DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

Belize

SUSTAINABLE DEVELOPMENT OF THE CARACOL REGION

(BL-L1022)

PROJECT PROFILE

The project team consisting of prepared this document: Sergio Deambrosi (INE/TSP), Team Leader; Alejandro Gomez (TSP/CBL), Alternate Team Leader; Alejandro Taddia, Alejandra Caldo, Ernesto Monter, and Juliana de Moraes (INE/TSP); Amado Crotte (TSP/CME); Melanie Argimon and Michele Lemay (CSD/RND); Jane Chow (CID/CBL); Sybille Nuenninghoff (RND/CBL); Rachel Atkinson and Renaud Tahon (VPS/ESG); Graham B. Williams, John A. Primo (FMP/CBL); and Louis F. Chretien (LEG/SGO)

Under the Access to Information Policy, this document is subject to Public Disclosure.

PROJECT PROFILE

Belize

I. BASIC DATA

Project Name: Project Number:				
Project Team:	(TSP/CBL), Alternate T Caldo, Ernesto Monter, a (TSP/CME); Melanie Arg (CID/CBL); Sybille Nueni	NE/TSP), Team Leader; Alejandro Gomez Feam Leader; Alejandro Taddia, Alejandra and Juliana de Moraes (INE/TSP); Amado Crotte imon and Michele Lemay (CSD/RND); Jane Chow hinghoff (RND/CBL); Rachel Atkinson and Renaud ham B. Williams, John A. Primo (FMP/CBL); and GO)		
Borrower:	Belize			
Executing Agency:	Ministry of Works, Transport and NEMO ¹ (MOWTN)			
	IDB (OC):	US\$18,000,000		
Financial Plan:	Total:	US\$18,000,000		
Safeguards:	Policies triggered:	OP-703; B.1; B2; B.3; B4; B.5; B.6; B.7; B.9; B.11; B12; B15; OP-102; OP-704; OP-710; OP- 761 and OP-765.		
	Classification:	A		

II. GENERAL JUSTIFICATION AND OBJECTIVES

- 2.1 **General background.** Belize has a territory of 22,965 km² with a population of 368,310 of which 55.07% live in the rural areas.² Belize is a small, open and export-based economy that, in 2015 had a real Gross Domestic Product (GDP) of US\$1,382.37 billion, representing a growth of 1.22% in 2015. Economic growth has slowed down in recent years (between 1999-2003 the average rate was 8.2%, in 2004-2006 it was 3.9%, and in 2007-2014 it went down to 2.4%), which could be linked with the total factor productivity decrease.³ The main economic activities of Belize include tourism, fishing, agriculture and forestry, which are strongly related to the country's natural resource base. In 2014, fishing, agriculture and forestry accounted for close to 13.82% of the GDP. Meanwhile, according to the World Travel and Tourism Council, in 2014 the direct contribution of travel and tourism to GDP was of US\$250.7 million (15% of the GDP) and the total contribution of the sector was of US\$655.9 million (39.2% of the GDP).⁴
- 2.2 **Caracol Region.** The Caracol region is located in the Cayo District, southwest of Belmopan. It refers to the Chiquibul Mountain Pine Ridge (MPR) Complex, which includes the Chiquibul National Park, the Chiquibul Forest Reserve, the Caracol Archaeological Reserve and the Mountain Pine Ridge Forest Reserve. The area can

¹ The acronym NEMO stands for "National Emergency Management Organization"

² Annual Report 2015, Statistical Institute of Belize.

³ The rekindling economic growth report, (Belize 2015) by Dougal Martin, shows that total factor productivity was 3,6 in the 1999-2003 period, 0,4 in the 2004-2006 period and -0,4 in the 2007-2014 period. The increment in the productivity ostensibly contributed to economic growth in the two accelerated growth phases, but essentially stopped contributing after 2004.

⁴ WTTC 2015 report

only be accessed through the Caracol road, which connects the region from George Price Highway (GPH). The economic activities in this area are agriculture and forestry, but its main potential value lies in tourism. These activities are completely dependent on the environment and on the ecosystem services for their sustainability. With more than 780 fauna species and 660 flora species in the Chiquibul National Park, the region has been described as "Belize's storehouse for biodiversity" with important assets for nature-based tourism (such as birdwatching) and cultural tourism. The Chiquibul National Park includes the Caracol Mayan site, the largest archaeological Mayan site in Belize.⁵ The Region also contains important forest reserves, which require the implementation of management plans⁶ along with monitoring programs.

2.3 **The Caracol Road.** Belize's road network consists of 3,281 km.⁷ The network presents several challenges, most of them existent in the Caracol road: (i) low paved

coverage:⁸ (ii) poor quality of roads and bridges;⁹ (iii) high impact of recurrent natural disasters and climate change;¹⁰ (iv) deficit in resource allocation for maintenance;¹¹ and (v) high accident rates.¹² As a result of these issues the country has experienced an increase in transport costs,¹³ hampering competitiveness and touristic development. The Caracol road is a 94 km long Y-shaped road that links the Caracol archeological reserve in the southern end with Georgeville and the sister towns of San Ignacio - Santa Elena on the GPH.¹⁴ The road, which provides access to tourism, agriculture, and logging areas, is winding and mostly unpaved, except for the 14.5 km segment close to the Caracol archaeological



Figure 1. The Caracol Region

⁵ According to the National Sustainable Tourism Master plan (NSTMP), the Caracol Mayan site is one of the four tourism assets with international recognition. In 2015, the visits registered to archaeological reserves in the country were 676,377 but only 9,822 were to Caracol. Source: Belize Tourism Board.

⁶ The Chiquibul Forest Reserve is executing a Restoration felling program and the Mountain Pine Ridge Forest Reserve a Harvesting Plan.

⁷ 591 km are main roads or highways, 755 km are secondary roads, and 1,935 km are rural roads. Belize Transport Sector Policy Note (BTSPN), IDB 2013, based on information provided by the MOWTN.

⁸ Only 20% of the Belizean network, mainly primary road network, is paved. BTSPN, IDB 2013.

⁹ Only 13% of the network is in good state. Road Maintenance Strategy in Belize MOWT, 2013.

¹⁰ Road flooding greatly restrict mobility and makes evident infrastructure vulnerability during extreme weather conditions.

¹¹ Only 45.3% of the required resources for routine and recurrent maintenance are considered in the annual budget.

¹² Belize has one of the highest rates of road fatalities (28,9 people per 100,000). Transport Sector in Belize, IDB 2013.

¹³ Transport cost in Belize measured as the freight price for a 40 ft. container are 2.6 US\$/km. BTSPN, IDB 2013.

¹⁴ The road is about 74 km from Georgeville and 82 km from Santa Elena to Caracol ruins. The west arm is 20 km long; the east segment, designated as D903, is 14 km long and goes from Georgeville to Junction K.

site, which was upgraded in 2003, but rapidly deteriorated due to the lack of proper maintenance. The geometric alignment of the road and its drainage systems correspond to rural standards. Some segments and bridges are one-way, limiting road capacity and transit. Moreover, access is further limited during rainy season, due to the hilly terrain and high rainfall in the area.

