well as mechanisms to evaluate performance in terms of occupational health and safety.
- Measures shall consider strategies to prevent gender-based violence in working environment and strategies to guarantee women equitable access to job positions and wages.
- (iii) Requirements of ESPS 3: Efficiency in the Use of Resources and the Prevention of Contamination
- Technically and financially feasible measures (e.g., plan for the management of solid and liquid waste, emissions of pollutant including noise, vibration and odor, and other relevant environmental aspects) will be considered within the Project's activities, to optimize the consumption of energy, water and other resources and inputs and to avoid or minimize greenhouse gas emissions.
 - Consideration of measures to avoid or reduce the emission of pollutants into the air, surface or ground water or soil, as well as responses to related accidental situations.
 - Consideration of measures to reduce, recover and reuse waste in a manner that is safe for health and the environment.
 - Consideration of measures for treating, destroying or disposing of waste (hazardous and non-hazardous) in an environmentally friendly manner.
 - Consideration of measures for the handling of hazardous materials (including pesticides), including the use of substitutes or less dangerous practices.
 - Regular monitoring of measures and actual measurement monitoring for pollutant are required.
- (iv) Requirements of ESPS 4: Community Health and Safety
- Prevention and control measures will be established in accordance with good international practices, to prevent risks and impacts relating to the health and safety of the community.
 - Measures to prevent the community from being exposed to hazardous materials and substances that the Project may generate.
 - Measures to avoid or minimize community exposure to diseases transmitted by water, vectors and contagious diseases that may be due to the arrival of temporary or permanent workers.
 - Measures shall be included that address preparations for and responses to emergencies, which considering the people affected, local government agencies and other relevant parties, for their protection as well as for their participation and collaboration.
 - Determination of adequate measures to reduce vulnerability and foster adaptation to natural hazards and climate change, whose scope will include hard and soft measures to be implemented in the design, construction, and operation stages of the project. These measures will be part of the Disaster and Climate Change Management Plan, following the IDB's Methodology⁵.
 - Measures shall consider strategies to prevent gender-based violence derived from workers of the project for people living in the areas of intervention.

⁵ See Section 5.2.3 Analyzing the results of the assessment and developing a disaster management plan and Appendix G for Risk mitigation options. Available here: <https://publications.iadb.org/en/disaster-and-climate-change-risk-assessment-methodology-idb-projects-technical-reference-document>

(v) Requirements of ESPS 5: Land Acquisition and Involuntary Resettlement

- Consideration of viable alternative designs for the Project that would avoid or minimize physical or economic displacement, weighing the environmental, social and financial costs and benefits, with special attention to the impacts on poor, women, and vulnerable groups.
- In the event that displacement cannot be avoided, and for all persons affected by the project, indemnification measures or rules shall be considered in a uniform manner in compliance with ESPF.
- Development of a Resettlement or Livelihood Restoration Plan, in accordance with the requirements of this ESPS.
- Regular monitoring of Resettlement and/or Livelihood Restoration Plan is required.

(vi) Requirements of ESPS 6: Conservation of Biodiversity and Sustainable Management of Living Natural Resources

- When impacts on biodiversity and ecosystem services cannot be avoided, measures should be defined to minimize them and to restore biodiversity and ecosystem services in the long term by adopting adaptive management practices that respond to changes and the results of monitoring.
- For the protection and conservation of biodiversity, the mitigation hierarchy should include equivalent biodiversity compensation measures, which can only be considered once adequate prevention, minimization and restoration measures have been applied. These equivalent biodiversity offset measures must be designed and implemented in such a way as to achieve quantifiable conservation results that do not generate any net loss and preferably result in a net increase in biodiversity. These measures will not be acceptable for habitats defined as critical under this ESPS.
- For critical habitats (where the Project has met the requirements of this Standard), mitigation strategies will be considered through a Biodiversity Action Plan aimed at achieving net increases in biodiversity measures.
- For non-critical habitats, consideration will be given for measures such as: (i) the prevention of impacts on biodiversity through the identification and protection of reserve areas; (ii) minimization of habitat fragmentation by implementing measures such as biological corridors; (iii) habitat restoration during and/or after operations.
- Impacts on ecosystem services should be avoided or minimized through measures aimed at maintaining the value and functionality of priority services and increasing the efficiency of their operational use.
- Regular monitoring of measures and actual measurement monitoring are required.

