

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

BELIZE

RURAL ELECTRIFICATION PROGRAM (REP)

(BL-L1049)

PROJECT PROFILE

This document was prepared by the project team consisting of: Odile Johnson, Project Team Leader (INE/ENE); Jaime Sologuren, Alternate Team Leader (INE/ENE); Juan Alvarez Alternate Team Leader (SCL/MIG); Javier Cuervo and Ramón Ríos (INE/ENE); Mónica Lugo (LEG/SGO); María Viteri and Alessandro Farinaccio (VPS/ESG); Gerusa Furlan and Cleide Custodio (VPC/FMP); Orchel Usher (CID/CBL); Pauline Blanc (CSD/CCS); Hugo Us (SCL/GDI); and Owen Hender (SCL/MIG).

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PROJECT PROFILE

BELIZE

I. BASIC DATA

Project Name:	Rural Electrification Program (REP)		
Project Number:	BL-L1049		
Project Team:	Odile Johnson, Project Team Leader (INE/ENE); Jaime Sologuren, Alternate Team Leader (INE/ENE); Juan Alvarez Alternate Team Leader (SCL/MIG); Javier Cuervo and Ramón Ríos (INE/ENE); Mónica Lugo (LEG/SGO); María Viteri and Alessandro Farinaccio (VPS/ESG); Gerusa Furlan and Cleide Custodio (VPC/FMP); Orchel Usher (CID/CBL); Pauline Blanc (CSD/CCS); Hugo Us (SCL/GDI); and Owen Hender (SCL/MIG)		
Borrower:	Belize		
Executing Agency:	Ministry of Public Utilities, Energy and Logistics (MPUEL) through its Energy Unit		
Type of Instrument and/or Modality:	INV-GOM		
Sector and Subsector:	Energy / Rural Electrification		
Financial Plan:	IDB (Ordinary Capital):	US\$	20,000,000
	IDB (Grant Facility) BL-J0011 ¹	US\$	1,750,000
	IDB (Low Carbon Energy Fund-LCE)-BL-G1012 ² :	US\$	1,000,000
	Total:	US\$	22,750,000
Socio-environmental classification:	B		
Strategic Alignment:	Poor populations Sustainable economic growth Institutional capacity and rule of law Digital transformation Climate change mitigation Climate resilience Climate and green financing Gender		
Expected alignment with the Paris Agreement	Simplified analysis		
Country Strategy:	Aligned with the strategic objective “Support the reactivation of key economic sectors through the continued provision of services, improving their resilience to natural hazards and climate change” of the Belize Country Strategy (GN-3320), by providing of quality and resilient infrastructure.		
Contribution to thematic initiatives and/or regional programs:	América en el Centro One Caribbean		

¹ IDB Grant Facility resources to continue supporting the efforts of the region to address ongoing and emerging migration challenges, according to operating guidelines GN-2947-26.

² Investment Grant financed by the LCE with resources from the Global Energy Alliance for People and Planet (GEAPP), administered by IDB, in accordance with the provisions set forth in the fund's creation proposal document ([GN-3073-2](#)).

II. JUSTIFICATION AND DESCRIPTION OF THE PROJECT

A. Description of the Project

- 2.1. **Objectives.** The general objective is to contribute to improving living conditions and economic opportunities for rural populations in Belize through access to electricity services. The specific objectives are: (i) to increase rural household access to electricity services; (ii) to strengthen technical and institutional capacity to support the reliable provision of electricity services; and (iii) to promote the productive uses of electricity in rural areas.
- 2.2. **Macroeconomic Context.** Belize has a land area of ~22,970km², and a population of ~411,000 people, with a dispersed settlement pattern, particularly in rural areas. Indigenous Peoples (Maya and Garifuna)³ represent ~13.8% of this population, and migrants ~11.5%,⁴ mostly from neighboring countries. Over half of both groups live in rural areas, increasing pressure on infrastructure gaps, including electricity access. Economic activity is concentrated on services and tourism^[2]⁵. Belize is highly exposed to climate-related hazards, particularly hurricanes and flooding, which pose significant risks to infrastructure, communities, and economic activity^[3]. Rural areas face more limited access to infrastructure and economic opportunities, with poverty rates significantly higher than in urban areas (30.9% compared to 9.7%)^[4], highlighting persistent disparities in living conditions.
- 2.3. **Energy Sector Institutional Framework.** The Ministry of Public Utilities, Energy and Logistics (MPUEL) is the central policy-making body responsible for energy planning, coordination, and oversight of the energy sector in the country. Within MPUEL, the Energy Unit manages energy data, develops sector strategies, and coordinates with public and private stakeholders, including on rural electrification. The Public Utilities Commission (PUC) serves as the regulatory authority for the electricity sector. PUC is responsible for licensing, tariff setting, and ensuring compliance with service and safety standards, and also oversees the performance of Belize Electricity Limited (BEL).
- 2.4. BEL is the public and vertically integrated utility under a Public-Private Partnership, and, since October 2025, is 97% state-owned^[5]. It holds licenses for generation (55MW, mainly for backup supply) and has the monopoly for transmission and distribution. BEL serves 116,983 customers^[6], is financially self-sustaining with an EBITDA margin of 10% (2024)^[7] and operates independently from the central government budget. BEL has established a sound corporate governance, is subject to annual external audits and demonstrates adequate financial performance.
- 2.5. **Electricity Rate:** The electricity rate is governed by the Electricity Act ([CAP 221](#)) and is applied uniformly nationwide to on-grid and off-grid systems. The tariff, calculated by PUC, includes generation costs and the Value Added of Delivery (VAD), which covers transmission and distribution services, infrastructure

³ Indigenous poverty reaches up to 80%^[1].

⁴ One of the highest shares of migrants in the region.

⁵ The bibliographic references are identified in brackets, please see [link](#).

investments, operation and maintenance (O&M), and commercial services. The tariff structure is organized into four main customer categories: residential, commercial, industrial, and social. The Social tariff, which provides reduced rates for vulnerable and low-consumption residential households, is designed to recover only the cost of generation and does not include the VAD. The unrecovered costs associated with Social customers are absorbed by the other tariff categories (effectively a cross-subsidy). Accordingly, there are no direct transfers from the Central Government to the utility. Tariff reviews are performed by PUC annually through the Annual Review Proceeding[8]. Additionally, a comprehensive Full Tariff Review Proceeding[9] is conducted every four years to reassess allowable revenues and tariff structures for the entire period.

- 2.6. **Electricity Sector Context.** The electricity sector has an installed capacity of 180MW[10], complemented by imports of up to 55MW, and annual generation of ~809GWh. The country is interconnected with Mexico to complement domestic supply. Belize has achieved significant progress in electrification, reaching 92.72%[11] national access in 2023⁶. Nevertheless, the remaining share of the population, primarily in remote rural areas, still lacks access. Rural electrification lags urban access (88% vs. 97%)[12], reflecting geographic and economic barriers.
- 2.7. The [Belize National Energy Policy 2023](#) sets a goal of universal basic energy access by 2030, through grid extension and microgrid solutions, particularly for remote communities. The 2024 National Electrification Plan ([NEP](#))⁷ confirms access as a priority and identifies a least-cost pathway combining grid densification⁸, grid extension, mini-grids, and stand-alone systems. The NEP estimates ~29,000 additional residential connections, of which 21,500 are included in BEL's investment plan, and will be connected by the utility, as they are financially viable. The remaining 7,500 households lie more than 500m away from existing distribution lines and are considered financially unviable based on the utility's experience, leaving them out of BEL's investment plan. Consequently, Belize requires additional support to electrify these remote populations.
- 2.8. **Problem.** The main problem that this operation seeks to address is the poor living conditions and constrained economic opportunities among rural populations in Belize, driven by a lack of access to electricity services. These populations include a high share of indigenous peoples and migrants.
- 2.9. **Determinant 1. Limited investment in electrical infrastructure in rural areas.** Remoteness, low population density, and dispersed settlements increase investment costs and hinder electricity access in rural communities⁹. As a result, rural communities often receive lower levels of investment, which delays or prevents the expansion of electricity access.

⁶ The electrification rate in 2000 was 79% ([Population Census 2000](#)).

⁷ A georeferenced[13] tool developed with the Bank's support, using a geospatial optimization model to plan least-cost electrification through grid extension, mini-grids and standalone solar PV.

⁸ Densification expands existing distribution networks to connect users within ~500m of the current grid.

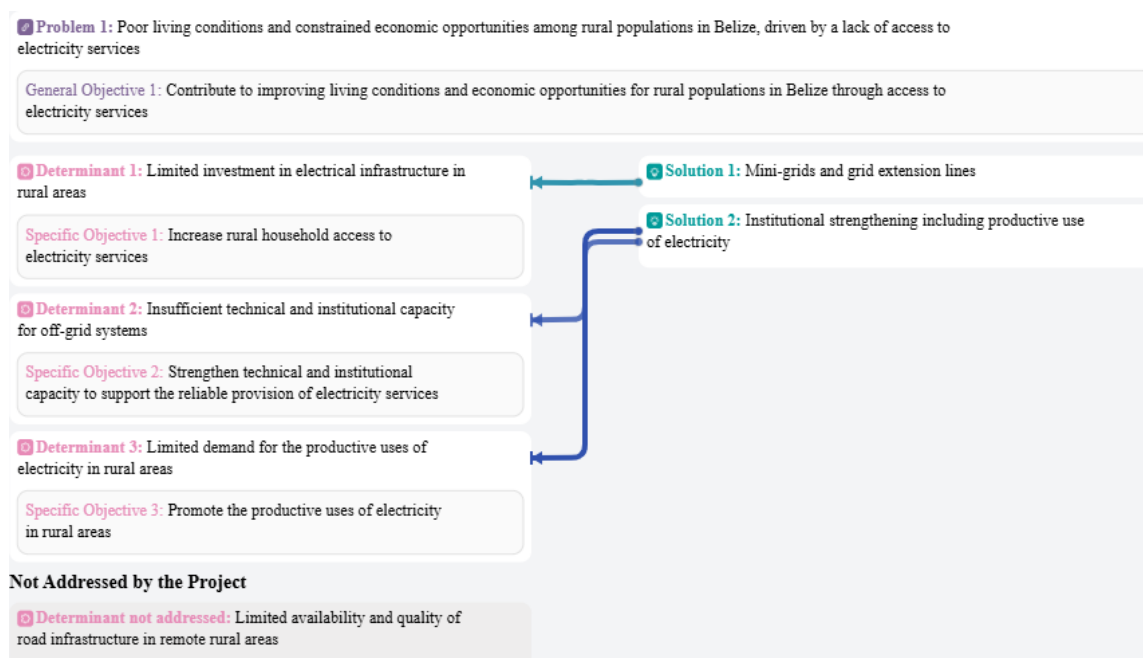
⁹ Recent studies in rural Belize show that last-mile electrification costs can reach US\$12,500/household, compared to ~US\$800–2,800/household near the grid.

- 2.10. **Determinant 2. Insufficient technical and institutional capacity for off-grid systems.** While the country has strong technical expertise across the traditional grid-based solution, decentralized technologies, such as solar mini-grid systems, are relatively new in the Belizean context. Their implementation requires different capacities in planning, procurement, system design, monitoring, environmental and social management, O&M and community participation. These capabilities are not yet fully developed in the country, hindering the scale-up of decentralized electrification options. Because government institutions lack planning tools and modeling systems for the design of mini-grids, existing projects were developed by international experts.
- 2.11. **Determinant 3. Limited demand for the productive uses of electricity in rural areas.** In remote and dispersed communities, electricity use for productive activities remains very limited, as consumption is largely confined to basic household needs (around 16.5 kWh/month). This, in turn, undermines utilities' and developers' incentives to expand service due to the resulting low demand and limited revenues. Therefore, complementary measures to promote the productive uses of electricity are required to enhance demand (above ~132 kWh/month) and support the financial and operational sustainability of electrification investments, while enhancing income-generating activities for beneficiaries¹⁰, including migrants.
- 2.12. **Determinant not addressed by the project. Limited availability and quality of road infrastructure in remote rural areas.** Geographic isolation, low road connectivity, and limited access increase the cost and complexity of implementing engineering works, including those required for rural electrification projects, and the deployment of productive activities.
- 2.13. **Proposed solutions.** The program proposes the financing of: (i) mini-grids and grid extension lines; and (ii) institutional strengthening activities, including GIS-based electrification planning tools; environmental and social management capacity-building; O&M of isolated energy systems; and a skill-building program for encouraging the efficient and productive uses of electricity.
- 2.14. **Beneficiaries.** The program's direct beneficiaries include approximately 3,000 households gaining new electricity access (including migrant households and indigenous populations), as well as MPUEL and BEL, the key institutions responsible for rural electrification, whose technical and institutional capacities will be strengthened. Indirect beneficiaries include public health and education facilities, along with rural Small and Micro-sized Enterprises (SMEs) within the intervention areas, all of which will benefit from more reliable electricity services.
- 2.15. **Expected results and impacts.** The impact indicator will be monthly electricity consumption per household. The results indicators will be: (a) the number of households with new access to electricity service; (b) annual energy generated by the solar energy system; (c) number of institutional staff trained; and (d) targeted population trained in productive uses of electricity.