- 2.4 **The problem.** Tourism and agriculture are the foundation of the Belize's economy, but are completely dependent on their sustainability on the natural environment, including ecosystem services. The Caracol region could contribute significantly to national economic growth. However, the region lacks a sustainable development plan that balances land and natural resource use with environmental protection and local livelihoods. In this context, the poor condition of the road affects the region's development hampering access to tourism assets as well as renewable resources like sustainable timber (from forest reserves) and agricultural commodities outside protected areas. Poor accessibility increases the vulnerability and permeability of the region to unsafe activities and illegal logging.¹⁵ Moreover, the institutional weakness of road maintenance and coordination with stakeholders, financial constraints and untenable development practices, contribute to the problem.
- 2.5 **Project rationale.** Improving accessibility and connectivity of the area would enhance the competitiveness of Belize's tourism sector and the regional productivity.¹⁶ The project will facilitate access to tourist destinations and will improve monitoring security for local businesses, tourists and residents, and the enforcement of legal logging. The necessary arrangements to safeguard biodiversity and cultural aspects in the area will be provided. The Government of Belize (GOB) has prioritized the progressive rehabilitation of the Caracol road,¹⁷ and the placement and implementation of a development plan, including the strengthening of the institutions involved. The project consists of the upgrading of the first 14 km segment from GPH at Georgeville to Junction K (D903 segment). In this progressive approach it is opportune to start with the D903 segment as it captures the benefits of serving the towns of San Antonio and Cristo Rey in the western arm, as it is faster to access GPH through this segment as an alternate, time-saving route; it would still work standalone in case no other segments were paved.
- 2.6 **National policies and related projects.** The project is aligned with the Growth and Sustainable Development Strategy (GSDS) 2016-2019 for Belize and the <u>National Sustainable Tourism Master Plan (NSTMP) Belize 2030</u>. The GSDS guides overall development of the country through an integrated, systemic approach based on the principles of sustainable development. The NSTMP states that improving the quality of roads and providing better access to nature and cultural tourism sites would contribute to Belize's tourism development. The Bank's Tourism Development

¹⁵ In 2011 the illegal harvest from the Chiquibul Forest was estimated in around US\$15 million.

¹⁶ In the tourism sector, productivity enhancements can come from interventions aimed at improving value of cultural and natural heritage, basic infrastructure, and development of regional tourism corridors (GN-2788).

¹⁷ The total cost of the upgrading of the Caracol road was estimated in US\$111.6 million. A 16 km segment of the west arm, between Cristo Rey and San Antonio, is now under rehabilitation works, financed with resources from Petrocaribe agreement. The GOB is seeking support from other financing sources for the rest of the road.

Project (TDP)¹⁸ included the improvement of the Caracol Access Road, as well as basic infrastructure of facilities and amenities in the site. The Sustainable Tourism Program I (STP I)¹⁹ financed the construction of the Cayo Welcome Center.The Sustainable Tourism Program II (STP II)²⁰ aims to increase development in the tourism sector directing more tourists to the Caracol Archaeological Reserve, the Mountain Pine Ridge and the Chiquibul Forest Reserve. Lastly, the GPH Rehabilitation Project²¹ will rehabilitate the GPH between Belmopan and Santa Elena.

- 2.7 **Strategic alignments.** The project meets the IDB's priorities detailed in the Country Strategy 2013-2017 with Belize (GN-2746) as it identifies tourism and transportation as priority sectors for growth. Therefore, the project aims to increase the tourism expenditures in a sustainable manner and improve secondary road infrastructure to facilitate access to emerging tourist destinations.
- 2.8 Additionally, the program is consistent with the Update to the Institutional Strategy 2010-2020 (GN-2788-5). It is strategically aligned with the developmental challenge of productivity and innovation as it develops instruments that contribute to the most efficient usage of production factors while providing adequate infrastructure. The program is also aligned with the cross-cutting theme of climate change and environmental sustainability as it will promote the conservation and sustainable use of biodiversity. The project contributes to the corporate result framework through the country development result indicator of km of roads built or upgraded.
- 2.9 Finally, the operation is aligned with the IDB's Infrastructure Strategy called "Sustainable Infrastructure for Competitiveness and Inclusive Growth" (GN-2710-5) as well as the Transport Sector Framework document (GN-2740-3), supporting the transportation infrastructure quality improvement, and with the Tourism Sector Framework document (GN-2779), supporting the provision of quality connectivity to tourism destinations.
- 2.10 **Objectives.** The objective of the project is to promote economic development of the Caracol Region by: (i) improving the condition of the Caracol road; and (ii) contributing to the maintenance of ecosystem services associated with the road, and managing and protecting natural resources in a sustainable manner.
- 2.11 **Components:** The project is structured in the following components:
- 2.12 **Component 1. Caracol Road upgrade (US\$15 million).** This component will finance: (i) the upgrading of the D903 segment of the Caracol road to meet acceptable design standards, providing resilience against flooding and other climate change effects;²² (ii) the improvement of logistical access to tourist attractions which

¹⁸ Loan 1250/OC-BL approved in 2000.

¹⁹ Loan 2060/OC-BL approved in 2008.

²⁰ Loan 3566/OC-BL approved in 2015.

²¹ Loan 3344/OC-BL approved in 2014.

Feasibility studies will identify the standards to be met during the road and drainage systems designs. The design will also include road safety standards.

complements the infrastructure investments of the STP II; ²³ and (iii) the supervision of the civil works.

- 2.13 **Component 2. Sustainable development (US\$2 million).** This component will finance: (i) the design and implementation of a sustainable development plan for the entire Caracol Road, including a participatory ecosystem-based land use planning process, to prepare the area and local populations for the change that will come along with the rehabilitation of the road and ensure its sustainable development;²⁴ (ii) support to sustainable productive activities (tourism, agroforestry) in line with the plan; and (iii) capacity building for environmental management and biodiversity conservation.
- 2.14 **Component 3. Institutional strengthening (US\$0.5 million).** This component will finance the strengthening of the Ministry of Works, Transport and NEMO (MOWTN) in the environmental safeguard application according to the IDB's policies and in the Environmental and Social Analysis (ESA) execution; and the strengthening of the Ministry of Agriculture, Fisheries, Forestry, Environment and Sustainable Development (MAFFESD) for the design and implementation of the sustainable development plan.
- 2.15 The project will also finance the administration and supervision of the project, including financing for the institutional framework to adequately plan, execute and monitor the project activities (US\$0.5 million).

III. TECHNICAL ISSUES AND SECTOR KNOWLEDGE

- 3.1 **Institutional framework and project execution design.** The MOWTN will be the executing agency of the loan. Within the MOWTN, there will be a Project Execution Unit (PEU) that will be responsible for project implementation and administration, including supervision and reporting to the IDB. As it relates to component 2, the MAFFESD will be in charge of its execution. Agreement(s) on the execution of the project will be signed between the MOWTN, the MAFFESD and other entities participating in the project. The PEU will also seek advice from Technical Advisory Committee and the Chiquibul MPR Caracol working group, both established within the STP II. The procurement and fiduciary components would be governed by the Bank's policies.
- 3.2 **Technical issues.** Through Technical Cooperation (TC) resources,²⁵ the IDB will finance the Environmental and Social Impacts Assessment (ESIA) for the rehabilitation of the entire road and the engineering designs for the D903 segment.²⁶ The feasibility assessment of this segment will be done with project preparation resources.²⁷ The lack of additional resources from the GOB to complete the

²³ Small access roads, parking lots and other works which complement the infrastructure investments of the STP II.

²⁴ The plan will take into consideration the actual needs and the value of natural capital to promote enhanced sustainable economic prosperity, improved forest management and environmental baseline consolidation and monitoring.

²⁵ BL-T1072 and BL-T1079.

²⁶ The MOWTNN is in charge of the contracting of these studies.

²⁷ The GOB plans to use Kuwait's grant to finance technical and economic studies for the rest of the project.

upgrading works on the Caracol Road and an uncertain timeframe for this completion were identified as medium project risks. The IDB plans to mitigate these risks by its involvement to make the project attractive to other donors in the short term.

3.3 **Sector knowledge.** This operation is prepared and will be executed jointly (double booking) by the Transport Division (INE/TSP) and the Environment, Rural Development and Disaster Risk Management Division (CSD/RND). The current knowledge about the respective sectors has been generated from projects recently approved by the Bank and technical studies developed for Belize. This knowledge includes: (i) the flood mitigation infrastructure project for Belize City (2566/OC-BL); (ii) the road maintenance strategy for Belize (MOWTN, 2013); (iii) the TDP; (iv) the STP I and II; (v) the GPH rehabilitation project; (vi) the study on mainstreaming biodiversity, ecosystems services and coastal resilience in tourism development (ecosystem service mapping and review, 2015); and (vii) the technical note on sustainable tourism in Belize (IDB, 2013).

