



# GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project  
 TYPE OF TRUST FUND: GEF Trust Fund

## PART I: PROJECT INFORMATION

Project Title:	Integrated management of production landscapes to deliver multiple global environmental benefits		
Country(ies):	Belize	GEF Project ID: <sup>1</sup>	9796
GEF Agency(ies):	UNDP	GEF Agency Project ID:	6015
Other Executing Partner(s):	Ministry of Natural Resources (MNR); Ministry of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development (MAFFESD)	Submission Date:	3/28/2017
GEF Focal Area(s):	Multi-focal Areas	Project Duration (Months)	60
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP	<input type="checkbox"/>
Name of parent program:	[if applicable]	Agency Fee (\$)	485,348

### A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES<sup>2</sup>

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing*	Co-financing (indicative)
BD-4: <i>Mainstream Biodiversity Conservation and Sustainable Use into Production Landscapes &amp; Seascapes and Sectors</i> ; Program 9: <i>Managing the Human-Biodiversity Interface</i>	GEFTF	3,434,254	10,134,576
LD-1: <i>Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods</i> ; Program 1: <i>Agro-ecological Intensification</i> ; and Program 2: <i>SLM for Climate-Smart Agriculture</i>	GEFTF	837,339	2,471,012
LD-3: <i>Reduce pressures on natural resources by managing competing land uses in broader landscapes</i> ; Program 4: <i>Scaling-up sustainable land management through the Landscape Approach</i>	GEFTF	837,340	2,471,012
<b>Total Project Cost</b>		<b>5,108,933</b>	<b>15,076,600</b>

\*Applying the STAR flexibility mechanism of GEF-6, resources for a total of \$1,780,339 USD of CC STAR allocation are being transferred to the BD and LD focal areas for the FSP as follows: \$890,169 USD are channeled to BD and \$890,170 USD are transferred to LD, inclusive of the corresponding contributions to Project Management Cost. Thus, for the FSP a total amount of \$3,434,254 USD of BD resources and a total amount of \$1,674,679 USD of LD resources are being allocated. Amounts including fees are shown in Table D. In addition, resources for a total of \$46,145 USD are also being channeled to the BD and LD focal areas for the PPG as follows: \$23,073 USD are channeled to BD and \$23,072 USD are channeled to LD. Thus, for the PPG a total amount of \$89,014 USD of BD resources and a total amount of \$43,406 USD of LD resources are being allocated. Amounts including fees are shown in Table E.

### B. INDICATIVE PROJECT DESCRIPTION SUMMARY

<b>Project Objective:</b> To mainstream biodiversity conservation and sustainable land/water management into production landscapes in Belize						
Project Components	Financing Type <sup>3</sup>	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing (indicative 1:3)
1. Enabling environment (policies, financial)	TA	Strengthened governance and financial structure for the conservation of biodiversity	1.1. Revised and harmonized policies and legislation for riparian forest protection	GEFTF	928,130 BD: 623,994	2,737,720

<sup>1</sup> Project ID number will be assigned by GEFSEC and entered by the Agency in subsequent document submissions.

<sup>2</sup> When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#) and [CBIT guidelines](#).

<sup>3</sup> Financing type can be either investment or technical assistance.