¹⁰ Electricity consumption estimates use the Energy Daily Allowances ([Trama-TecnoAmbiental](#)).

- 2.16. **Other contributions to cross-cutting themes.** The operation contributes to (i) climate mitigation through renewable energy-based mini-grids; (ii) climate resilience by promoting decentralized solutions in isolated, and climate-vulnerable areas, incorporating climate-resilient standards for electricity infrastructure, while improving households' adaptive capacity through reliable electricity and its productive uses; (iii) gender equality and inclusion of diverse population groups by supporting indigenous women's participation in electricity-related productive activities; and (iv) institutional capacity and governance, by strengthening energy-sector institutions to plan, operate, and maintain rural electrification systems.

Figure 1. Summary of the Theory of Change (ToC)



Note: The ToC can be reviewed here: [link](#).

B. Bank Additionality

- 2.17. **Programmatic approach.** The operation operationalizes the Belize Energy Policy and the NEP, being the latter supported by the Bank drawing on [lessons learned](#) from the development of Rural Electrification Master Plans and Energy Access Programs in the LAC region. From these experiences, the team incorporated into the design of this operation the value of integrating least-cost planning that combines grid and off-grid solutions, addressing financing gaps for remote users, and strengthening institutional capacity.
- 2.18. The NEP was supported by TC [ATN/LE-19700-RG](#), [ATN/OC-19699-RG](#), through geospatial least-cost analysis and identification of priority investments. TC [ATN/LE-21196-BL](#) is financing the technical (e.g. pre-designs for mini-grids), social, and environmental studies required for the projects included in this operation's sample. Together, these TCs provide the analytical and technical foundation for the proposed sovereign investment. The effectiveness of rural

electrification projects has been proven by the successful achievement of past loans ([2608/OC-EC](#), [2460/BL-BO](#) and [3165/OC-PN](#)) and by recent operations ([5930/OC-SU](#) and [5991/OC-GU](#)) currently under implementation.

- 2.19. This is the first IDB sovereign-guaranteed energy operation in Belize. Previous IDB Group support includes an IDB Lab initiative piloting green finance for renewable energy and energy efficiency investments for MSMEs ([ATN/CN-17454-BL](#), 2019), and a US\$30,000,000.00 Non-Sovereign Guaranteed loan from IDB Invest to BEL ([15004-01](#), 2025) for climate mitigation investments and working capital.
- 2.20. **Non-Financial Additionality.** The Bank's comparative advantage in rural electrification interventions lies in its technical expertise drawn from similar operations, while generating context-specific knowledge tailored to local conditions. The operation will strengthen institutional capacities for planning, designing, and operating rural electrification projects, including technical, fiduciary, governance, risk management, environmental and social safeguards, and monitoring and evaluation systems. The Bank's expertise on migrant integration will support addressing the needs of mixed rural communities.
- 2.21. **Synergies with the private sector.** The operation will support existing SMEs by ensuring reliable, affordable electricity. It could indirectly enable new SMEs through productive uses of energy at the household level. Private-sector participation is expected in the construction and installation of mini-grids. The operation will coordinate with other IDB Group programs in the same geographic area.
- 2.22. **Collaborations with other institutions.** The Bank, through MPUEL, coordinates with development partners supporting the universal access agenda, by sharing planning, progress, and lessons learned. Key partners include: IFC (financing a [utility-scale solar plant](#)); World Bank (supporting a [battery energy storage system -BESS- project](#) and institutional reform); Saudi Fund for Development (financing a [solar PV plant with battery storage](#)); and European Commission (financing grid extensions and four mini-grids, including [two with BESS](#)).

III. COSTS AND FINANCING STRUCTURE

- 3.1. **Components.**
- 3.2. **Component 1: Rural electrification projects (IDB Ordinary Capital (OC): US\$17,000,000.00; Low Carbon Energy Fund (LCE): US\$1,000,000.00; IDB-GRF: US\$1,500,000.00; Total: US\$19,500,000.00),** finances: (i) design, construction, and installation of resilient solar mini-grids with energy storage, remote monitoring systems and service connections; and (ii) design and construction of distribution network extensions.
- 3.3. **Component 2: Capacity building (IDB-OC: US\$1,500,000.00; IDB-GRF US\$250,000.00; Total: US\$1,750,000.00),** finances: (i) strengthening of the technical and institutional capacities in the electricity sector for the key public sector institutions; and (ii) promotion of efficient and productive uses of electricity,

incorporating gender and indigenous perspectives and a focus on the migrant population and its host community.

- 3.4. **Program administration, monitoring, evaluation, and auditing (IDB-OC: US\$1,500,000.00)**, finances the operation's administration cost, monitoring, verification, and evaluation of program outcomes, and the financial audit.
- 3.5. **Financing structure.** The total financing amount of the operation is US\$22,750,000.00, of which US\$20,000,000.00 (87.9%) consists of a loan from the Bank's OC, US\$1,000,000.00 (4.4%) corresponds to grant financed with resources from the LCE, and US\$1,750,000.00 (7.7%) corresponds to grant financed with resources from IDB-GRF.
- 3.6. **Financing Instrument or Modality.** The operation is proposed as an Investment Loan, with two investment grants, as mentioned above. The loan is a Multiple-Works (GOM) modality because it will finance projects of similar characteristics but mutually independent, located in different villages, and of sizes that do not warrant individual operations. All projects will meet the eligibility criteria to be defined during the formulation stage of the Proposal for Operations Development (POD). A representative sample of subprojects will be analyzed and included in the POD, in accordance with the criteria and directives of the Bank's policies applicable to GOM operations. Projects in sample meet the following criteria: located in rural areas lacking reliable electricity; includes the connection of existing households; applies mini-grids or grid extension as electrification solutions; and is not classified as Category "A".
- 3.7. **Migration eligibility.** The project meets GRF migration eligibility (GN-2947-26) under Criterion 1, is aligned with the thematic focus on improving access to social services and both migrant and host communities will benefit from the initiative.

IV. MAIN RISKS AND IMPLEMENTATION ARRANGEMENTS

A. Risks

- 4.1. **Risks to Achieving Results.** The main risks to achieving results include execution context risks related to climate exposure (§4.5), and social risks if stakeholder engagement processes, including Free, Prior and Informed Consent (FPIC)—currently applied in projects involving the Maya Indigenous communities—are not adequately managed. Institutional capacity risks stem from existing limitations in the local contractor market and procurement administrative constraints associated with a small-country context, which could delay bidding processes, as well as from the need to ensure sustained and strong coordination among MPUEL, BEL, and PUC. Project-specific risks relate to lower-than-expected demand or uptake of productive uses of electricity, which could affect mini-grid utilization and financial viability, and to inadequate preparation or implementation of environmental and social management instruments.
- 4.2. **Sustainability of Results.** Sustainability will be based on resilient technical design, effective institutional coordination and capacity, and the financial viability of mini-grids under the uniform national tariff structure with cross-subsidy

provisions (§2.5). The number of new rural users relative to the existing customer base is expected to be proportionally very small, limiting any impact on the tariff structure or on expected revenues at BEL which are expected to cover the operation's costs. Long-term performance will require adequate O&M capacity, demand growth through productive uses of electricity, and continued coordination among MPUEL, BEL, and PUC. The provision of electricity will be the responsibility of BEL, which will receive the new infrastructure from the Government and integrate it into its operations. The program includes strengthening BEL's O&M capacities for mini-grids, building on the experience it has gained operating systems developed with the support of other MDBs. An analysis of the population's payment capacity will be conducted.

- 4.3. **Environmental and Social Risks.** According to the IDB's Environmental and Social Policy Framework (ESPF), and the current information, the Program is classified as Category "B" as activities are likely to cause moderate negative environmental and social impacts, mostly local and temporary, mainly during construction. The main works will include civil works for the installation of distribution poles, overhead lines, mini-grid infrastructure, and service connections in remote and dispersed rural communities. Anticipated adverse construction impacts include air emissions, dust, and noise; increased traffic; waste generation; chance finds; community and worker health and safety; and community inconveniences from heavy machinery and equipment causing temporary blockages of access to residences, businesses, and public infrastructure. Civil work could cause minor physical and/or economic displacement of residents and businesses. Some interventions may be located within or in proximity to areas inhabited by indigenous peoples, including Maya communities in the Toledo and Cayo Districts. However, no significant negative impacts on legally protected areas or irreversible impacts on indigenous communities are anticipated at this stage, given the type and scale of civil works. The Category "B" classification will be confirmed after social and environmental studies are completed.
- 4.4. The Environmental and Social Risk Rating (ESRR) is classified as Substantial based on risks related to cause, contribution, context, and performance. Indigenous communities may be located within or near the Program's area of influence, requiring enhanced due diligence and a culturally appropriate FPIC process. The scope of the Indigenous Peoples Plan (IPP), or equivalent instrument, will be defined during the environmental and social assessment. Adverse impacts on land, livelihoods, and cultural heritage are not expected to be irreversible, subject to appropriate mitigation measures. The Executing Agency (EA) has moderate capacity to manage environmental and social risks, and targeted capacity-building will be incorporated during implementation. The ESRR will be reviewed as the assessment progresses.
- 4.5. The Disaster and Climate Change Risk Classification (DCCRC) is Moderate, given Belize's exposure to climate-related natural hazards—including hurricanes, flooding, wildfires, and storm surge. Given that the majority of the Program's infrastructure will be aerial and located in remote and vulnerable rural areas, climate resilience measures will be incorporated into technical specifications and the Environmental and Social Management System (ESMS).

- 4.6. An Environmental and Social Assessment (ESA) and Environmental and Social Management Plan (ESMP) will be prepared for a representative sample of the Program, including, as applicable, a Resettlement Policy Framework or Resettlement Action Plan, an Indigenous Peoples Plan, and a Stakeholder Engagement Plan. An Environmental and Social Management Framework (ESMF) will guide the preparation of future subprojects. Draft documents will be disclosed prior to the analysis mission, and consultations with stakeholders, including potentially affected communities, will be conducted. Final documents and consultation reports will be disclosed prior to OPC distribution.

B. Summary of the implementation arrangements

- 4.7. **Execution mechanism.** Belize will be the borrower of the program, and MPUEL, through its Energy Unit, will be the EA. MPUEL will be responsible for administrative, budgetary, financial-accounting management, environmental and social supervision, program planning, monitoring, and contracting of the external auditing. Moreover, MPUEL will coordinate with: (i) BEL, which will support detailed designs for grid extensions and manage long-term operation and maintenance of the financed infrastructure; (ii) PUC, as the regulator; (iii) the Ministry of Rural Transformation, Community Development and Local Government, which facilitates engagement with rural communities; and (iv) the Office of Indigenous Peoples' Affairs, which supports interventions targeting Indigenous populations. An Institutional Capacity Assessment Platform (ICAP) will be carried out for the MPUEL and its Energy Unit.
- 4.8. **Retroactive financing.** The Bank may retroactively finance, from the loan resources, eligible Program expenditures incurred by the Borrower from the date of approval of the Project Profile up to the loan approval, up to the amount of US\$4,550,000.00 (20% of the proposed financing). Expenditures incurred more than 18 months prior to the date of loan approval will not be eligible.