IV. ENVIRONMENTAL SAFEGUARDS AND FIDUCIARY SCREENING

4.1 In accordance with the guidelines of the Policy Environment and Safeguards Compliance Policy (OP-703), the proposed operation is classified as category A by the project team. This classification is based on the operation's potential environmental and social impacts and risks, particularly those indirectly surrounding highly sensitive areas (from both cultural and natural habitats perspectives).

V. RESOURCES AND TIMETABLE

5.1 Annex V presents the timetable and costs for preparing the loan, including the distribution of the Proposal for Operations Development to Quality and Risk Review in January, 2017; as described in Annex VI, the TC BL-T1072 and BL-T1079 will support the project preparation by financing the ESA and the final design of the project. An estimated allocation of US\$42,200 from administrative funds will be used to complete the pre-feasibility assessment of the project.

Annex I – BL-L1022¹

CONFIDENTIAL

¹ The information contained in this Annex is confidential and will not be disclosed. This is in accordance with the "Deliberative Information" exception referred to in paragraph 4.1 (g) of the Access to Information Policy (GN-1831-28) at the Inter-American Development Bank. Please contact us <u>INE-TSP@iadb.org</u>.



Operation Information

Operation						
BL-L1022 Caracol Road Reabilitation						
Environmental and Social Impact Category	High Risk Rating					
A	High Risk	High Risk				
Country	Executing Agency					
BELIZE	{Not Set}					
Organizational Unit	IDB Sector/Subsector					
Env, Rural Dev & Disaster Risk	TRANSPORT NETWORKS CONNECTIVITY					
Team Leader	ESG Lead Specialist	ESG Lead Specialist				
SERGIO LUIS DEAMBROSI	{Not Set}	{Not Set}				
Type of Operation	Original IDB Amount	% Disbursed				
Loan Operation	\$0	0.000 %				
Assessment Date	Author					
16 May 2016	renaudt ESG Lead Spec	renaudt ESG Lead Specialist				
Operation Cycle Stage	Completion Date					
ERM (Estimated) 16 Jun 2016						
QRR (Estimated)	9 Nov 2016					
Board Approval (Estimated)	{Not Set}					
Safeguard Performance Rating						
{Not Set}						
Rationale						
{Not Set}						

Safeguard Policy Items Identified

B.1 Bank Policies (Access to Information Policy- OP-102)

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

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

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



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

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

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

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

B.1 Bank Policies (Resettlement Policy- OP-710)

The operation has the potential to disrupt the livelihoods of people living in the project area of influence (not limited to involuntary displacement, see also Resettlement Policy)

B.11. Pollution Prevention and Abatement

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

B.12. Project Under Construction

The operation is already under construction by the executing agency or borrower.

B.15. Co-financing Operations

The operation or any of its components is being co-financed.

B.2 Country Laws and Regulations

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

B.3 Screening and Classification

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

B.4 Other Risk Factors

There are other environmental and social sustainability issues that the project team considers to represent a risk for this operation. (e.g. wood sourced from Amazon rainforest).

B.4 Other Risk Factors

The operation <u>includes activities</u> to close current "adaptation deficits" or to increase the ability of society and ecological systems to adapt to a changing climate.

B.5 Environmental Assessment Requirements

An environmental assessment is required.

B.6 Consultations



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

B.7 Supervision and Compliance

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

B.9 Natural Habitats and Cultural Sites

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

B.9 Natural Habitats and Cultural Sites

The operation will result in the degradation or conversion of Critical Cultural Sites in the project area of influence.

Potential Safeguard Policy Items

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

The operation has the potential to affect negatively women or gender equality (<u>Negative gender impacts may</u> include the following)

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

The operation offers opportunities to promote gender equality or women's empowerment.

B.1 Bank Policies (Indigenous People Policy- OP-765)

The operation has the potential to negatively affect indigenous people (also see Indigenous Peoples Policy.).

B.4 Other Risk Factors

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

Recommended Actions



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

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

Additional Comments

[No additional comments]



Operation Information

Operation						
BL-L1022 Caracol Road Reabilitation						
Environmental and Social Impact Category	High Risk Rating					
A	High Risk					
Country	Executing Agency					
BELIZE	{Not Set}					
Organizational Unit	IDB Sector/Subsector					
Env, Rural Dev & Disaster Risk	TRANSPORT NETWORKS CONNECTIVITY					
Team Leader	ESG Lead Specialist	ESG Lead Specialist				
SERGIO LUIS DEAMBROSI	DEAMBROSI {Not Set}					
Type of Operation	Original IDB Amount	% Disbursed				
Loan Operation	\$0	0.000 %				
Assessment Date	Author					
16 May 2016	renaudt ESG Lead Spec	renaudt ESG Lead Specialist				
Operation Cycle Stage	Completion Date					
ERM (Estimated)	16 Jun 2016					
QRR (Estimated)	9 Nov 2016					
Board Approval (Estimated)	{Not Set}					
Safeguard Performance Rating						
{Not Set}						
Rationale						
{Not Set}						

Operation Classification Summary

Overriden Rating	Overriden Justification
Comments	



Conditions / Recommendations

Category "A" operations require an Environmental Impact Assessment or a Strategic Environmental Assessment (see Environment Policy Guideline: Directive B.5 for EIA and SEA requirements) and at least two consultations with affected parties.

These operations will require an environmental assessment (EA), normally an Environmental Impact Assessment (EIA) for investment operations, or other environmental assessments such as a Strategic Environmental Assessment (SEA) for programs and other financial operations that involve plans and policies. Category "A" operations are considered high safeguard risk. For some high safeguard risk operations that, in the Bank's opinion raise complex and sensitive environmental, social, or health and safety concerns, the borrower should normally establish an advisory panel of experts to provide guidance for the design and/or execution of the operation on issues relevant to the EA process, including health and safety. However, these operations will also establish safeguard, or monitoring requirements to address environmental and other risks (social, disaster, cultural, health and safety etc.).

The Project Team must send to the ESR the PP (or equivalent) containing the Environmental and Social Strategy (the requirements for an ESS are described in the Environment Policy Guideline: Directive B.3) as well as the Safeguard Policy Filter and Safeguard Screening Form Reports.

Summary of Impacts / Risks and Potential Solutions

<u>Involuntary resettlement</u> of <u>Indigenous Peoples</u> or other ethnic minority communities whose identity is closely tied to their traditional territories, even if the objective of the project is to move these peoples from unhealthy or high risk areas



Potential Resettlement Issues Indicate Significant Risk of Non-Compliance with IDB policy **OP-710:** Discuss with Environmental and/or Social specialist(s), relevant team members and others before proceeding. Borrower is required to develop a RP (as part of the ESMP) that demonstrates the following attributes: (a) detailed socio-economic survey and baseline of the affected households and groups; (b) successful engagement with affected parties via a process of Community Participation culminating; (c) mechanisms for delivery of compensation in a timely and efficient fashion; (d) a livelihoods restoration program; (e) budgeting and internal capacity (within borrower's organization) to monitor and manage resettlement activities as necessary over the course of the project; (f) a grievance mechanism for resettled people; In addition, the borrower is required to demonstrate that: (a) the resettlement component will result in direct benefits to the affected indigenous or minority community relative to their prior situation; (b) customary rights will be fully recognized and fairly compensated; (c) compensation options will include land-based resettlement; and (d) the people affected have given their informed consent to the resettlement and compensation measures. Depending on the financial product, the RP should be referenced in legal documentation (covenants, conditions of disbursement, credit and operating regulations, project completion tests, etc.), require regular (quarterly, bi-annual or annual) reporting and independent review of implementation, including participatory monitoring.