(vii) Requirements of ESPS 7: Indigenous Peoples

- Whenever possible, adverse impacts on the communities of Indigenous Peoples affected by the Project should be avoided. When, having explored alternatives, it is not possible to avoid adverse impacts, measures must be designed to minimize or provide restoration or compensation for such impacts in a culturally appropriate manner and proportional to the nature and size of the impacts and the vulnerability of the communities of Indigenous Peoples affected by the Project. Considering gender gaps in indigenous communities.
- The proposed measures will be developed together with the consultation and informed participation of said communities, with consideration for a Plan for Indigenous Peoples.
- There must be a process of interaction with the communities of Indigenous Peoples affected by the project, as required by ESPS 1 and 10.

- The free, prior and informed consent of the communities of Indigenous Peoples affected by the project must be obtained in the circumstances set forth in this ESPS, and the pertinent mitigation measures applied. Free, prior informed consent will be applied to the design and execution of the project and to the expected results in relation to impacts that affect the communities of Indigenous Peoples.

(viii) Requirements of ESPS 8: Cultural Heritage

- Provisions must be taken into account to address chance discoveries through a specific procedure.
- Measures should be considered in accordance with the hierarchy proposed in this ESPS for the mitigation of adverse effects during the removal of reproducible (non-critical) cultural heritage items, should they exist in the Project area.
- Measures should be taken to avoid removing, altering, or damaging any critical or irreproducible cultural heritage item.

(ix) Requirements of ESPS 9: Gender Equality

- Measures should be designed to (i) avoid, minimize or mitigate identified negative impacts, or provide compensation in this regard through mechanisms that promote gender equality and (ii) ensure that people of different genders who may be affected by the Project, including women and people of diverse sexual and gender identities, receive social and economic benefits equal to those received by other members of the community, thus avoiding the reinforcement of gender inequalities.
- Measures will also be considered to prevent risks of sexual and gender-based violence related to the Project, including specific policies for contractors regarding sexual harassment and codes of conduct, workshops, and awareness campaigns for both workers and contractors and for the communities where the project is developed, etc.
- Design effective grievance redress mechanisms that minimize the reporting burden for victims, offer gender-sensitive services, and minimize the risk of retaliation. These mechanisms must contain specific procedures for addressing sexual and gender-based violence, including confidential reporting through persons trained in the area, with secure and ethical documentation.
- Measures will be incorporated to prevent the risk of sexual exploitation or abuse of minors.

(x) Requirements of ESPS 10: Participation of Stakeholders and Information Disclosure

- The stakeholder engagement plan will describe measures that will be implemented to remove barriers to participation and to capture views of groups that are affected by the project in different ways.
- The Borrower will carry out a process, in accordance with ESPS 1 and ESPS 10, of consultation and informed participation. In the case of projects that produce adverse impacts on Indigenous Peoples, the Borrower shall carry out a process of consultation and informed participation and, in certain circumstances, will have to obtain their free, prior and informed consent, in accordance with ESPS 1 and 7. In case of resettlement there should be a specific process with those potentially affected by these impacts.
- A grievance redress mechanism will be proposed to receive concerns and complaints and facilitate their resolution. This mechanism may also serve as a means of compliance with the requirements of ESPS 5 and 7. However, the grievance redress mechanism for project workers, required under ESPS 2, will be established as separate.

Consultant to support the Transport Operations in Guyana
Support for the Economic Evaluation of the Road from Diamond to Timheri
GY-L1081
Guyana

Background of this search:

Established in 1959, the Inter-American Development Bank (“IDB” or “Bank”) is the main source of financing for economic, social and institutional development in Latin America and the Caribbean. It provides loans, grants, guarantees, policy advice and technical assistance to the public and private sectors of its borrowing countries.