V. RESOURCES AND PREPARATION SCHEDULE

- 5.1. The project is expected to be considered for approval by the IDB Board of Executive Directors by October 7th, 2026, with POD Due Date on June 5th, the Quality Risk Review (QRR) meeting on July 8th, and an Operations Policy Committee (OPC) on August 13th. Program preparation will require administrative resources of US\$156,455.00 and TC resources of US\$150,000.00, financed by TC BL-T1213, currently under preparation, which will finance the technical, economic and environmental studies for the operation.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK



BELIZE

RURAL ELECTRIFICATION PROGRAM (REP)

BL-L1049

INITIAL ENVIRONMENTAL AND SOCIAL REVIEW SUMMARY (ESRS)

04/07/2026

This document was prepared by:
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With the support of the Project team:
Odile Ivette Johnson Naveo and Jaime Sologuren

Initial Environmental and Social Review Summary	
Operation Data	
Operation Number	BL-L1049
IDB Sector/Subsector	Energy / Rural Electrification LON/GOM
Type of Operation & Modality	LON / GOM Energy / Rural Electrification
Initial E&S Impact Classification (ESIC)	B
Initial E&S Risk Rating (ESRR)	Substantial
Initial Disaster and Climate Change Risk Classification (DCCRC)	Moderate
Borrower	Belize
Executing Agency	Ministry of Public Utilities, Energy and Logistics (MPUEL)
IDB Loan Amount (and total project cost)	\$22,750,000.00
Applicable ESPS's with requirements	ESPS-1; ESPS-2; ESPS-3; ESPS-4; ESPS-5; ESPS-6; ESPS-7; ESPS-8; ESPS-9; ESPS-10
Executive Summary	
The Rural Electrification Program (REP) in Belize will finance solar mini-grids with battery storage, distribution network extensions, service connections, and institutional strengthening activities to expand electricity access in remote rural communities. According to the IDB's Environmental and Social Policy Framework (ESPF), and the current information, the Program is <u>classified as "Category B"</u> as its activities are likely to cause moderate negative environmental and social impacts, mostly local and temporary, mainly during the construction phase, for which effective mitigation measures are available. As a Multiple Works (GOM) operation, the environmental and social assessment will focus on a representative sample of subprojects and the sectoral risks associated with rural electrification investments. Potential environmental and social, health and safety (ESHS) impacts are expected to be moderate, localized, and largely temporary, occurring primarily during construction and installation activities. For example, key direct impacts may include vegetation clearing for pole placement, generation of dust, noise, and construction waste, increased traffic and occupational health and safety risks, and temporary disruption to community access. Minor physical or economic displacement could occur in isolated cases related to the installation of poles, distribution lines, or mini-grid infrastructure. Operational impacts are expected to be limited and associated mainly with maintenance activities and battery management systems. Indirect and cumulative risks may include small increases in greenhouse gas emissions from construction activities (estimated below 25,000 tCO₂e annually), labor and supply chain risks, and potential exposure of communities to communicable or vector-borne diseases linked to temporary labor influx.	

The Environmental and Social Risk Rating (ESRR) is assessed as Substantial, reflecting contextual risks and the presence of Indigenous communities within or near the potential areas of influence, which require enhanced due diligence and culturally appropriate consultation processes.

Belize is exposed to climate-related hazards—including hurricanes, flooding, wildfires, and storm surges, resulting in a Moderate Disaster and Climate Change Risk Classification. The project will incorporate climate-resilient infrastructure design and operational standards.

Environmental and social due diligence will include preparation of an Environmental and Social Assessment for a representative sample of subprojects, an Environmental and Social Management Plan, an Environmental and Social Management Framework for future subprojects, a Stakeholder Engagement Plan, and, based on social and environmental studies assessment, a Resettlement Framework and Indigenous Peoples Plan. Consultations on the ESA/ESMP as well as the specific and culturally meaningful consultation with potentially affected people will be carried out before distribution to Board. Updated versions of the ESA/ESMP and ESMF and the consultation reports will be disclosed before distribution to Board.

Operation Description

The Rural Electrification Program (REP) will expand electricity access in remote and dispersed communities in Belize through renewable mini-grids, distribution network extensions, and institutional strengthening. The operation will be implemented as a Multiple Works (GOM) modality, financing a series of subprojects with similar characteristics located in different rural communities. Environmental and social due diligence will focus on a representative sample of subprojects reflecting the types of infrastructure interventions and associated environmental and social risks expected in the rural electrification sector.

Component I. Rural Electrification Projects(US\$19.5 million). This component will finance the design, construction, and installation of solar photovoltaic mini grids with battery energy storage systems and remote monitoring technologies in four communities Conejo Creek, Sunday Wood, Crique Sarco, and Dolores which are currently considered as the representative sample, as well as distribution network extensions to connect rural households and community facilities in Santa Cruz, Santa Elena, San José, and Pueblo Viejo. Infrastructure activities may include installation of distribution poles and overhead lines, service connections, and energy-efficient public lighting systems. Construction activities may involve minor excavation and trenching, vegetation clearing for pole placement or mini-grid infrastructure, temporary storage of construction materials, and transport of equipment to remote communities. Limited land may be required for mini-grid installations or pole placement; while large-scale land acquisition is not expected, minor physical or economic displacement could occur in isolated cases. Associated facilities include existing electricity transmission and distribution infrastructure operated by Belize Electricity Limited (BEL), which will integrate the new systems into the national grid and assume responsibility for operation and maintenance.

Component II. Capacity Building (US\$1.75 million). This component will strengthen institutional and technical capacities for rural electrification planning, environmental and social management, and operation and maintenance of decentralized energy systems, while promoting productive uses of electricity in rural communities.

Program Administration, Monitoring, Evaluation, and Auditing (US\$1.5 million). This component will finance program coordination, environmental and social monitoring, evaluation of results, and financial and technical audits.

The program will primarily be implemented in rural areas of Belize, including communities with Indigenous populations, particularly in the Toledo and Cayo districts. A representative sample of

subprojects will be defined during preparation to assess environmental and social impacts and risks associated with the sector and the types of infrastructure to be financed. The sample is prioritized based on: (i) rural areas lacking reliable electricity; (ii) connection of existing households; (iii) mini-grids or grid extension as electrification solutions; and (iv) exclusion of Category “A” projects.

The selection of projects for the sample is under development and will be established based on a qualitative disaster risk assessment that will define specific localized and low-regret interventions targeting risk reduction in specific key areas in terms of exposure to disaster risk. It will be ensured that the most complex projects (category B) are included so that they have the corresponding socio-environmental assessments in the preparation phase.

Rationale for Classifications/Rating

<i>E&S Impact Classification</i>	The operation is preliminarily classified as Category B because the environmental and social impacts associated with the installation of solar photovoltaic mini-grids, distribution network extensions, service connections, and public lighting systems are expected to be site-specific, temporary, and reversible, and manageable through standard mitigation measures. Potential impacts are primarily associated with construction activities and may include limited vegetation clearing, dust and noise generation, construction waste, increased traffic, occupational and community health and safety risks, and temporary access disruptions. Minor economic displacement could occur in isolated cases related to pole installation or mini-grid infrastructure. The program may operate in rural areas where Indigenous communities, including Maya communities, are present, and may occur near areas of cultural significance. However, given the limited footprint of the infrastructure, significant or irreversible impacts on land, livelihoods, or cultural heritage are not anticipated at this stage, and these aspects will be further assessed during project preparation.
<i>E&S Risk Rating</i>	The operation has been assigned a Substantial Environmental and Social Risk Rating (ESRR). While the direct environmental and social impacts of the infrastructure are expected to be moderate and manageable, the risk rating reflects contextual and institutional factors that may influence project implementation. The rating was elevated due to the initial identification of Indigenous communities within or near the project’s potential area of influence, which requires enhanced due diligence and the implementation of culturally appropriate consultation processes consistent with Free, Prior, and Informed Consent (FPIC) requirements under the IDB Environmental and Social Policy Framework. As part of due diligence, the Bank will assess the scope of an Indigenous Peoples Plan. Additional factors influencing the risk rating include potential labor and occupational health and safety risks during construction, limited local contractor capacity in remote areas, and moderate institutional capacity for environmental and social management. While adverse impacts on land, livelihoods, and cultural heritage are not expected to be irreversible, these aspects will be assessed further during project preparation and appropriate mitigation measures will be defined. The ESRR will be reviewed as environmental and social due diligence progresses.

<i>DCC Risk Classification</i>	The operation has been classified as Moderate for Disaster and Climate Change Risk. Belize is highly exposed to climate-related hazards, including hurricanes, flooding, storm surges, wildfires, and extreme rainfall events. Rural electrification infrastructure, particularly overhead distribution lines and decentralized energy systems, may be vulnerable to these hazards if resilience measures are not incorporated into project design. The program will integrate climate-resilient engineering standards and technical specifications into the design and construction of mini-grids and distribution infrastructure, considering Belize's exposure to extreme weather events. Decentralized renewable energy systems may also contribute to improving system resilience and reliability in remote areas. Additionally, the installation of solar-based mini-grids contributes to climate change mitigation by increasing the share of renewable energy in rural electricity supply	
Use of Borrower E&S Framework		<i>No</i>
The IDB Environmental and Social Policy Framework (ESPF) will be applied.		
Is a framework approach applied?		<i>No</i>
A Framework Approach will not be applied.		
Will the operation be co-financed or is there a possibility of being co-financed?		<i>No</i>
The operation will not be co-financed.		
Environmental and Social Performance Standards (ESPSs) that apply to the proposed project		
ESPS-1. Assessment and Management of E&S Risks and Impacts		<i>Yes</i>
The operation will be executed by the Ministry of Public Utilities, Energy, and Logistics (MPUEL) through a Program Execution Unit (PEU) to be established within MPUEL's Energy Unit. The Unit will be responsible for administering the loan resources and ensuring the achievement of the operation's objectives, including supervision of environmental and social aspects, as well as the planning, programming, monitoring, and auditing of the Program. Given that this unit will be established specifically for the Program, and in accordance with ESPS 1, the Institutional Capacity Assessment Platform (ICAP) will be applied to generate inputs for designing the governance system of the operation and defining the technical assistance and capacity-building needs that will facilitate environmental and social management and program implementation, including support for hiring during execution. There is currently no Environmental and Social Management System (ESMS) within (MPUEL) to support the Program. Through Technical Cooperation (BL-T1213), the Bank will support the borrower by hiring a consulting firm to prepare an ESMS for the Program in accordance with ESS 1, harmonizing any existing management instruments with the applicable requirements of the Environmental and Social Policy Framework (ESPF). Environmental and social performance targets and objectives for the operation will be defined, along with supervision and monitoring mechanisms. The ESMS will establish the management system following the seven pillars established in the ESPF and required by ESPS 1:		

- i. Specific environmental and social framework: The Project will be framed within the applicable national and subnational legislation, the international agreements ratified by Belize and the ESPS of the ESPF.
- ii. Procedures for the identification and assessment of risks and impacts will be defined through the following instruments: the Environmental and Social Assessment (ESA) for the sample projects and the Environmental and Social Management Framework (ESMF) for works outside the sample. The ESMF will also include defined eligibility criteria. Associated facilities related to electricity transmission and distribution operated by Belize Electricity Limited (BEL) will be assessed for their environmental and social (E&S) risks and impacts as part of the environmental and social due diligence process.
- iii. Procedures for management measures will be included in an Environmental and Social Management Plan (ESMP) for the sample works and in the ESMF for works outside the sample. The ESMF will also establish the requirements for the preparation and implementation of specific ESMPs for works outside the sample.
- iv. Regarding the capacity of the executing agency, the operation will be executed by MPUEL through a Program Execution Unit. The Unit does not currently have knowledge or experience with operations under the Bank's new ESPF. Therefore, the Institutional Capacity Assessment Platform (ICAP) will be applied to determine the actions necessary to strengthen the Unit's environmental and social management capacities through the hiring of specialized personnel or specific technical assistance consultancies.
- v. With respect to emergency response measures, appropriate procedures will be defined within an Emergency Response Plan included in the ESMP of each sample work, as well as a Natural Disaster Management Framework within the ESMF.
- vi. A Stakeholder Engagement Plan (SEP) will be prepared, including the identification of stakeholders and the arrangements necessary to ensure continuous communication throughout the life of the Project. The SEP will also include a grievance mechanism that will allow the collection of concerns, questions, and complaints from potentially affected people and from workers involved in the works. The SEP will be publicly disclosed prior to the Bank's Analysis Mission.
- vii. Monitoring, follow-up, and evaluation of the Program's environmental and social performance will be established in the ESMP for the sample works. The ESMF will also include the necessary guidelines within the frameworks established therein. Likewise, an ESA/ESMP will be prepared for each sample work, taking into account the requirements of the ESPF, by consultants hired by the Energy Division, as well as an ESMF for works outside the sample.