Moderate Greenhouse Gas Emissions are predicted.

Greenhouse Gas (GHG) Assessment: The borrower should promote the reduction of projectrelated greenhouse gas emissions in a manner appropriate to the nature and scale of project operations and impacts. The borrower should quantify direct emissions from the facilities owned or controlled within the physical project boundary and indirect emissions associated with the off-site production of power used by the project. Quantification and monitoring of GHG emissions should be conducted annually in accordance with internationally recognized methodologies (i.e. IPCC -<u>http://www.ipcc.ch/</u>). In addition, the borrower should evaluate technically and financially feasible and cost-effective options for the reduction/offset of emissions that may be achieved during the design and operation of the project. The Sustainable Energy and Climate Change Initiative (SECCI) can help with this task (<u>http://www.iadb.org/secci/</u>).

Conversion or <u>degradation</u> of <u>critical natural habitat</u> causing <u>minor</u> to <u>moderate</u> impact on <u>migratory</u> <u>species</u>.



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

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

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

Conversion or <u>degradation</u> of <u>critical natural habitat</u> causing <u>minor</u> to <u>moderate</u> impact on <u>protected</u> <u>areas</u> or areas of high conservation value

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Conversion or <u>degradation</u> of <u>critical natural habitat</u> causing <u>minor</u> to <u>moderate</u> impact on <u>threatened species</u>.



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

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

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

Conversion or <u>degradation</u> of natural habitat causing <u>minor</u> to <u>moderate</u> impact on <u>ecosystem</u> <u>services</u>.

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

Conversion or <u>degradation</u> of natural habitat causing <u>minor</u> to <u>moderate</u> impact on <u>species</u> <u>composition</u>.

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



Conversion or <u>degradation</u> of natural habitat causing <u>minor</u> to <u>moderate</u> impact on ecological function.

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

Generation of solid waste is <u>moderate</u> in volume, does not include <u>hazardous materials</u> and follows standards recognized by multilateral development banks.

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

Likely to have <u>minor</u> to <u>moderate</u> emission or discharges that would negatively affect <u>ambient</u> <u>environmental conditions</u>.

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

Potencial to exclude or discriminate women or men from project benefits based on gender *NOTE



Incorporation of gender analysis into its social impact and risk assessments: Where the Project or its context present potential for discrimination against women or men based on gender, Project preparation should include an analysis of exclusion or discriminatory factors (specific or as part of overall social assessment) and the Project should include information, dissemination, training and other corrective measures as appropriate aimed at overcoming barriers to afford women or men the same protection and access afforded to other groups and equal access to Project-generated resources and benefits (e.g. credit, employment, public services, etc.). The social impact and risk assessment and associated mitigation framework must address all the factors specifically. The mitigation framework will be referenced in the legal documentation (covenants, conditions of disbursement, etc.), require regular reporting, frequent and independent monitoring, and independent review of implementation, including participatory monitoring.

Potential to exclude Indigenous Peoples from Project benefits on discriminatory basis.

Mitigation Framework (specific)-consultation with Indigenous Peoples required: Where the Project or its context present potential for ethnically based discrimination against IPs, Project preparation should include an analysis of discriminatory factors (specific or as part of overall social assessment) and the Project should include information, dissemination, training and other corrective measures as appropriate aimed at overcoming linguistic and other barriers to afford indigenous workers, entrepreneurs, beneficiaries or contractors the same protection and access afforded to other groups and equal access to Project-generated resources and benefits (e.g. credit, employment, public services, etc.). The Mitigation Framework must address all the factors specifically. The Mitigation Framework will be referenced in the legal documentation (covenants, conditions of disbursement, etc.), require regular reporting, frequent and independent monitoring, and independent review of implementation, including participatory monitoring.

Potential to introduce <u>gender</u> differentiated health and safety <u>risks</u>, or to increase the risk of violence, sexual exploitation, human trafficking or sexually transmitted diseases

Incorporation of gender analysis into its social impact and risk assessments: Where project has the potential to introduce gender differentiated health and safety risks, or to increase the risk of violence, sexual exploitation, human trafficking or sexually transmitted diseases, project preparation and implementation should include specific analysis and consultation regarding these issues and the social impact and risk assessment and associated mitigation framework must address them specifically. The mitigation framework will be referenced in the legal documentation (covenants, conditions of disbursement, etc.), require regular reporting, frequent and independent monitoring, and independent review of implementation.

Potential to introduce conditions that restrict the participation of women or men based on pregnancy, maternity/paternity, marital status

Incorporation of gender analysis into its social impact and risk assessments: Where project has the potential to introduce conditions that restrict the participation of women or men based on pregnancy, maternity/paternity, marital status, project preparation and implementation should include specific analysis and consultation regarding these issues and the social impact and risk assessment and associated mitigation framework must address them specifically. The mitigation framework will be referenced in the legal documentation (covenants, conditions of disbursement, etc.), require regular reporting, frequent and independent monitoring, and independent review of implementation.



Potential to introduce unequal requirements for access to benefits and economic opportunities based on <u>gender</u>

Incorporation of gender analysis into its social impact and risk assessments: Where project impacts will potentially introduce unequal requirements for access to benefits and economic opportunities based on gender, project preparation and implementation should include specific analysis and consultation/agreements regarding these issues and the social impact and risk assessment and associated mitigation framework must address them specifically. The mitigation framework will be referenced in the legal documentation (covenants, conditions of disbursement, etc.), require regular reporting, frequent and independent monitoring, and independent review of implementation, including participatory monitoring.

Potential to introduce unpaid work unevenly between men and women (volunteer work or community participation).

Incorporation of gender analysis into its social impact and risk assessments: Where project has the potential to introduce unpaid work unevenly between men and women (volunteer work or community participation), project preparation and implementation should include specific analysis and consultation regarding these issues and the social impact and risk assessment and associated mitigation framework must address them specifically. The mitigation framework will be referenced in the legal documentation (covenants, conditions of disbursement, etc.), require regular reporting, frequent and independent monitoring, and independent review of implementation.

Potential to offer men and women unequal access to inheritance or property rights

Incorporation of gender analysis into its social impact and risk assessments: Where project impacts will potentially offer men and women unequal access to inheritance or property rights, project preparation and implementation should include specific analysis and consultation/agreements regarding these issues and the social impact and risk assessment and associated mitigation framework must address them specifically. The mitigation framework will be referenced in the legal documentation (covenants, conditions of disbursement, etc.), require regular reporting, frequent and independent monitoring, and independent review of implementation, including participatory monitoring.

Project construction activities are likely to lead to localized and temporary impacts (such as dust, noise, traffic etc) that will affect local communities and <u>workers</u> but these are <u>minor</u> to <u>moderate</u> in nature.

Construction: The borrower should demonstrate how the construction impacts will be mitigated. Appropriate management plans and procedures should be incorporated into the ESMP. Review of implementation as well as reporting on the plan should be part of the legal documentation (covenants, conditions of disbursement, etc).

Risk of significant impacts/damage to cultural site(s)



Protection of Cultural Sites:Where impacts to cultural site are anticipated, the borrower should generally seek the advice of professional experts and a mitigation plan should be developed which includes the following basic elements: (a) demonstration that mitigation will comply with relevant legislation; (b) evidence that the borrower has the capacity/commitment to protect cultural sites; (c) implementation of chance finds procedures; (d) establishment of consultation processes with affected communities and appropriate experts; and (e) appropriate controls on the removal of cultural sites. Additional special requirements will come into play if cultural site is likely to be affected by the investment. The legal documentations require monitoring, regular reporting and independent review of implementation. The borrower should develop an action plan that describes how cultural sites will be protected.