Guyana

The village at Diamond has developed into a large residential community (infrastructure was financed under a previous IDB loan - Low Income Settlement Program) and is a major generator of traffic, most of which is destined for Georgetown, which creates heavy congestion along the route during the morning and evening traffic peaks. The community of Grove, since the development of Diamond, has turned into an important commercial centre with businesses lining the length of the village creating substantial 'side friction' along the roadway thereby affecting traffic flows. There is a major bottleneck at the intersection of the main Diamond Access Road and the East Bank Demerara Road which backs traffic up in both directions particularly through the village of Grove. The width of the right-of-way in Grove is narrow and restricted due to the presence of properties adjacent to the roadway. Traffic reduces quite substantially from the village of Craig at the southern boundary of Grove through Soesdyke to Timehri.

In 2013/2014 the IDB financed a feasibility study and detailed design report for the upgrading of the Grove to Timehri corridor however this project has not progressed to date.

Since the discovery of oil and gas offshore Guyana in 2015 there has been a dramatic increase in the Guyanese economy. This has manifested itself in a marked increase in vehicle registration i.e. increased traffic on the national road network, as well as in a construction boom. A key input for construction in Guyana is white sand and the location of the sand pits are along the Soesdyke-Linden highway. This means that heavily laden trucks many of which are over the legal limit (see *Soesdyke-Linden Highway Feasibility Study and Detailed Design Report* dated 2019) traverse the Grove-Soesdyke section of the proposed project route.

Additionally, in order to address the huge increase in traffic generated by the buildout of the Diamond housing project the Government of Guyana is constructing the following roads in phases:

- 2-lane local road from Diamond to Eccles
- 4-lane road from Diamond to Mandela Avenue
- 4-lane road from Ogle to Diamond and onwards to Timehri. This road will directly connect the proposed Grove to Timehri project to be financed by the IDB.

Finally, the Government of Guyana is planning to develop a Second City called Silica City somewhere along the Soesdyke-Linden Highway. Needless to say, that the traffic generated from Silica City will be substantial.

Two shore bases to service the oil industry located along the Demerara River are also in their early stages of development and traffic generated from these facilities will use the Grove to Timehri road.

Given the above developments it's imperative that a detailed and comprehensive economic analysis is conducted to fully grasp benefits of the IDB financed operation.

What you'll do:

The Inter-American Development Bank (IDB) is preparing a new loan operation for the upgrading of the East Bank Demerara (EBD) Road from Grove to Timehri (23,5km). The loan operation follows on from the recently completed 4-lane widening project from Providence to Diamond (5km) also financed by the IDB. Grove is the neighboring village on the southern side of Diamond so the project, when completed, would provide an improved road corridor from Georgetown to the Cheddi Jagan International Airport (CJIA) located at Timehri (the 4-lane Ruimveldt to Providence leg was completed some years ago). The Grove to Timehri section of the EBD road was last rehabilitated and widened in 1996 through a loan operation financed by the IDB and although there have been maintenance interventions over the years the road has reached the end of its design life as evidenced by a progressively deteriorating pavement structure with cracking, rutting and potholing in places.

The specific objectives include:

- a) A Review Report of the existing studies with a proposed work schedule
- b) Economic evaluation of the three investment components: works, improvement of planning and pre-investment and road safety.
- c) Based on information from available studies and secondary information from previous studies, the economic and social evaluation will be carried out, which will consider among others: Investment costs, operation and maintenance of the road in the condition with and without project.
- d) Application of prices, estimated benefits in terms of time savings and savings in operating costs for users
- e) Potential commercial benefits for the region (increase in competitiveness and productivity) and better linkages to the airport,
- f) Potential benefits generated to the economy by improved regional domestic and international connectivity
- g) Reduction of losses (non-revenue water) due to improved water distribution network connections.
- h) Calculation of indicators (Net Present Value, Benefit/Cost Ratio, socio-economic Rate of Return)
- i) Sensitivity analysis of the results to changes in the most relevant variables.
- j) General discussion of the benefits to the national economy of taking advantage of the current economic boom to increase the standard of road construction and pedestrian infrastructure.
- k) Develop the programme Results Matrix

Deliverables and Payments timeline:

Compensation will be determined in accordance with Bank's policies and procedures. In addition, candidates must be citizens of an IDB member country.