The ESA, ESMP, ESMF and SEP documents will be published on the Bank's website prior to the Analysis Mission. Consultations with stakeholders will be carried out before the operation is submitted to the Board of Directors.

ESPS-2. Labor and Working Conditions	Yes
During due diligence, the occupational risks faced by workers involved in the construction and maintenance of the works will be addressed. These risks include typical construction-related hazards associated with energy infrastructure projects, such as accidents involving machinery and tools, slips, trips and falls, vehicle and equipment movement, manual handling of materials, and excavation-related incidents, as well as exposure to live electrical lines, electromagnetic fields, chemicals, lifting of loads, and working at heights. The Labor Management Plan (LMP) included in the ESMPs for the sample	

projects and in the ESMF will incorporate specific measures to address these risks and ensure the health and safety of workers at the workplace.

- No significant adverse occupational risks or impacts are expected during the operation phase, which will be confirmed during due diligence.

- No risks of child labor, including the employment of adolescents under 15 years of age, as established under ESPS 2 and recognized under Belizean legislation, or forced labor are expected for the works; however, this will be confirmed during the due diligence process. In addition, the implementation of a Code of Conduct and a worker grievance mechanism will be required as part of the projects' labor management plans.

During due diligence, non-discrimination, freedom of association, and collective bargaining conditions will also be assessed.

Given that some projects include the procurement or installation of solar panels, a procedure will be established within the ESMS of MPUEL to conduct supply chain due diligence. This procedure will be aligned with IDB policies and will focus on the identification, assessment, and management of forced labor risks in the supply chain, including background checks of key suppliers of goods and services, as well as verification of labor contracts of subcontractors and suppliers. This will ensure that child labor, forced labor, and/or discrimination, among other unacceptable practices, are not present in relation to the project's goods and services supply chain.

ESPS-3. Resource Efficiency and Pollution Prevention	Yes
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During construction activities, the installation of poles and low- and medium-voltage power lines, as well as the installation of solar mini-grid systems, may generate impacts such as noise, vibrations, and particulate matter emissions; the generation of solid waste and construction debris; the generation of hazardous materials; the discharge of domestic wastewater and wastewater contaminated with hazardous substances; and the potential generation of contaminated soils.

The Environmental and Social Assessment/Environmental and Social Management Plans (ESA/ESMPs) for the sample projects and the Environmental and Social Management Framework (ESMF) for projects outside the sample will assess these and other aspects and establish appropriate management plans to address all identified risks and impacts, including the management and final disposal of waste and hazardous materials.

During the due diligence process, greenhouse gas (GHG) emissions associated with the operation will be estimated for both the construction phase and the operation phase, following the Bank's methodology, the "Greenhouse Gas Inventory Tool."

Individual photovoltaic systems and solar mini-grids will include battery storage systems. The lithium contained in these batteries is highly reactive, particularly when exposed to water or high ambient temperatures. Currently, there is no established lithium battery recycling system in the country. The ESMP/ESMF will therefore establish guidelines to promote safe management, collection, and recycling of batteries at the end of their useful life.

ESPS-4. Community Health, Safety, and Security	Yes
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Communities within the area of direct influence of the projects may be exposed to risks and impacts typically associated with civil works for energy infrastructure, including the installation of solar mini-grids and the expansion of low-and medium-voltage electricity distribution networks. These may include

traffic and occupational accidents, nuisances related to dust, vibrations, noise, and emissions, increased traffic due to construction vehicles, the presence of heavy machinery, temporary road closures, and temporary interruptions of access to residences, businesses, and/or public infrastructure. Additional risks may include the transmission of communicable diseases, potential impacts on community infrastructure, possible conflicts between community members and workers, and the potential risk of increased gender-based violence, particularly sexual harassment or abuse.

Risks and impacts related to community health and safety will be assessed as part of the Environmental and Social Assessments (ESA) for the sample projects, and the Environmental and Social Management Plans (ESMPs) will include mitigation measures to address the identified risks and impacts. These considerations will also be incorporated into the Environmental and Social Management Framework (ESMF) for projects outside the sample.

The Program aims to reduce gaps in electricity access in Belize, focusing interventions in areas with limited or unreliable electricity coverage, particularly in remote and rural communities. Many of these interventions respond to the needs of communities that currently lack reliable electricity service, which may contribute to high levels of social acceptance and reduce the likelihood of significant conflicts. However, given the socioeconomic challenges present in some rural areas, the possibility of localized conflicts during Program implementation cannot be entirely ruled out. As part of the environmental and social assessments, the ESA for the sample projects will identify potential sources of conflict based on the analysis of the local social context.

Within the Environmental and Social Management System (ESMS) of the executing agency, it will be necessary to ensure that roles and responsibilities for environmental, social, health, and safety management are clearly defined for each project. These roles and responsibilities will be communicated to workers from the outset so they know whom to contact in case of incidents or if their role entails specific responsibilities related to health and safety management. These aspects will be further analyzed as part of the institutional capacity assessment of the ESMS.

Based on the characteristics and scale of the planned network expansion works and solar mini-grid installations, the Program's overall disaster and climate change risk is considered Moderate. Belize is exposed to multiple natural hazards that may affect the infrastructure and communities in the Program's areas of intervention. In the communities where solar mini-grids will be installed, hazard levels are considered high for earthquakes, medium for drought, high for heatwaves, and moderate to high for riverine flooding. Similar hazard levels are expected in the areas where low- and medium-voltage network expansion works will take place. In these areas, hurricanes and associated extreme weather events also represent a significant natural hazard that may affect both infrastructure and local communities. Climate change may increase the frequency and intensity of extreme weather events, which will be considered in the design and implementation of the Program.

The ESMP will include an Emergency and Disaster Preparedness Plan specific to the sample works, while the ESMF will include measures applicable to works outside the sample related to climate change and natural disaster risks. During the environmental and social due diligence, the plans and activities mentioned above will be assessed to verify their alignment with the IDB Disaster and Climate Change Risk Assessment Methodology. This Plan will form part of the ESMP for each sample site and the ESMF for works outside the sample and will be consistent with all disaster risk and climate change aspects under ESPS 4. All risks identified herein will be confirmed during the due diligence process.

The interaction between the proposed infrastructure and the natural environment is expected to present low environmental risk, given the relatively small physical footprint of solar mini-grids and electricity distribution infrastructure. However, considering the critical nature of electricity services, the infrastructure may be considered to have moderate criticality, and resilience considerations will therefore be incorporated into the design of the projects.

The energy projects financed under this operation will involve the installation and construction of electricity distribution networks, including low- and medium-voltage feeder lines, as well as solar mini-grid systems and associated energy infrastructure. All infrastructure will incorporate resilience measures to reduce the risk of damage caused by earthquakes, flooding, hurricanes, landslides, and other climate-related hazards.

The use of private security personnel is not anticipated during the implementation of the Program. At this stage, no significant risks of impacts on ecosystem services have been identified.

ESPS-5. Land Acquisition and Involuntary Resettlement	Yes
The infrastructure to be financed, primarily solar photovoltaic mini-grids, distribution poles, overhead lines, and service connections, requires relatively small physical footprints and will be located within existing rights-of-way, public land, or community-agreed locations. While large-scale land acquisition is not expected, minor economic displacement might occur. The program doesn't involve physical displacement. Economic displacement could occur in isolated cases, for example in connection with pole placement, mini-grid infrastructure sites, or temporary construction access, depending on the context. A Resettlement Action Plan (RAP) and Livelihood Restoration Plan (LRP) will be prepared as required, consistent with the provisions of ESPS 5. These plans will include baseline socio-economic assessments, compensation, and livelihood restoration measures, implementation arrangements, and monitoring mechanisms. Specific consultations will be conducted with affected individuals and households, ensuring their participation in the design of mitigation and livelihood restoration measures. For subprojects outside the representative sample, the Environmental and Social Management Framework (ESMF) will include a Resettlement Policy Framework (RPF) establishing procedures and guidelines for the preparation of site-specific RAPs or LRPs, as needed, in accordance with ESPS 5. The Executing Agency (EA) will be required to submit these instruments to the Bank for review and approval prior to the commencement of works. Evidence of meaningful consultations with affected people and the implementation of agreed compensation and livelihood restoration measures will also be required before construction begins. To further minimize risks, the Program's Environmental and Social Management System (ESMS) will include screening and exclusion criteria to ensure that subprojects with the potential to cause significant physical or economic displacement are not eligible for financing. The Resettlement Action Plan (RAP) and the Livelihood Restoration Plan (LRP) will be disclosed prior to OPC.	
ESPS-6. Biodiversity Conservation and Sustainable Management of Living Natural Resources	Yes

According to the ESG Screening App, no protected areas or critical habitats were identified as being directly affected by the Project. The locations proposed for solar mini-grids are not expected to affect protected areas or sensitive habitats. The expansion of low- and medium-voltage electricity distribution lines may pass near the Rio Blanco National Park reserve area, but no direct impacts on the protected area are anticipated. However, as certain segments of the energy distribution lines may run along the boundary of Río Blanco National Park (e.g., San Antonio Road), the environmental and social due diligence will assess potential indirect impacts, including the risk of facilitating illegal access to the protected area. Appropriate prevention and mitigation measures will be identified in line with ESPS 6 requirements

Site clearing for the installation of solar mini-grids and the expansion of low- and medium-voltage electricity distribution networks could affect vegetation or wildlife; however, these impacts are expected to be minimal with appropriate siting away from sensitive habitats and the implementation of adequate vegetation management practices. These aspects will be further verified during environmental and social due diligence to ensure compliance with applicable biodiversity requirements.

These risks will be analyzed once the type and exact location of the distribution lines and solar mini-grid infrastructure for the sample projects are confirmed. During due diligence, it will be ensured that any works located adjacent to areas of high conservation value comply with the requirements of ESPS 6, and that the ESMP includes a Biodiversity Action Plan, where required. This Biodiversity Action Plan includes reforestation/compensatory planting measures.

The construction of new access roads is not expected, as the electrical lines and solar mini-grid infrastructure are anticipated to be located in already intervened or partially intervened areas. This information will be verified during the Environmental and Social Assessments (ESA). If impacts on vegetation patches are identified during the environmental and social due diligence, in addition to the assessment of direct, indirect, and cumulative risks and impacts on biodiversity and ecosystem services, a forest restoration plan proportional to the expected risks and impacts will be prepared. This plan will include compensation measures for tree removal, specifying the applicable compensation ratio. The plan will form part of the ESMPs for projects where vegetation impacts are identified. The ESMF for projects outside the sample will establish guidelines to be followed in the event that vegetation impacts occur.

The ESMPs for the sample projects, including those related to solar mini-grids and distribution network expansion, will include a robust biodiversity monitoring and evaluation program. In addition, if site revegetation activities are required after project implementation, invasive species will not be used, and the use of native species will be promoted. The voluntary or accidental introduction of exotic flora or fauna is not expected, nor is the use or production of living natural resources anticipated.

ESPS-7. Indigenous Peoples	Yes
Given that the Program will support rural electrification investments in remote and dispersed areas across Belize, there is a possibility that some subprojects may be located within or near areas inhabited or used by Indigenous Peoples, including Maya communities, particularly in the Toledo and Cayo districts. The presence and potential impacts on Indigenous Peoples will be confirmed during environmental and social due diligence.	