Safety issues associated with structural elements of the project (e.g. dams, public buildings etc), or road transport activities (heavy vehicle movement, transport of <u>hazardous materials</u>, etc.) exist which could result in <u>moderate</u> health and safety <u>risks</u> to local communities.

Address Community Health Risks: The borrower should be required to provide a plan for managing risks which could be part of the ESMP; (including details of grievances and any independent audits undertaken during the year). Compliance with the plan should be monitored and reported. Requirements for independent audits should be considered if there are questions over borrower commitment or potential outstanding community concerns.

The project has or will have minor negative impacts on Indigenous Peoples.

Mitigation Framework: Include specific mitigation measures as needed in consultation with affected IPs. Consult with Indigenous Peoples specialist. Incorporate measures in legal documentation (covenants, conditions of disbursement, etc.). Include mitigation measures as part of overall environmental and social management plans or provisions.

The project is located in an area prone to <u>hurricanes</u> or other <u>tropical storms</u> and the likely severity of the impacts to the project is <u>moderate</u>.

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

The project is located in an area prone to inland flooding and the likely severity of the impacts to the project is moderate.



A Disaster Risk Assessment, that includes a Disaster Risk Management Plan (DRMP), may be necessary, depending on the complexity of the project and in cases where the vulnerability of a specific project component may compromise the whole operation. The DRMP should propose measures to manage or mitigate these risks to an acceptable level. This must take into consideration changes in the frequency and intensity of intensive rainfall and in the patterns of snowmelt that could occur with climate change. The DRMP includes risk reduction measures (siting and engineering options), disaster risk preparedness and response (contingency planning, etc.), as well as the financial protection (risk transfer, retention) of the project. The DRM Plan takes into account existing vulnerability levels and coping capacities, the area's disaster alert and prevention system, general design standards, land use regulations and civil defense recommendations in flood prone areas. However, the options and solutions are sector- and even case-specific and are selected based on a cost analysis of equivalent alternatives.

The Project might damage critical cultural sites and there are no feasible alternatives

Potential Critical Cultural Sites Impacts Indicate Significant Risk of Non-Compliance with IDB policy OP-703: Develop and evaluate alternative projects options and discuss with Environmental specialist, relevant team members and others before proceeding.

The Project might impact critical cultural sites, or significantly affect non-critical cultural sites

Protection of Cultural Sites: Where impacts to critical cultural sites are anticipated, the borrower shall take, acceptable to the project team, measures to mitigate such impacts and integrate into the project's ESMP. Where noncritical cultural sites are significantly impacted, appropriate measures to protect, mitigate, or compensate the noncritical cultural sites need to be integrated into the ESMP. Projects likely to encounter chance finds, should develop and implement specific procedures to handle chance finds occurrences, integrated into the project's ESMP. Category A projects should include in their EIA, when applicable, an analysis of the archeological potential of the areas of direct influence, and, as necessary, propose chance find procedures, based on internationally accepted practices.

The project will increase impacts and <u>risks</u> related to <u>communicable diseases</u> in local communities (often as a result of an influx of temporary or permanent labor).

Ensure the Borrower Addresses Disease Risks: The borrower should develop a program of education and infection illness prevention with emphasis on HIV and develop a plan to reduce transmission of communicable diseases that may be associated with the influx of temporary or permanent project labor that include measures such as the screening of workers health. Depending on the scale, location and significance of risk educational programs, prophylactics and other measures may also be important.

Transport of <u>hazardous materials</u> (e.g. fuel) with <u>minor</u> to <u>moderate</u> potential to cause impacts on community health and safety.



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

Disaster Risk Summary

Disaster Risk Level

Moderate

Disaster / Recommendations

The reports of the Safeguard Screening Form (i.e., of the Safeguards Policy Filter and the Safeguard Classification) constitute the Disaster Risk Profile to be included in the Environmental and Social Strategy (ESS). The Project Team must send the PP (or equivalent) containing the ESS to the ESR.
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The Borrower prepares a Disaster Risk Management Summary, based on pertinent information, focusing on the specific moderate disaster and climate risks associated with the project and the proposed risk management measures. Operations classified to involve moderate disaster risk do not require a full Disaster Risk Assessment (see Directive A-2 of the DRM Policy OP-704).
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The Project Team examines and adopts the DRM summary. The team remits the project risk reduction proposals from the DRMP to the engineering review by the sector expert or the independent engineer during project analysis or due diligence, and the financial protection proposals to the insurance review (if this is performed). The potential exacerbation of risks for the environment and population and the proposed risk preparedness or mitigation measures are included in the Environmental and Social Management Report (ESMR), and are reviewed by the ESG expert or environmental consultant. The results of these analyses are reflected in the general risk analysis for the project. Regarding the project implementation, monitoring and evaluation phases, the project team identifies and supervises the DRM approaches being applied by the project executing agency.

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

Disaster Summary

Details



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

Actions

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

ENVIRONMENTAL AND SOCIAL STRATEGY

I. CONTEXT

1.1 The Caracol Archeological Reserve, the largest known Maya archeological complex in Belize, along with tourist attractions in the Mountain Pine Ridge, Chiquibul Forest Reserves, and the Chiquibul National Park, is situated in a tri-national bio-region forming the largest remaining contiguous block of tropical broadleaf forest north of the Amazon. These areas are accessed by the Caracol Road (Figure 1) that connects the George Prince Highway (providing access from Belmopan and Belize City) with the archeological site to the south located on the border with Guatemala. The road is also used by logging trucks working in the concessions awarded in the Forest Reserves.



Figure 1: Project and projected area.

1.2 Tourism and agriculture are the foundation of Belize's economy. They are both completely dependent on their sustainability on the natural environment, including ecosystem services. The Caracol Region could contribute significantly to national economic growth, but the region lacks a sustainable development plan that balances land use planning and natural resource use with environmental protection. In that context, the poor quality of the road network affects the region's future development hampering access to tourism assets as well as the movement of renewable resources like sustainably harvested timber (from the forest reserves) and agricultural products in the settled areas outside of the protected areas. Poor road access also increases the difficulty of controlling illegal logging¹ and harvesting of forest products. The National Sustainable Tourism Master Plan (NSTMP) Belize 2030 has identified poor access to Caracol Mayan Ruins as a key constraint on the growth of the tourism sector. It is necessary to enhance road accessibility and connectivity to achieve a sustainable development of the area by increasing the regional productivity, particularly related to tourism and sustainable forest management. It is also necessary to consider the network's resilience against natural disasters and climate change impacts.

II. PROJECT

- 2.1 **The Caracol road comprises the following sections**: (i) section 1: Georgeville to Junction K (14 km, in green on Figure 1), which is the section that would directly be financed by the Bank; (ii) section 2: Santa Elena to the Junction K, (22 km, in red on Figure 1), of which 8 km is currently being rehabilitated (iii) section 3: From the Junction K to Caracol site (60 km, in Figure 1 in blue for the section in the Mountain Pine Forest Reserve and yellow for the section in the Chiquibul National Park).
- 2.2 The Government of Belize (GOB) is contemplating the rehabilitation of all of project the sections, which together comprise the project, and define the scope of the environmental and social review and compliance process of the IDB. Rehabilitation may include particular road widening, asphalting, realignment and bridge reconstruction. The GOB has approached the Inter-American Development Bank (IDB) to finance the rehabilitation of section one only, while other financings are contemplated for the rest of the project, including Kuwait Fund for Arab Economic Development (KFAED).
- 2.3 **Road main actual characteristics:** (i) all three sections are unpaved except for the last 14,5 km of section 3, and the inception of the road in Santa Elena. The road has varying widths, ranging from 3.4 m to 8.5 m (some segments are therefore one-way); (ii) the road comprises some steep curves, a few short slopes up to 9% and suffers some stability issues (in particular in the approach to Guacamallo bridge); and (iii) geometric alignment of the road, as well as drainage system and bridges complies with rural standards.
- 2.4 **Objective:** The objective of the project is to promote economic development of the Caracol Region by: (i) improving the condition of the Caracol road; and (ii) contributing to the maintenance of ecosystem services associated with the road, and managing and protecting natural resources in a sustainable manner
- 2.5 To meet these objectives the program is composed of the following components:

¹ In 2011 the illegally harvested from the Chiquibul Forest was estimated in around US\$15 million.