The consultant will present for approval of the contract supervisor a report that will include the breakdown of the days worked and the activities developed during the month. The consultant will receive a payment upon presentation of the corresponding invoice.

What you'll need:

Citizenship: You are a citizen of one of our 48-member countries.

Consanguinity: You have no family members (up to fourth degree of consanguinity and second degree of affinity, including spouse) working at the IDB Group.

Education: Master's degree or equivalent in Economics, Civil Engineer

Experience: At least 15 years of experience working with complex construction projects in economic analysis, planning, design or supervision. Experience in research of economic gains and spillover effects of investment projects. Experience with IBD investment projects and standard contracts for works. **Languages:** Fluency in written and oral English is required.

Core and Technical Competencies: Strong analytical and qualitative skills. Demonstrable experience in the management of interdisciplinary project teams as well as detailed engineering and traffic analysis tools. Project Management formal training. PMP or equivalent certifications are a plus. Excellent written and oral communications; ability to work independently, self-initiative and responsibility. Proficient use of common office and project management software packages.

Opportunity Summary:

- **Type of contract:** International consultant contract for External Products and Services (PEC). This consultancy contemplates a maximum of 35 days.
- **Length of contract:** 3-month period
- **Starting date:** May 3, 2022
- **Location:** The consultant will work from his/her country of residence.
- **Responsible Person:** Pablo Guerrero, Sector Senior Specialist Transport Division (INE/TSP)
- **Requirements:** You must be a citizen of one of the IDB's 48-member countries and have no family members currently working at the IDB Group.

Our culture: Our people are committed and passionate about improving lives in Latin America and the Caribbean, and they get to do what they love in a diverse, collaborative and stimulating work environment. We are the first Latin American and Caribbean development institution to be awarded the EDGE certification, recognizing our strong commitment to gender equality. As an employee you can be part of internal resource groups that connect our diverse community around common interests.

Because we are committed to providing equal opportunities in employment, we embrace all diversity and encourage women, LGBTQ+, persons with disabilities, afro-descendants, and indigenous people to apply.

About us: At the IDB, we're committed to improving lives. Since 1959, we've been a leading source of long-term financing for economic, social, and institutional development in Latin America and the Caribbean. We do more than lending though. We partner with our 48-member countries to provide Latin America and the Caribbean with cutting-edge research about relevant development issues, policy advice to inform their decisions, and technical assistance to improve on the planning and execution of projects. For this, we need people who not only have the right skills, but also are passionate about improving lives.

Our team in Human Resources carefully reviews all applications.

Consultant to support the Transport Operations in Guyana
Support for the Review of existing studies for the Road from Diamond to
Timheri
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Since the discovery of oil and gas offshore Guyana in 2015 there has been a dramatic increase in the Guyanese economy. This has manifested itself in a marked increase in vehicle registration i.e. increased traffic on the national road network, as well as in a construction boom. A key input for construction in Guyana is white sand and the location of the sand pits are along the Soesdyke-Linden highway. This means that heavily laden trucks many of which are over the legal limit (see *Soesdyke-Linden Highway Feasibility Study and Detailed Design Report* dated 2019) traverse the Grove-Soesdyke section of the proposed project route.

Additionally, in order to address the huge increase in traffic generated by the buildout of the Diamond housing project the Government of Guyana is constructing the following roads in phases:

- 2-lane local road from Diamond to Eccles
- 4-lane road from Diamond to Mandela Avenue
- 4-lane road from Ogle to Diamond and onwards to Timehri. This road will directly connect the proposed Grove to Timehri project to be financed by the IDB.

Finally, the Government of Guyana is planning to develop a Second City called Silica City somewhere along the Soesdyke-Linden Highway. Needless to say, that the traffic generated from Silica City will be substantial.

Two shore bases to service the oil industry located along the Demerara River are also in their early stages of development and traffic generated from these facilities will use the Grove to Timehri road.

Given the above developments it's imperative that a detailed and comprehensive traffic analysis is conducted as this will impact both the economic feasibility as well as the pavement design of the proposed Grove to Timehri project.