If Indigenous Peoples are identified within the area of influence of the representative sample of subprojects, the corresponding Environmental and Social Assessment (ESA) and Environmental and Social Management Plan (ESMP) will include a Socio-Cultural Analysis (SCA) to assess the presence, characteristics, and governance structures of Indigenous communities and to identify potential project-related impacts and opportunities for inclusion. The SCA will inform the design of culturally appropriate engagement and consultation processes, ensuring that consultations follow Indigenous decision-making structures and community protocols.

Consistent with the requirements of ESPS 7, consultations with Indigenous Peoples will be conducted in a culturally appropriate manner and in coordination with relevant community authorities and representative institutions. Where applicable, engagement processes will follow the principles of Free, Prior, and Informed Consent (FPIC) and will assess whether Broad Community Support is required. Based on the results of the SCA and consultation processes, an Indigenous Peoples Plan (IPP) or equivalent instrument will be prepared as necessary to ensure that Indigenous communities receive culturally appropriate benefits and that any potential adverse impacts are avoided, minimized, or mitigated.

For subprojects outside the representative sample, the Environmental and Social Management Framework (ESMF) will include procedures for screening and addressing potential impacts on Indigenous Peoples, including guidance for the preparation of SCAs, consultation processes, and IPPs where required.

The Program's Environmental and Social Management System (ESMS) will include screening and exclusion criteria to ensure that subprojects with the potential to cause significant adverse impacts on Indigenous Peoples or their lands, resources, or cultural heritage are not eligible for financing.

The socio-cultural analysis (SCA) will be disclosed prior to OPC.

ESPS-8. Cultural Heritage	Yes
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Given that the Program will support rural electrification investments across dispersed rural areas of Belize, project activities could occur in locations where tangible or intangible cultural heritage may be present, including areas of cultural or spiritual significance for Indigenous communities, particularly Maya communities in the Toledo and Cayo districts. Belize also contains numerous archaeological and historical sites associated with its rich cultural history. However, significant impacts on cultural heritage are not anticipated given the limited physical footprint and relatively small-scale nature of the infrastructure works, which will primarily involve installation of solar mini-grids, distribution poles, overhead lines, and service connections.

Potential risks to cultural heritage will be further assessed during the preparation of the Environmental and Social Assessment (ESA) for the representative sample of subprojects. Where infrastructure is proposed near areas that may be sensitive from a cultural heritage perspective, a prior assessment will be conducted and appropriate management measures will be developed in coordination with the competent national authorities responsible for cultural heritage protection, as well as with relevant community representatives where applicable. These measures will be incorporated into the corresponding Environmental and Social Management Plans (ESMPs).

Given the possibility of unexpected archaeological findings during excavation or construction activities, the ESMPs for the sample subprojects will include a Chance Find Procedure consistent with ESPS 8 requirements. This procedure will establish protocols for the identification, protection, notification, and management of archaeological or cultural heritage discoveries and will be incorporated into contractor environmental, social, health, and safety inductions.

For subprojects outside the representative sample, the Environmental and Social Management Framework (ESMF) will include screening procedures and guidance for managing potential impacts on cultural heritage, including the application of Chance Find Procedures. The Program's Environmental and Social Management System (ESMS) will also include screening and exclusion criteria to ensure that subprojects with the potential to generate significant adverse impacts on cultural heritage are not eligible for financing.	
ESPS-9. Gender Equality	<i>Yes</i>
Rural electrification programs can generate important development benefits but may also produce uneven distribution of opportunities and exposure to gender-related risks if gender considerations are not explicitly addressed. In rural areas of Belize, women, particularly those in Indigenous and remote communities, may face barriers to participation in decision-making processes, limited access to economic opportunities linked to energy services, and potential risks associated with labor influx and worker–community interactions during construction. At the same time, improved access to electricity can create new opportunities for women's economic participation, time savings, and improved access to services. For these reasons, the Program will incorporate a gender-responsive approach consistent with ESPS 9 (Gender Equality). During preparation of the Environmental and Social Assessment (ESA) for the representative sample of subprojects, gender-related risks, gaps, and opportunities will be identified. This analysis will inform the development of mitigation and inclusion measures to be incorporated into the Environmental and Social Management Plans (ESMPs) and the Stakeholder Engagement Plan (SEP), including actions to promote the participation of women, including Indigenous women, in consultations and activities that support the productive use of electricity. To operationalize these measures, the Program will develop and implement a Gender Action Plan (GAP) as part of the Environmental and Social Management System (ESMS). The GAP will establish concrete actions to promote gender equality and prevent gender-based risks during project implementation. Key measures will include: (i) the adoption and enforcement of codes of conduct for workers and contractors that prohibit sexual exploitation, abuse, and harassment (SEAH) and other forms of gender-based violence (GBV); (ii) training and awareness programs for workers, contractors, and relevant stakeholders on gender equality and GBV/SEAH prevention; (iii) targeted outreach and engagement strategies to support inclusive participation of women in consultations and productive energy initiatives; (iv) the establishment of confidential grievance mechanisms for workers and community members capable of safely receiving and addressing complaints related to GBV/SEAH, and (v) measures to promote gender equity within the workforce. For subprojects outside the representative sample, the Environmental and Social Management Framework (ESMF) will include procedures to ensure the application of gender-responsive measures and the implementation of the GAP. Where applicable, Resettlement Action Plans (RAPs) or Livelihood Restoration Plans (LRPs) will incorporate measures to ensure equitable access to compensation and livelihood restoration for women and other vulnerable groups.	
ESPS-10. Stakeholder Engagement and Information Disclosure	<i>Yes</i>
A stakeholder engagement and information disclosure process will be implemented throughout the life cycle of the Program. In accordance with ESPS 1 (Assessment and Management of Environmental and Social Risks and Impacts) and ESPS 10 (Stakeholder Engagement and Information Disclosure), a Stakeholder Engagement Plan (SEP) will be prepared as part of the Program's Environmental and Social	

Management System (ESMS). The SEP will establish procedures for public consultation, information disclosure, and a grievance redress mechanism (GRM) accessible to all stakeholders.

The SEP will be treated as a living instrument and will be updated as additional information becomes available during project preparation and implementation, including for subprojects outside the representative sample financed under the Multiple Works modality. Updated versions will be disclosed to stakeholders when relevant changes occur.

The SEP will include the following elements:

Stakeholder identification and analysis.

Planning of engagement strategies and interaction mechanisms.

Information disclosure procedures.

Consultation processes with stakeholders.

Complaints handling and response through the grievance redress mechanism.

Ongoing reporting and feedback to stakeholders.

The SEP will guide consultations during both the preparation and implementation phases of the Program. During preparation, meaningful consultation processes will be conducted for the subprojects included in the representative sample. During implementation, similar consultation processes will be carried out for subprojects outside the sample prior to their execution.

Given the presence of Indigenous communities, including Maya communities, within or near potential areas of influence, stakeholder engagement will include culturally appropriate consultation processes consistent with the requirements of ESPS 7 (Indigenous Peoples). Where applicable, these processes will follow the principles of Free, Prior, and Informed Consent (FPIC) and will assess whether Broad Community Support is required. Engagement approaches will incorporate culturally appropriate communication methods, local languages where necessary, and the participation of representative Indigenous authorities and community structures.

Prior to the Analysis Mission, the fit-for-disclosure versions of the Environmental and Social Assessment (ESA), Environmental and Social Management Plan (ESMP), including the SEP, and the Environmental and Social Management Framework (ESMF) will be disclosed on the Bank's website. Final versions of these documents, including consultation reports, will be disclosed prior to distribution to the Board.

IDB Environmental and Social Due Diligence

Strategy for Due Diligence

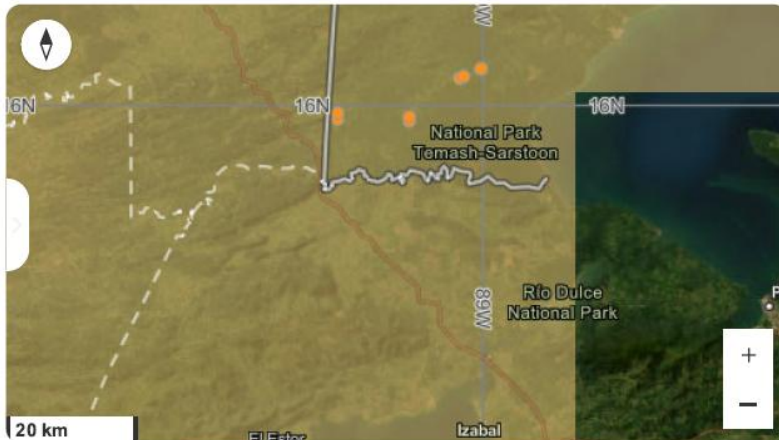
<i>E&S Assessment requirement</i>	<i>Status of development</i>	<i>Estimated resources to finalize (specify Bank or Borrower cost)</i>	<i>Estimated timeline to finalize (inc. consultation)</i>
Environmental and Social Management System (that includes ESA/ESMP,	Hiring process started. To be developed.	US\$50k	Execution: 5 months Intended start date: April 2026 Consultation: July 2026

DRA/DRMP, SEP and RAP or LRP, BAP -if applicable- for the sample, and ESMF for the Program)			
Annexes			
Annex A.	E&S Maps		

Annex A. E&S Maps

Mini-Grids-Maps

Drought related hazards



Legend

2026.02.06 Communities and PV Terrain



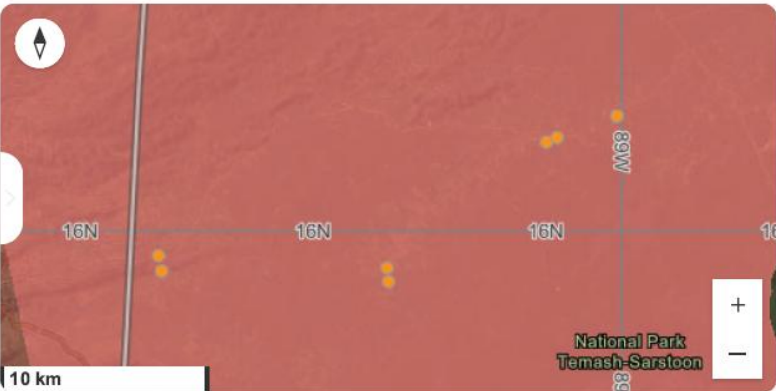
Drought Hazard (CC)

High

Moderate

Coordinate System: WGS 1984 Web Mercator
Auxiliary Sphere.
Map created with: ES GeoHub

Map containing the representation of the following hazards: Drought (i) and Drought with Climate Change (ii) hazards. (i) The index used is the number of years, within a window of 20 years from 1980 to 2001, where at least one drought event occurred. Areas with ≤ 1 year with drought events: "Low"; 2-3 years with drought events: "Moderate"; > 3 years with drought events: "High". (ii) Percent change in the occurrence of days under drought for the period 2070 – 2099 relative to 1976-2005. $-100\% < \%changes < +25\%$: "Low"; $+25\% < \%changes < +50\%$: "Moderate"; $\%changes > +50\%$: "High".



Map containing the representation of the following hazards: Heatwave (i), Heatwave with Climate Change_RCP4.5 (ii), Heatwave Hazard with Climate Change_RCP8.5 (iii) hazards. It shows an index that combines duration and maximum temperature, called total degree days (DD: the average total degree days of heatwave per year), is used to assess heatwave hazard. (i) Period 1976-2005. DD < 79: "Low"; $80 \leq DD \leq 165$: "Moderate"; DD > 165: "High". (ii) Period 2071 – 2100. DD < 79: "Low"; $80 \leq DD \leq 165$: "Moderate"; DD > 165: "High". (iii) Period 2071 – 2100. DD < 79: "Low"; $80 \leq DD \leq 165$: "Moderate"; DD > 165: "High".