- a. **Component 1. Caracol Road upgrade (US\$15 million).** This component will finance: (i) the upgrading of the 14-kilometer segment of the Caracol Road from Georgeville to Junction K, to meet acceptable design standards,² providing resilience against flooding and other climate change effects; (ii) the improvement of logistical access to tourist attractions which complements the infrastructure investments of the STP II; ³; (iii) the supervision of the civil works.
- b. **Component 2. Sustainable development (US\$2 million).** This component will finance the (i) the design and implementation of a sustainable development plan, including a participatory ecosystem-based land use planning process;⁴ (ii) support to sustainable productive activities (tourism, agroforestry) in line with the plan; and (iii) capacity building for environmental management and biodiversity conservation..
- c. **Component 3. Institutional Strengthening (US\$0.5 million).** This component will finance the strengthening of the Ministry of Works, Transport and NEMO (MOWTN) in the environmental safeguard application according to the IDB's policies and in the Environmental and Social Analysis (ESA) execution; and the strengthening of the Ministry of Agriculture, Fisheries, Forestry, Environment and Sustainable Development (MAFFESD) for the implementation of the sustainable development plan. The project will also finance (~US\$0.5 M) the administration and supervision of the project, including financing for the institutional framework to adequately plan, execute and monitor the project activities.
- 2.6 **Project alternative analysis**: To date no project alternative analysis has been undertaken. As this is a road rehabilitation, an alternative analysis will be limited to assessing certain design parameters (e.g. width, pavement) and road realignments options for their various potential impacts (environment / land acquisition /costs), considering the no rehabilitation option. Indeed road rehabilitation design parameters are to be defined and could vary by section along the road.

III. INSTITUTIONAL AND REGULATORY CONTEXT

- 3.1 The executing agency of the operation is the Ministry of Works and Transport (MoWT), who will also be preparing key studies including the Environmental and Social Impact Assessment (under Technical Cooperation BL-T1072) and Feasibility and design studies (contemplated to be financed by KFAED). A Project Execution Unit (PEU) will be organized within the MoWT and will be responsible for project implementation and administration, including supervision and reporting to the IDB. As it relates to component 2, the PEU will liaise and coordinate closely with the Ministry of Agriculture, Fisheries, Forestry, Environment and Sustainable Development.
- 3.2 The Environmental Protection Act (EPA) legislates the role of the Department of the Environment (DoE),⁵ that among other things controls the Environmental Impact Assessment (EIA) procedure and is responsible for determining whether an EIA is required, reviewing and approving the terms of reference prepared by the project

² Which will be defined during a feasibility study to come.

³ Small access roads, parking lots and other works which complement the infrastructure investments of the STP II.

⁴ The plan takes into consideration the value of natural capital to promote enhanced sustainable economic prosperity, improved forest management and environmental baseline consolidation and monitoring.

⁵ In the MAFFESD.

developer, determining procedures for public consultation, and directing the evaluation and approval of the EIA report.

- 3.3 The EIA regulations established the National Environmental Appraisal Committee (NEAC) as the agency responsible for reviewing EIA reports. The NEAC advises to the DoE on the adequacy of the EIA, and to the DoE on the need for a public hearing. The NEAC is chaired by the chief environmental officer, who is also the head of the DoE, and the committee is comprises of representatives from the main environmental government agencies. During the EIA evaluation process, the NEAC may conduct site visits and interviews with key stakeholders as part of the consultation process.
- 3.4 The EIA process also calls for various levels of public consultation. This includes meetings with key stakeholders for views and inputs, local community consultations, two publications informing the location and dates when the EIA document will be available to the public. These publications will be available in a local newspaper for a period of two weeks.
- 3.5 At the final stage of approval, the DoE requires the project developer to sign an environmental compliance plan, a legal document to which the developer must adhere. This document is legally binding and contains the mitigation measures, stages of development, and technology to be used during the various phases of the project. It also makes provisions for monitoring and enforcement of the conditions agreed to and provisions for failure to implement the agreement.
- 3.6 Ministry of Agriculture, Fisheries, Forestry, Environment and Sustainable **Development (MAFFESD):** Within this ministry, the Forest Department is responsible for administering the Forest National Parks System and wildlife protection acts, and thus, for all protected areas designated under them. For the two forest reserves within the project's area of influence, the Forest Department manages the logging concessions, determining and monitoring permitted harvesting every year. With regard to Chiquibul National Park, it entered in 2007 into a co-management agreement with the non-governmental organization Friends for Conservation and Development (FCD) that sets out five provisions: (i) development of a management plan that provides for the protection of the natural and cultural resources of the Chiquibul National Park; (ii) institution of a protection program for the conservation of the ecosystems and species in the Chiquibul National Park: (iii) development of a research and monitoring program to conserve the park's critical biodiversity; (iv) implementation of a public awareness campaign that promotes the importance of the Chiquibul National Park; and (v) launching of a Chiquibul National Park financial sustainability plan to enable effective long term management. A management plan for the National Park was produced for 2008-2013.
- 3.7 The Belize's National Institute of Culture and History (NICH) act protects Belizean cultural assets and prohibits the willful damage, destruction or disturbance of any ancient monument, or their marking or defacing, or removal; or the removal or destruction of any antiquity. Another important provision of the NICH act authorizes the director of archaeology to supervise any contractor, who is about to engage in any operation which is liable to destruction, damage, interfere with or otherwise be to the detriment of any ancient monument or antiquity; not to proceed with any operation until the director shall have had an archaeological exploration and survey carried out; and to take or to refrain or desist from taking any such action as part of

the operation as the director may decide to be fair and reasonable for the proper protection of the ancient monument or antiquity.

- 3.8 One objective of the GOB policy on adaptation to climate change is to prepare all sectors of Belize to meet the challenges of global climate change. This includes the Transportation Sector in which several of Belize's roads and bridges are vulnerable to seasonal floods. Belize's waterways also become un-navigable during certain periods. Sea level rise and changes in rainfall patterns could increase the episodes of flooding which will impact the nation's transportation. As a result, the policy tasks the Ministry of Works and the Port Authority are to undertake climate change vulnerability studies of roads, bridges and waterways and prepare adaptation options for threats.
- 3.9 Environmental and Social Impact Assessment (ESIA) has not been identified so far and it is planned to have this document developed through Technical Cooperation BL-T1072. A retained consultancy firm would conduct an environmental and social impact assessment, an ecosystem services assessment, and a disaster risk assessment according to the IDB's E&S safeguards policies, Natural Disaster Risk Management policy (OP-704), and operational procedures to ensure minimum effect on local communities and the surrounding environment and cultural sites. The consultancy will contribute to sector knowledge by placing a special emphasis on identifying and managing the risks and potential environmental and social impacts on ecosystem services and biodiversity resulting from the rehabilitation of the Caracol road. For the rehabilitation of the same road (but with design parameters probably different than those which will be decided for present operation) contemplated in the late 90's, an EIA was prepared in 1999, which has provided some useful elements for this eligibility stage, as reflected in the present document.