What you'll do:

The Inter-American Development Bank (IDB) is preparing a new loan operation for the upgrading of the East Bank Demerara (EBD) Road from Grove to Timehri (23,5km). The loan operation follows on from the recently completed 4-lane widening project from Providence to Diamond (5km) also financed by the IDB. Grove is the neighboring village on the southern side of Diamond so the project, when completed, would provide an improved road corridor from Georgetown to the Cheddi Jagan International Airport (CJIA) located at Timehri (the 4-lane Ruimveldt to Providence leg was completed some years ago). The Grove to Timehri section of the EBD road was last rehabilitated and widened in 1996 through a loan operation financed by the IDB and although there have been maintenance interventions over the years the road has reached the end of its design life as evidenced by a progressively deteriorating pavement structure with cracking, rutting and potholing in places.

The specific objectives include:

For Guyana:

The consultant will do the following task:

- l) A Review Report of the existing studies with a proposed work schedule
- m) Field test and conduct traffic analysis, taking into account newer traffic patterns in the area;
- n) Review and proposed pavement design update;
- o) Review of drainage design
- p) Updated cost estimation for the project
- q) TOR for engineering design update detailing all activities the engineering firm should undertake.
- r) The Review Report should also examine the viability of dueling the existing 2-lane Grove to Timehri road.

Deliverables and Payments timeline:

Compensation will be determined in accordance with Bank's policies and procedures. In addition, candidates must be citizens of an IDB member country.

The consultant will present for approval of the contract supervisor a report that will include the breakdown of the days worked and the activities developed during the month. The consultant will receive a payment upon presentation of the corresponding invoice.

What you'll need:

Citizenship: You are a citizen of one of our 48-member countries.

Consanguinity: You have no family members (up to fourth degree of consanguinity and second degree of affinity, including spouse) working at the IDB Group.

Education: Master's degree or equivalent in Civil Engineer, Construction or Architecture

Experience: At least 10 years of experience working with complex construction projects in labors of planning, design or supervision. Experience as project manager for complex engineering projects. Experience with IDB procurement policies and standard contracts for works.

Languages: Fluency in written and oral English is required.

Core and Technical Competencies: Strong analytical and qualitative skills. Demonstrable experience in the management of interdisciplinary project teams as well as detailed engineering and traffic analysis tools. Project Management formal training. PMP or equivalent certifications are a plus. Excellent written and oral communications; ability to work independently, self-initiative and responsibility. Proficient use of common office and project management software packages.

Opportunity Summary:

- **Type of contract:** International consultant contract for External Products and Services (PEC). Retainer. This consultancy contemplates a maximum of 80 days, and two travel sessions from the place of residence to Guyana.
- **Per diem:** 10 days of travel allowance and travel costs
- **Length of contract:** 7-month period
- **Starting date:** May 3, 2022
- **Location:** The consultant will work from his/her country of residence.
- **Responsible Person:** Pablo Guerrero, Sector Senior Specialist Transport Division (INE/TSP)
- **Requirements:** You must be a citizen of one of the IDB's 48-member countries and have no family members currently working at the IDB Group.

Our culture: Our people are committed and passionate about improving lives in Latin-America and the Caribbean, and they get to do what they love in a diverse, collaborative and stimulating work environment. We are the first Latin American and Caribbean development institution to be awarded the EDGE certification, recognizing our strong commitment to gender equality. As an employee you can be part of internal resource groups that connect our diverse community around common interests.

Because we are committed to providing equal opportunities in employment, we embrace all diversity and encourage women, LGBTQ+, persons with disabilities, afro-descendants, and indigenous people to apply.

About us: At the IDB, we're committed to improving lives. Since 1959, we've been a leading source of long-term financing for economic, social, and institutional development in Latin America and the Caribbean. We do more than lending though. We partner with our 48-member countries to provide Latin America and the Caribbean with cutting-edge research about relevant development issues, policy advice to inform their decisions, and technical assistance to improve on the planning and execution of projects. For this, we need people who not only have the right skills, but also are passionate about improving lives.

Our team in Human Resources carefully reviews all applications.