2026.02.06 Communities and PV Terrain

●

Heatwave (CC) RCP8.5

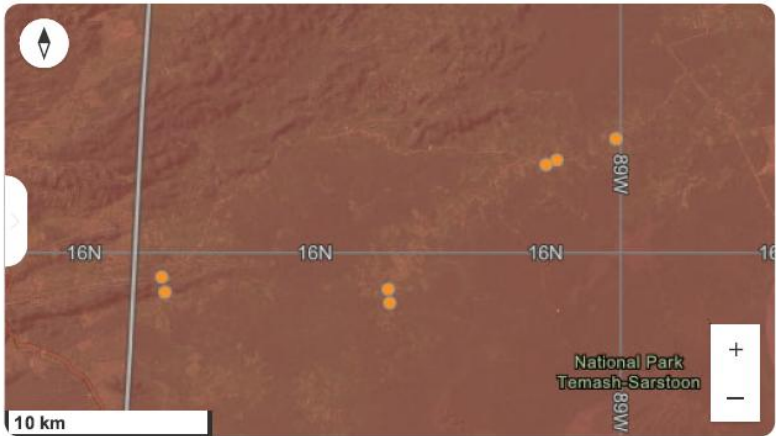
High
Moderate

Heatwave Hazard (CC) RCP8.5

High
Moderate

Coordinate System: WGS 1984 Web Mercator
Auxiliary Sphere.
Map created with: ES GeoHub

Earthquake hazard



Map containing the representation of Earthquake hazard. It is a vectorized version from: The Global Earthquake Model (GEM) Global Seismic Hazard Map (version 2023.1) which depicts the geographic distribution of the Peak Ground Acceleration

Legend

2026.02.06 Communities and PV Terrain

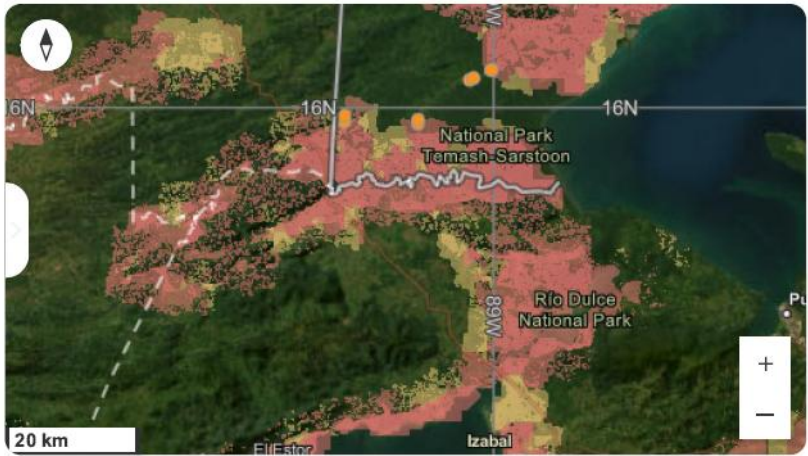
●

Earthquake

High
Moderate

Coordinate System: WGS 1984 Web Mercator
Auxiliary Sphere.
Map created with: ES GeoHub

Riverine Flooding related hazards



Map containing the representation of the following hazards: Riverine Flooding (i) and Riverine Flooding with Climate Change (CC) (ii). (i) Areas within the 25-yr return period map extent: "High"; 50-yr < return period < 100-yr: "Moderate"; all other areas: "Low". (ii) Percent change in the 30-year return flow - Q30 – of rivers for the period 2070-2099 relative to 1971-2000. -100% < changes < +10%: "Low"; +10% < changes < 20%: "Moderate"; changes > +20% : "High".

Legend

2026.02.06 Communities and PV Terrain

●

Riverine Flooding hazard

High

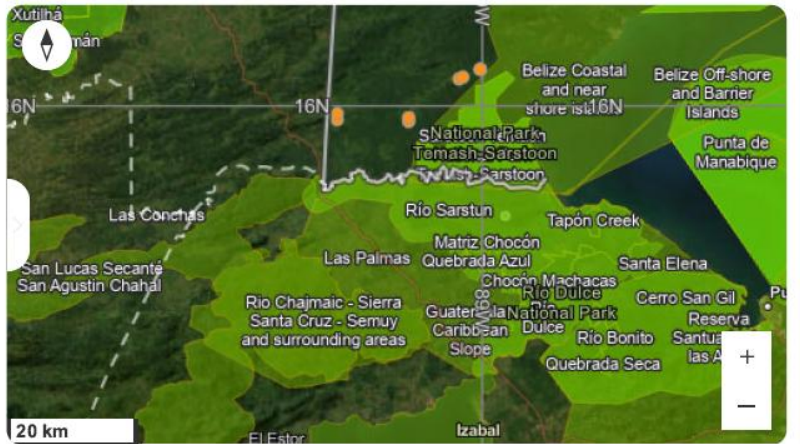
Moderate

Riverine Flooding hazard (CC)

High

Moderate

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



The map represents Protected Areas and Key Biodiversity Areas. The dataset contains both polygon and point geometries for each layer. The World Database of Key Biodiversity Areas is managed by BirdLife International on behalf of the KBA Partnership. The World Database on Protected Areas (WDPA) is the most comprehensive global database on terrestrial and marine protected areas. It is a joint project between the United Nations Environment Programme (UNEP) and the International Union for Conservation of Nature (IUCN), managed by UNEP. All information is sourced from IBAT. For more information please visit <https://www.ibat-alliance.org/>

2026.02.06 Communities and PV Terrain

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Key Biodiversity and Protected Areas

Key Biodiversity Areas

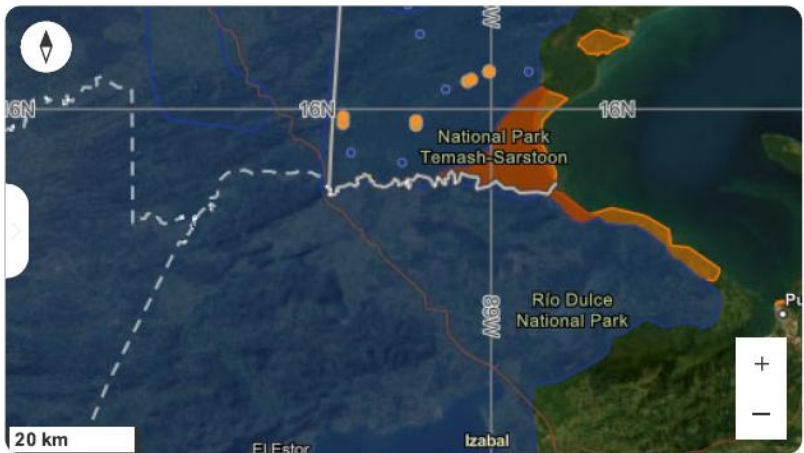
Protected Areas

Protected Areas (points)

●

Coordinate System: WGS 1984 Web Mercator
Auxiliary Sphere.
Map created with: ES GeoHub

ESPS-7. Indigenous Peoples



The map represents Afro-descendant Territories, Indigenous Territories and Indigenous & Afro-descendant Communities. Geographic information collected for Communities and Territories of Indigenous peoples in Latin America and the Caribbean, in an effort aimed at updating existing information that seeks to cover the 26 countries of IDB action. Based on official and unofficial information, developed and collected by governmental and non-governmental organizations that work with Indigenous peoples in each country, or at a regional level.

Legend

2026.02.06 Communities and PV Terrain

Indigenous Territories

IDENTITY

- Indigenous People
- Indigenous and Afro-descendant People
- Peasant Community

Afro-descendant Territories

IDENTITY

- Afro-descendant People
- Indigenous and Afro-descendant People

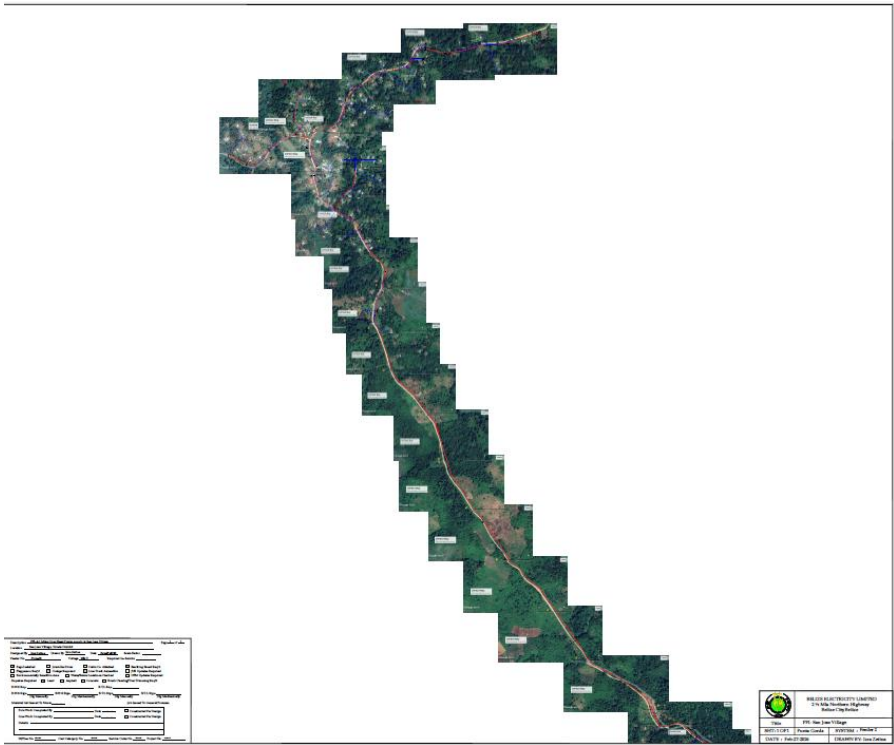
Indigenous & Afro-descendant Communities

IDENTITY

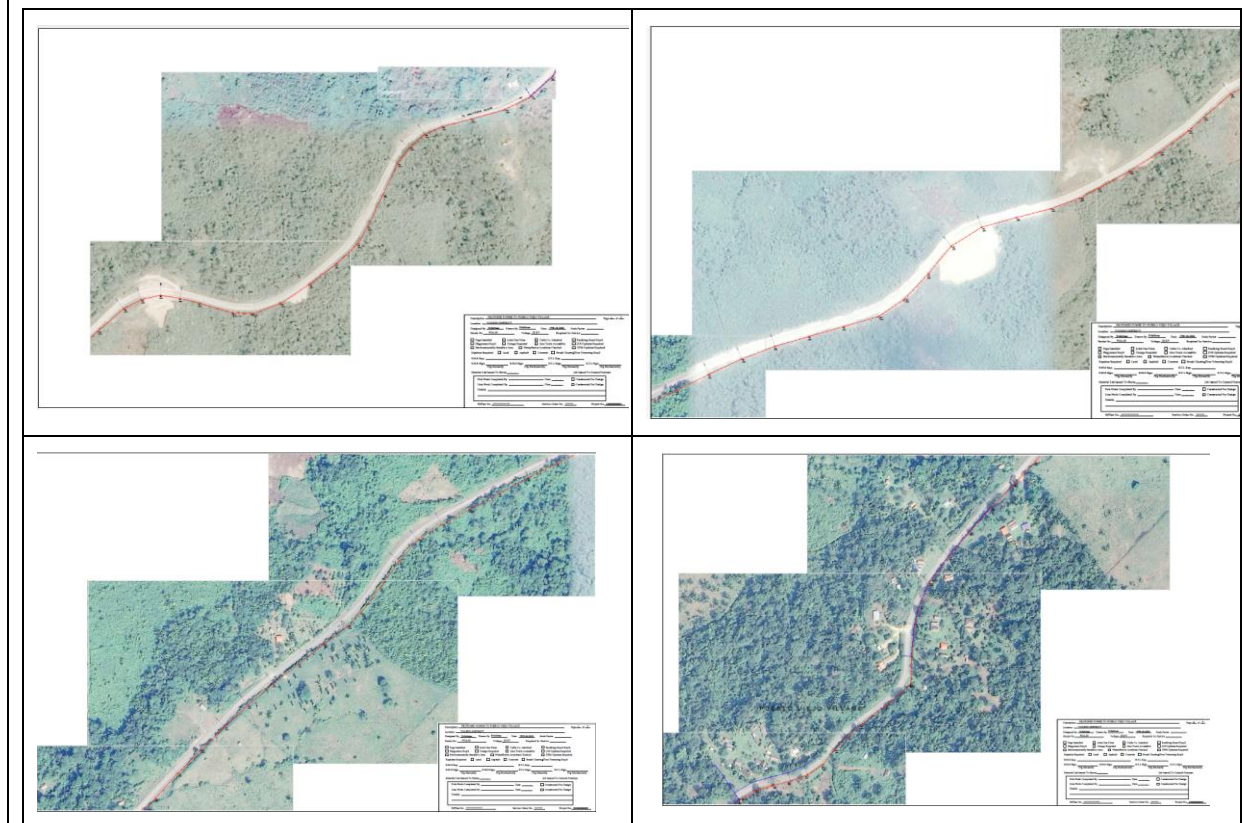
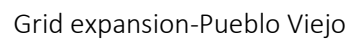
- Afro-descendant People