IV. ENVIRONMENTAL AND SOCIAL SETTING AND CONTEXT

- 4.1 The route from the Y southwards to the Caracol Archeological Reserve lies almost exclusively within protected areas (Figure 2a) of high biodiversity value in an area prone to disaster risk. Two of the areas (Mountain Pine Ridge Forest Reserve and Chiquibul Forest Reserve) are mandated for sustainable timber extraction and watershed protection (IUCN Category VI), while the Chiquibul National Park is a protected area under IUCN Category II for conservation, and the Caracol Archeological Reserve is a national reserve for the preservation of cultural heritage (IUCN Category VI). The whole area also falls within an Important Bird Area (Maya mountains and southern reserves).
- 4.2 The Chiquibul and Mountain Pine Ridge (MPR) complex is one of Belize's innermost biodiversity hotspots, nestled in the more mountainous region of the country. This wealth of biodiversity is concentrated within four previously mentioned protected areas, which total an area of 220,237. These four protected areas also make up the majority of the undisturbed forests of the Maya Mountain Massif (MMM). The Chiquibul-MPR complex is dominated by forests, which constitute 94% of the area. This contiguous area contains at least five different forest ecosystem types providing valuable ecosystem services; maintaining their condition requires the implementation of management plans⁶ and monitoring programs. Broad-leaved

⁶ The Mountain Pine Ridge and the Chiquibul Forest Reserves have approved management plans in execution (for the Chiquibul Forest Reserve a Restoration felling program; and for the Mountain Pine Ridge Forest Reserve a Harvesting Plan).

species make up the overwhelming portion of the area including sub montane forest types not found anywhere else in the country.

- 4.3 Although, the area does not have a high level of local endemism, it has very high biodiversity as it represents one of the last contiguous blocks of forest in the region. Estimates of flora vary from 660 to 1,355 plants species in the protected areas, of which four are endemic to Belize and 12 are listed as threatened according to the World Conservation Union (IUCN) red list of threatened species. There are estimated to be at least 780 species of fauna including large mammal species and 300 bird species, with one of the last populations of scarlet macaw (Ara macao) in the country. Frog species may include two threatened species, the craugastor sandersoni listed as endangered by IUCN and the Belize endemic lithobates juliani IUCN listed as near threatened. The forests also protect the upper watershed of the Belize River, the country's most important one for supplying both water and some energy to the majority of Belize population. Although wildfires and an outbreak of the southern pine beetle due to a prolonged drought in 2,000 in the pine forest reserves have devastated the pine forests, the tropical forest south of this remains relatively undisturbed. Threats here include gold protection, illegal logging and extraction of xate palm leaves (three species of chamaedorea) for the floral industry and wildlife poaching. Much of the pressure comes from people entering across the border from Guatemala (see Figure 2b).
- 4.4 Currently, most of the land within the area of the project and outside the protected areas is dedicated to agriculture. Along the Georgeville road, vegetation cover is composed primarily of pastures, small hillside milpa (slash and burn) and a large citrus farm (Barton Creek), while along the Santa Elena road the vegetation cover is dominated by agriculture (mostly milpa and pastures).
- 4.5 Hardwood logging has been recorded in the area (forest reserves) since the late 1890's. In the 1950's roads in Chiquibul were built (and then maintained) by the Forest Department to connect centers and forest encampments with areas of utilization (Mountain Pine Ridge with Georgeville through Guacamallo Bridge). In the late 1990's, the responsibility of Caracol road was transferred to the MoWT.



Figure 2a: The location of the road in relation to protected areas



Figure 2b: Tree cover loss from 2000-2014 (shown in pink) in relation to the route of the road. The tree cover loss to the south of the road's 'Y' was caused by forest fires and an outbreak of the southern pine beetle.

- 4.6 It is important to note that an extensive network of logging roads and firebreaks exist in these protected areas, a length of over 500 km in various conditions. The Department of Defense uses these roads for periodic training and to patrol the border. Fully loaded logging trucks and tourists use these same roads. Due to this variety of users and the nature of the narrow, winding roads, there have been several serious accidents.
- 4.7 Like most countries in the Caribbean and Central American, Belize is subject to hurricanes (most frequent between July and October). In 1961, the Chiquibul Forest Reserve suffered an extensive damage and still shows signs of the devastation. During that event the central part of the reserve suffered a loss of 15% of mature trees. On the more exposed outlying slopes the loss was as high as 90%. Today, secondary growth trees in the Chiquibul National Park and around still indicate the effects of the hurricane.
- 4.8 Other key natural hazard is flooding, to which almost all bridges are subject to. In particular the Guacamallo Bridge may flood up to seven feet and may take between one to three days for safe usage following heavy rains.
- 4.9 The Chiquibul-MPR Complex, which is located in its entirety within the Belize River watershed, supports the country with many ecosystem services comprised of direct and indirect benefits. Within the Chiquibul-MPR Complex, pine contributes substantially to the gross annual timber value in the area; with values for local markets for the region estimated at US\$7.8 million. For a combination of local and export markets US\$8,7million. Whereas the Chiquibul MPR complex only harbors one watershed (the Belize River watershed) it represents the country's most important oneas it supplies water to the majority of Belize's population. Besides the above provisioning services, the Chiquibul-MPR Complex also provides significant carbon sequestration and soil formation through the extensive area of broad leaf forests within its boundaries along with a wealth of genetic resources. Indirectly, the Chiquibul-MPR Complex contributes to the maintenance of coastal water quality by filtering sediments from reaching the Belize Barrier Reef lagoon, which then ensures

healthy nursery habitats important for fisheries productivity and healthy reefs that support diving and snorkeling tourism.

- 4.10 Ecosystems, such as the Caracol Region pine forests, also provide important benefits for the design of more sustainable, cost-effective roads by, for instance, protecting infrastructures from natural hazards through the provision of regulating and supporting services such as: flood and erosion control by containing water from excessive rainfall and preventing erosion and sedimentation from affecting coastal and urban areas.
- 4.11 Except for minor exceptions (but notably Douglas D'Silva Forest Station which is now almost completely abandoned), the only settlements (as well as agriculture activities) along the road are located north of the Junction K see Figure 3 (South of Georgeville and San Ignacio/Santa Elena); they are: (i) San Ignacio Santa Elena; (ii) Cristo Rey Village; (iii) San Antonio Village; (iv) Seven Miles Village; and (v) Georgeville Village. Probably in relation to this, there is little evidence to date of deforestation within the protected areas driven by increased access through the current road.
- 4.12 According to the 1999 EIA, the population of the settlements included Creole, Garifuna, East Indian, Mestizo, Maya, Caucasian and Chinese of whom some may be Indigenous peoples as per IDB's policy definition.



Figure 3: land use in northern project area.

V. IMPACTS RISKS AND CONTROL MEASURES

- 5.1 The main potential socio-environmental impacts and risks associated with construction phase activities are: (i) air pollution and noise; (ii) generation of waste included hazardous (excavated materials, used oils); (iii) soil compaction; (iv) health and safety issues; (v) impact to traffic and potential increase in accidents; (vi) soil degradation and pollution of waterways; (vii) loss of natural habitats; and (viii) acquisition of land for right of way liberation.
- 5.2 The main potential socio-environmental impacts and risks associated with operation phase activities are: (i) air pollution increase due to traffic increase; (ii) road kill of fauna and the barrier effect; (ii) indirect impacts to the cultural site and critical natural habitat, mostly from increased access, and through illegal logging, agriculture, hunting as preliminarily identified.
- 5.3 Measures to prevent and/or mitigate potential environmental impacts and risks will be defined during the development of the Environmental and Social Impact Assessment⁷ and Technical studies.⁸ These measures will cover all pertinent project activities (borrowing pits, camp site, asphalt plant, and dumping sites) it also should include: (i) minimizing impacts on protected areas, fragile ecosystems and native vegetation9; (ii) preventing cutting of native forest species; (iii) using sediment control measures to reduce pollution of water bodies; (iv) ensuring adequate capacity and measures to prevent or reduce the risks associated with flooding natural disasters or fires; (v) reducing soil disturbances and if possible protect the organic soil layer; (vi) implementing adequate occupational health and safety measures; (vii) making appropriate waste management rules; (viii) having adequate procedures to avoid negative impacts to archeological and cultural heritage sites; (ix) applying water to reduce dust wherever necessary; and (x) placing staff to control road traffic and install traffic and prevention signs along the road.
- 5.4 The need for resettlement is estimated to be very limited and concentrated north of Junction K and should include little or any need for resettlement of households; it will depend on road rehabilitation parameters, in particular width. It is uncertain at this stage if some affected people may qualify as an indigenous population under IDB's policy definition.