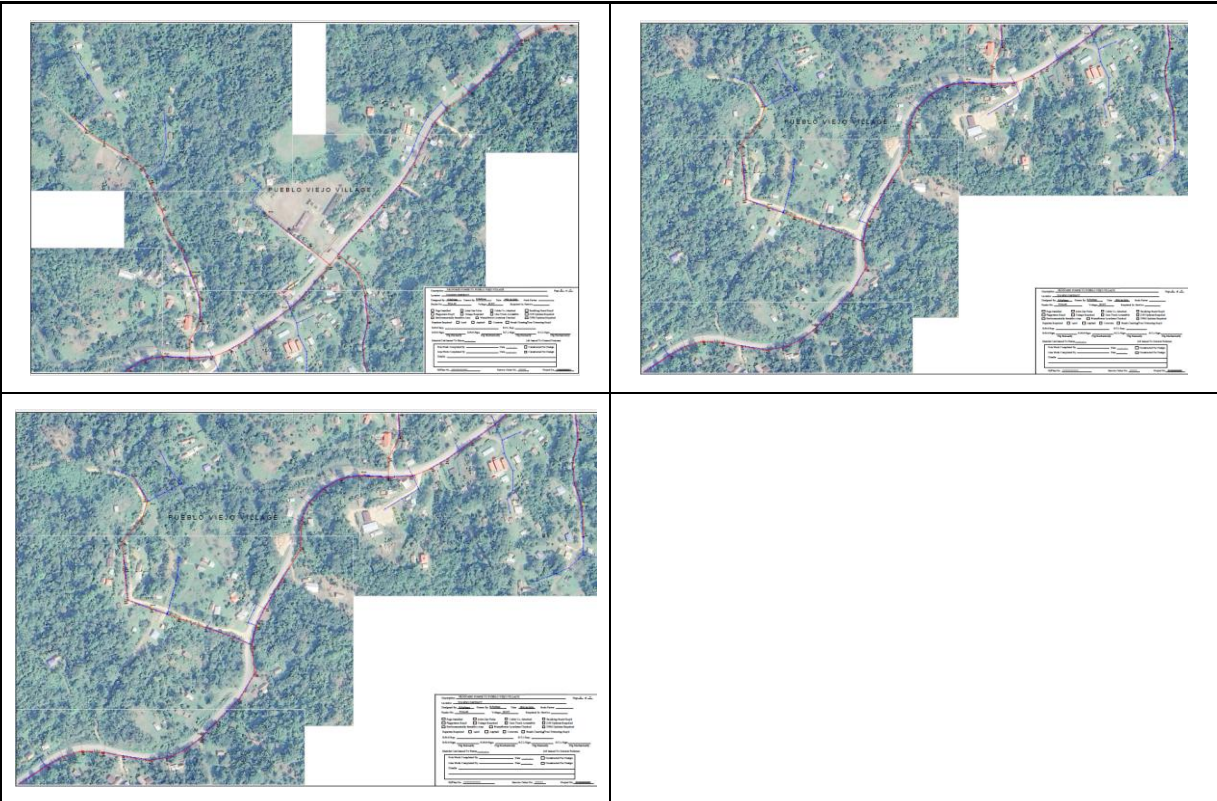
Expansion of low-and medium-voltage electricity distribution networks-Maps

Grid expansion- San Jose Village, Toledo District

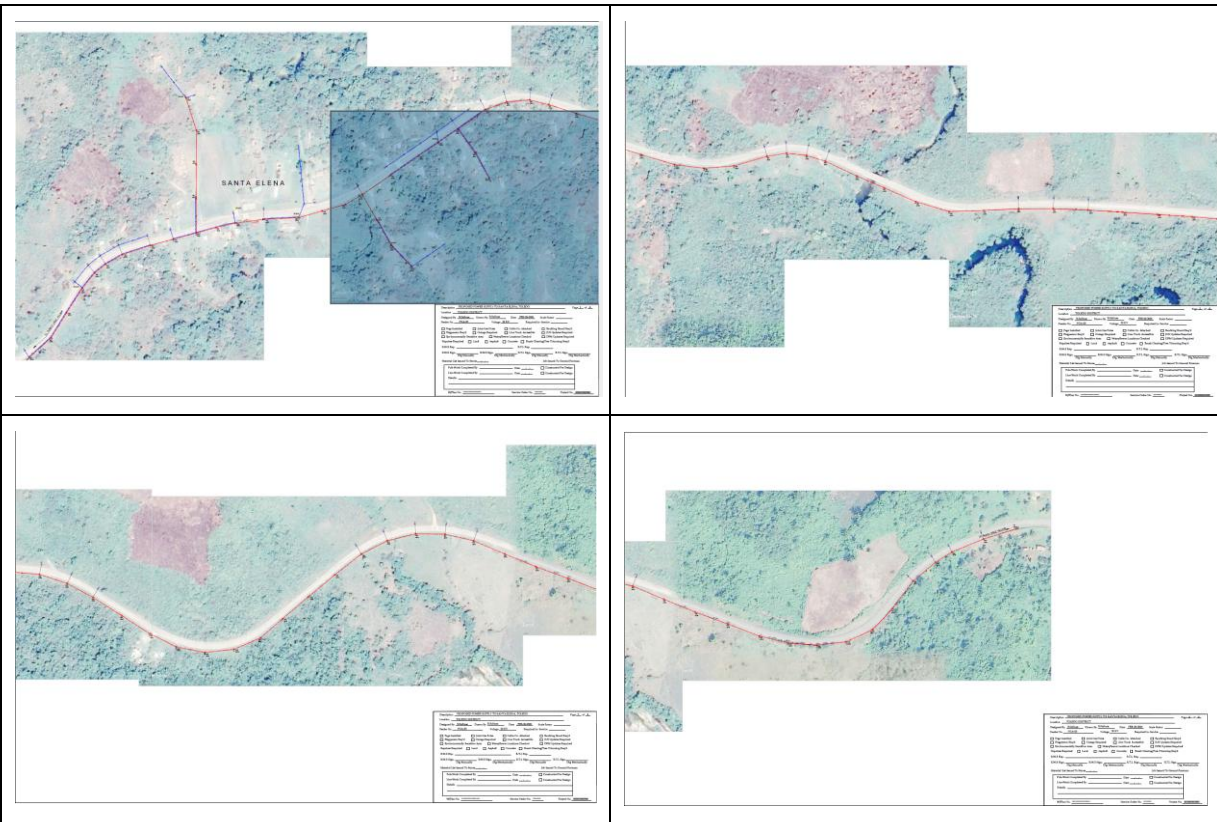


Grid expansion-Santa Cruz Village, Toledo District

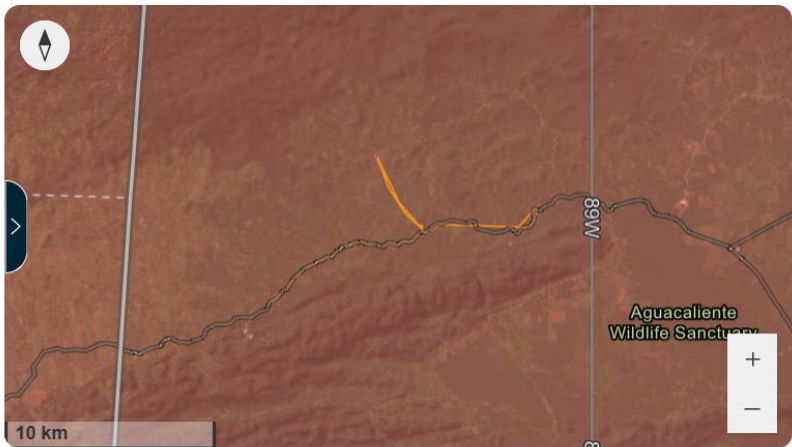




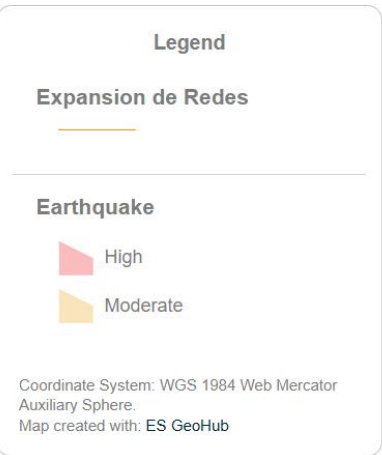
Grid expansion-Santa Helena



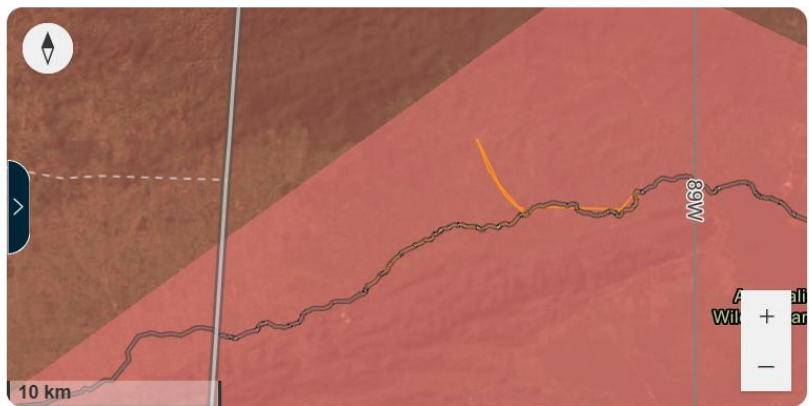
Earthquake hazard



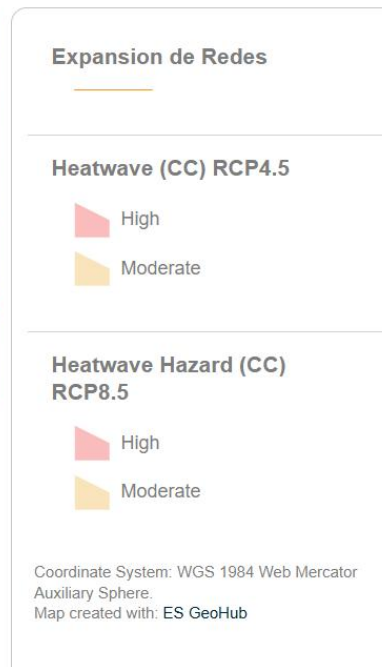
Map containing the representation of Earthquake hazard. It is a vectorized version from: The Global Earthquake Model (GEM) Global Seismic Hazard Map (version 2023.1) which depicts the geographic distribution of the Peak Ground Acceleration (PGA) with a 10% probability of being exceeded in 50 years, computed for reference rock conditions (shear wave velocity, V_{s30} , of 760-800 m/s). It has been clipped to the LAC region (borrower countries) using a 100 km buffer distance.



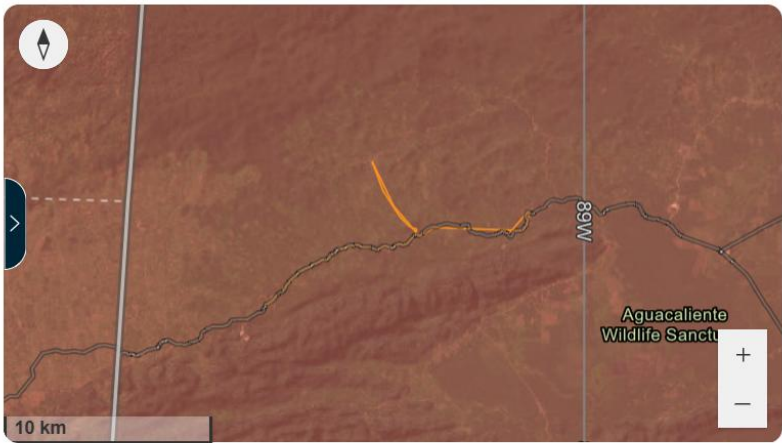
Heatwave related hazards



Map containing the representation of the following hazards: Heatwave (i), Heatwave with Climate Change_RCP4.5 (ii), Heatwave Hazard with Climate Change_RCP8.5 (iii) hazards. It shows an index that combines duration and maximum temperature, called total degree days (DD: the average total degree days of heatwave per year), is used to assess heatwave hazard. (i) Period 1976-2005. DD < 79: "Low"; $80 \leq DD \leq 165$: "Moderate"; DD > 165: "High". (ii) Period 2071 – 2100. DD < 79: "Low"; $80 \leq DD \leq 165$: "Moderate"; DD > 165: "High". (iii) Period 2071 – 2100. DD < 79: "Low"; $80 \leq DD \leq 165$: "Moderate"; DD > 165: "High".

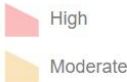


Hurricane related hazards



Expansion de Redes

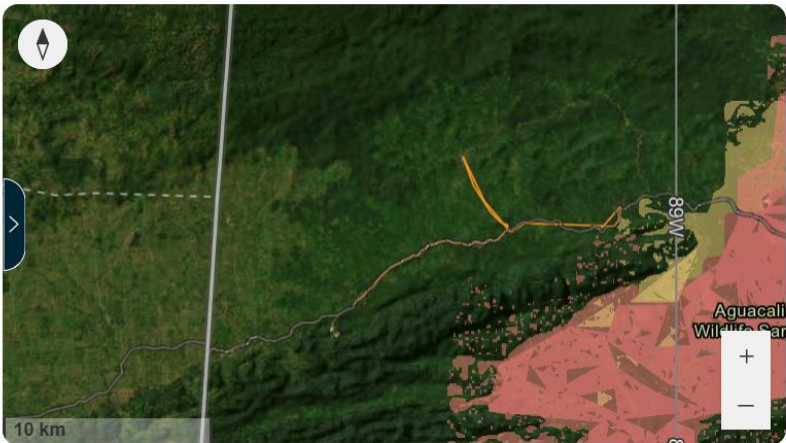
Hurricane Wind



Coordinate System: WGS 1984 Web Mercator
Auxiliary Sphere.
Map created with: ES GeoHub

Map containing the representation of storm surge and hurricane wind hazards. It is modeled only along the coastline. The data were classified into three hazard categories—low, moderate, and high—based on storm surge run-up heights for a 250-year return period, a widely used standard for coastal hazard zoning and infrastructure risk assessment. Run-up values below 0.1 meters are considered as “Low”; run-up values between 0.1 meters and 2 meters (inclusive) are considered as “Moderate”; run-up values greater than 2 meters are considered as “High”.

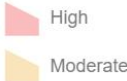
Riverine Flooding related hazards



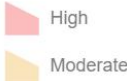
Legend

Expansion de Redes

Riverine Flooding hazard



Riverine Flooding hazard (CC)



Coordinate System: WGS 1984 Web Mercator
Auxiliary Sphere

Map containing the representation of the following hazards: Riverine Flooding (i) and Riverine Flooding with Climate Change (CC) (ii). (i) Areas within the 25-yr return period map extent: “High”; 50-yr < return period < 100-yr: “Moderate”; all other areas: “Low”. (ii) Percent change in the 30-year return flow - Q30 – of rivers for the period 2070-2099 relative to 1971-2000. -100% < changes < +10%: “Low”; +10% < changes < 20%: “Moderate”; changes > +20% : “High”.

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



The map represents Protected Areas and Key Biodiversity Areas. The dataset contains both polygon and point geometries for each layer. The World Database of Key Biodiversity Areas is managed by BirdLife International on behalf of the KBA Partnership. The World Database on Protected Areas (WDPA) is the most comprehensive global database on terrestrial and marine protected areas. It is a joint project between the United Nations Environment Programme (UNEP) and the International Union for Conservation of Nature (IUCN), managed by UNEP. All information is sourced from IBAT. For more information please visit <https://www.ibat-alliance.org/>

Expansion de Redes

Key Biodiversity and Protected Areas

Key Biodiversity Areas



Protected Areas



Coordinate System: WGS 1984 Web Mercator
Auxiliary Sphere.
Map created with: ES GeoHub

ESPS-7. Indigenous Peoples



The map represents Afro-descendant Territories, Indigenous Territories and Indigenous & Afro-descendant Communities. Geographic information collected for Communities and Territories of Indigenous peoples in Latin America and the Caribbean, in an effort aimed at updating existing information that seeks to cover the 26 countries of IDB action. Based on official and unofficial information, developed and collected by governmental and non-governmental organizations that work with Indigenous peoples in each country, or at a regional level.

Legend

Expansion de Redes

Indigenous Territories

IDENTITY



Indigenous People

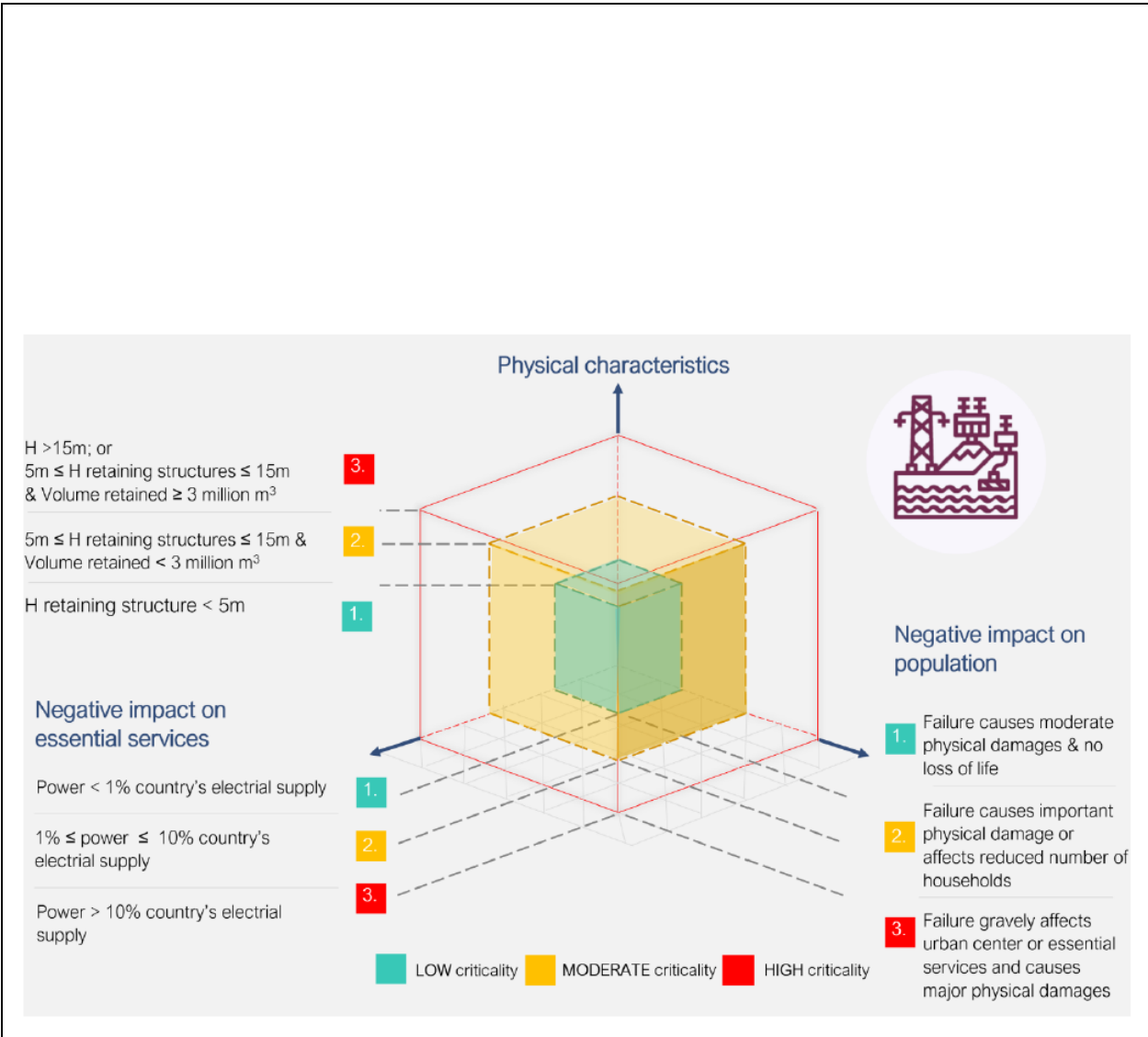


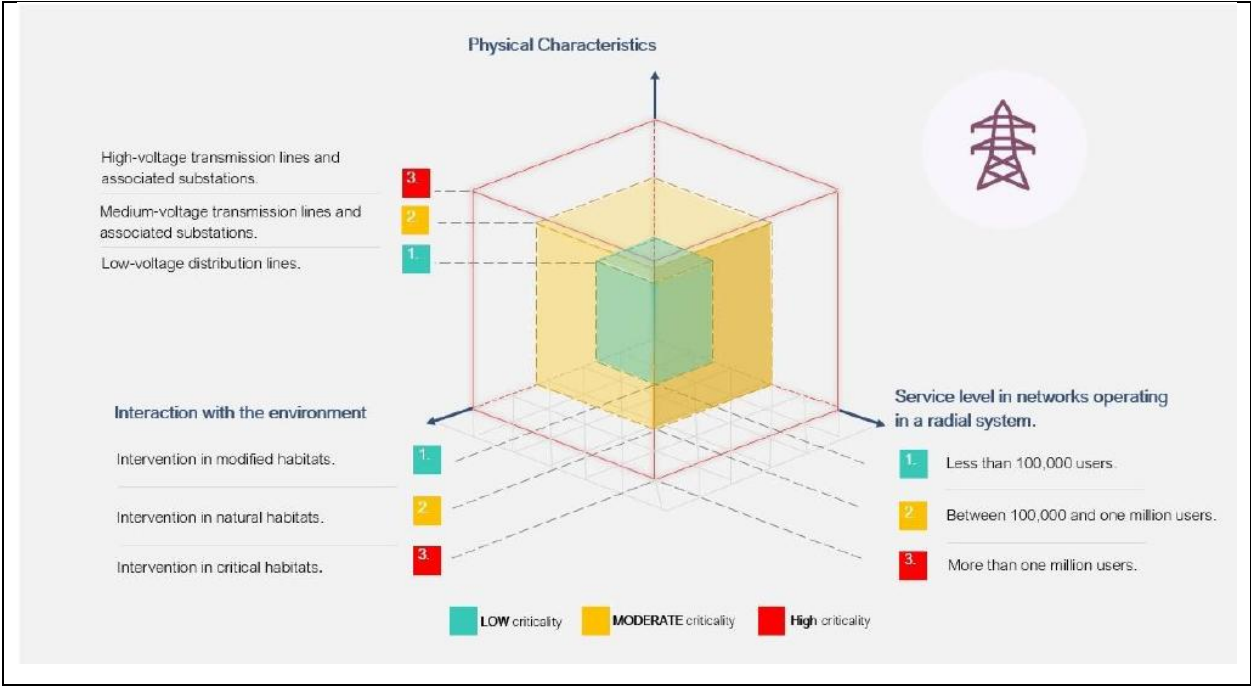
Indigenous and Afro-
descendant People



Peasant Community

Coordinate System: WGS 1984 Web Mercator
Auxiliary Sphere.
Map created with: ES GeoHub





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