VI. ENVIRONMENTAL STRATEGY FOR DUE DILIGENCE

- 6.1 The project is classified as category A based on its potential environmental and social impacts and risks, particularly those indirect to surrounding highly sensitive areas (from both cultural and natural habitats perspectives).
- 6.2 The project triggers the following safeguard polices: (i) OP-703 Environment and Safeguards Compliance Policy; (ii) OP-102 Access to Information Policy; (iii) OP-704 Disaster Risk Management Policy (with a risk assessed preliminarily as medium); and (iv) OP-710 Operational Policy on Involuntary Resettlement.

As described infra, this will include an ecosystem services based strategy, a disaster risk assessment, and as applicable a resettlement action plan.

⁸ The latter in particular for natural hazards related risks managed by design parameters such as drainage or bridge heights.

⁹ E.g. by choosing adequately borrows pits, asphalt plant, camp site.

- 6.3 As well as potentially the following ones: (i) OP-761 Operational Policy on Gender Equality in Development; and (ii) OP-765 Operational Policy on Indigenous People's.
- 6.4 Activation of the above two latter policies will be assessed during bank's due diligence, in particular based on information from the ESIA process, in which case relevant measures (e.g. special measures for consultation and compensation of Indigenous Peoples) will be defined to achieve compliance with them.
- 6.5 Directives of OP-703 triggered are: Bank policies (B.01); Country Laws and Regulations (B.02); Screening and Classification (B.03); Other Risk Factors (B.04); Environmental Assessment Requirements (B.05); Consultations (B.06); Supervision and Compliance (B.07); Natural Habitats and Cultural Sites (B.09); Pollution Prevention and Abatement (B.11); Project Under Construction (B.12); and Co-financing Operations (B.15).¹⁰
- 6.6 Capacity of the executing agency and other relevant governmental agencies, including the Forest Department and FCD, to manage potential impacts, especially indirect ones from the project, will be critical to achieve outcomes consistent with IDB's safeguard policies. In application of Directive B.4; their environmental governance capacity is considered a potential risk factor, and will be assessed in details during due diligence phase.
- 6.7 Directive B.12 is triggered as part of section 2 is currently in construction. The IDB's due diligence will assess compliance with IDB's safeguard policies of these works. In case of non-compliances identified, these will be resolved before board presentation or addressed through an action plan.
- 6.8 In April 2016, the IDB conducted an identification mission, which included a site visit, to have a firsthand account of the current characteristics of the project. During IDB's due diligence the project's Environmental and Social Impact Assessment (ESIA) will be developed under a Technical Cooperation, as well as technical studies the latter through a separate financing. Considering project's area of influence characteristics, the ESIA will include an ecosystem services based strategy as well as a disaster risk assessment. As applicable, this will include a resettlement action plan.
- 6.9 Following completion of these studies, ESG specialists will undertake a due diligence mission to the area to determine whether the key impacts and issues have been correctly identified and whether plans for their mitigation are satisfactory.
- 6.10 The Environmental and Social Due Diligence of the Bank will pay particular attention to the project compliance status with relevant policies and norms to ensure that: (i) the proposed environmental and social mitigation measures and monitoring are adequate and well defined in terms of their completeness, sufficiency of detail, feasibility of implementation, cost, assignment of responsibility, schedule, and quality control; (ii) all direct impacts have been identified and assessed, especially the impacts on biodiversity, endangered species, induced erosion, archeological and natural hazards; and (iii) that all indirect impacts and/or cumulative effects have been adequately identified for both the construction and operational phases of the project.
- 6.11 Capacity of the relevant institutions to manage social and environmental issues, to enforce proper design, construction standards and proper maintenance of physical assets.

¹⁰ Cofinancing with Kuwait Fund for Arab Economic Development.

- 6.12 Assessment of Forest Department management (including its capacity) of four protected areas (including two Forest Reserves) of project's area.
- 6.13 Completeness of the emergency preparedness and response plan in terms of procedures to deal with southern pine beetle outbreaks, fires, hurricanes and floods in particular.
- 6.14 Evaluation of activities to date such as public information disclosure and consultation; evaluation of the adequacy, consistency and scheduling of engagement plans for future including public disclosure, consultation and grievance mechanism.
- 6.15 Evaluation, and further development as necessary, of project monitoring/supervision procedures to ensure proper implementation of environmental, social, and health and safety actions and requirements
- 6.16 For resettlement activities (as necessary) and compensation for losses, assessment of conformity with requirements of the Bank's Policy OP-710.
- 6.17 Assessment of the need to activate Bank's Indigenous Peoples Policy, and as the case may be, compliance of studies and plans to it.
- 6.18 Assessment of measures in place to prevent/mitigate impacts to cultural and or heritage/archaeological sites in accordance with Bank's Policy.
- 6.11 Following completion of the ESDD, the project team will prepare an Environmental and Social Management Report (ESMR) which summarizes the key impacts and risks and will provide a final assessment of the project's compliance with the Bank's safeguard requirements. The ESMR will indicate how the environmental and social management measures are expected to be covered by borrower commitments in the loan agreement and other contractual documents, and how the Bank will supervise their implementation.

COMPLETED AND PROPOSED SECTOR WORK

Study	Description	Responsible	Date	Reference & Links
The Road Maintenance Strategy Document (RMSD) for Belize	The objective of the RMSD is to provide guidelines and to identify the procedures necessary for a institutional, financial and legal reform of road maintenance.	Ministry of Works Transport and NEMO	2013	Link
Transport Sector in Belize technical note	The note provides an overview of the main characteristics of the transport sector in Belize and the challenges going forward.	IADB	2013	Link
Belize transport sector note	The note provides an overview of the characteristics of the transport sector in Belize and proposes areas for Bank action within the sector.	IADB	2013	Link
The sustainable tourism in Belize technical note	This technical note discusses the main characteristics of the Belizean tourism sector and its importance to the national economy, and identifies the key constraints to the sector's sustainable development.	IADB	2015	<u>Link</u>
Environmental and Social Impact Assessment (ESIA) for the rehabilitation of the entire Caracol Road project ¹	Environmental and social studies for the rehabilitation of the Caracol Road according to the Bank's E&S safeguards policies and operational procedures. The ESA consists of an Environmental and Social Impact Assessment (ESIA) and Management Plan.	Ministry of Works Transport and NEMO	4 th quarter 2016	
Final design for the segment to be upgrading by the project ²	Engineering final design for the segment to be upgrading by the project.	Ministry of Works Transport and NEMO	1 st quarter 2017	
Pre-feasibility assessment of the segment to be upgraded by the project	Economic and technical pre-feasibility assessment of the segment to be upgraded by the project.	The project team	4 th quarter 2016	
Technical and Economic feasibility Studies for the Upgrading of the Caracol road	Economic and technical feasibility of the rehabilitation of the entire Caracol road, excluding the segment to be upgraded by the project. The study includes the preparation of the detailed engineering design and preparation of bidding documents.	Ministry of Works Transport and NEMO ³	1 st quarter 2017	

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Annex V – BL-L1022¹

CONFIDENTIAL

¹ The information contained in this Annex is confidential and will not be disclosed. This is in accordance with the "Deliberative Information" exception referred to in paragraph 4.1 (g) of the Access to Information Policy (GN-1831-28) at the Inter-American Development Bank. Please contact us <u>INE-TSP@iadb.org</u>.