<p>mechanisms, and institutional capacities) for delivering multiple global environmental benefits (GEBs) through the sustainable management of production landscapes</p>	<p>and ecosystem services through sustainable land (SLM)/water management in production landscapes, including:</p> <ul style="list-style-type: none"> <li>a. Riparian forest protection legislation updated, increasing the existing 66 feet (20 meters) of buffer reserve to at least 100 feet (30 meters).</li> <li>b. At least 30% increase in government and private funding aligned to support sustainable production in priority sectors (agriculture, tourism, forestry, and urban development and industry).</li> <li>c. At least 2 financial incentive mechanisms recognized by the government (e.g., annual per-hectare payments in return for maintaining forest cover such as Ecuador’s Socio Bosque Program and a carbon sequestration model such as the one developed by the UNDP-GEF project 3590 <i>Mainstreaming biodiversity in the coffee sector in Colombia</i>). These mechanisms to be determined during the PPG following feasibility analysis.</li> </ul> <p>Increased ability of the government to implement strategies for conservation and SLM/water management in production landscapes through:</p> <ul style="list-style-type: none"> <li>a. At least 5 government agencies have formalized</li> </ul>	<p>(National Land Utilization Act), forest management (Forest Act), water management and irrigation (National Integrated Water Resources Act), river sand mining (Environmental and Safety Regulations under the Mines and Minerals Act), environmental management, river discharges, and water quality (Environmental Protection Act) results in:</p> <ul style="list-style-type: none"> <li>a. Clarification guidelines of agencies jurisdictions/ mandates regarding water and forest resources management.</li> <li>b. Mechanisms to improve co-programming and investment between public agencies in production landscapes in place.</li> <li>c. Protocols for inter-institutional coordination to enforce norms and establish penalties related to clearing of riparian forests, discharges to water bodies, illegal water withdrawal, and mining in rivers.</li> <li>d. Improved monitoring and enforcement of legislation and policy governing land use and land use conflicts, including staff trained and equipped in the Lands and Surveys Department.</li> </ul> <p>1.2. Diversified financial incentives developed and established through a participatory process (including women, indigenous peoples, and other vulnerable groups) to implement biodiversity-friendly production practices and sustainable water management and use strategies.</p> <p>1.3. Expanded information management system under the National Integrated Water Resources Authority (NIWRA)/Land information Center, Ministry of Natural Resources, includes mechanisms and protocols such as databases and online map viewer for data gathering,</p>		<p>LD: 304,136</p>	
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		<p>agreements to provide updated georeferenced information enhancing inter-agency cooperation as part of an Inter-agency Articulated Environmental Information Management Platform that facilitates decision making.</p> <p>b. Increased by 30% in the capacity of staff of key agencies to promote biodiversity conservation, integrated watershed management, SLM, and building resilience to climate change as measured through GEF/UNDP Capacity Development Scorecard.</p> <p><i>Indicators will be confirmed and baseline and targets will be determined during the PPG.</i></p>	<p>access and information sharing between institutions to strengthen biodiversity conservation, land/water resource management, and sustainable agricultural management.</p> <p>1.4. Training program at the national level to build institutional capacities (public and private) in biodiversity conservation, integrated watershed management, SLM, and building resilience to climate change.</p> <p>1.5. Operationalization of a funding strategy, including collection of fees for water use, for the development and implementation of Water Resource Master Plans and Water Quality Control Plans jointly between the NIWRA/MNR and water users.</p> <p>1.6. Awareness program for producers, technicians, and government officials in the production sector (agriculture, tourism, forestry, and urban development and industry) informs about the environmental and socioeconomic benefits of sustainable production practices and the availability of financial incentives to facilitate implementation.</p>			
2. Delivering multiple GEBS through sustainable production and improved value chains for key agricultural and forest products from the Belize River watershed	TA	<p>Multiple GEBS achieved through:</p> <p>a. 2,500 hectares (ha) (6,177.6 acres) of landscape management tools (i.e., biological micro-corridors, agroforestry, forest enrichment, live fences, windbreaks, and hedges) provides habitat to biodiversity and improves soil productivity.</p> <p>b. Presence of key indicator species (jaguar [<i>Panthera onca</i>], puma [<i>Puma concolor</i>], white-lipped peccary [<i>Tayasu peccary</i>]) in forest patches/corridors in</p>	<p>2.1. Landscape management tools used in priority areas for biodiversity conservation, including:</p> <p>a. Conservation agreements with participating producers/farmers used for establishing landscape management tools (i.e., biological micro-corridors, agroforestry, forest enrichment, live fences, windbreaks, and hedges).</p> <p>b. At least five nurseries of endemic and native plants established.</p> <p>2.2. Water Master Plan for the Belize River watershed developed through a</p>	GEFTF	3,712,520 BD: 2,495,974 LD: 1,216,546	10,950,918

		<p>production lands and protected areas.</p> <p>c. 500 ha (1,235 acres) of degraded riparian forests rehabilitated<sup>4</sup> improve water quality, ecosystem connectivity, and resilience to flooding and droughts.</p> <p>d. At least 50% of key groundwater recharge areas rehabilitated<sup>5</sup> and protected builds ecosystem resilience and more stable water supplies.</p> <p>e. Reduction of the erosion rate by 20% by project's end improves water quality favoring biodiversity and agro-ecosystem productivity.</p> <p>Increased area of agriculture and forest production under sustainable practices:</p> <p>a. 500 agriculture and forestry farms covering 15,000 ha (37,065 acres) under sustainable production.</p>	<p>participatory process allows integrated management for sustainable land and water resources use:</p> <p>a. Rehabilitation and management strategies for riparian forests implemented based on a baseline study of stresses and degree of damage to these forests conducted during the PPG phase.</p> <p>b. Critical groundwater recharge areas identified and mapped and delineated based on extent, quantity, and quality, recharge rate, etc.</p> <p>c. Optimized hydrological monitoring network (meteorological stations, wells, flow and stage gauges, etc.) provides data for sustainable water management and designing protection measures including flood and drought forecasting.</p> <p>d. Program for participatory soil management to reduce erosion and improve water quality.</p> <p>2.3. Baseline study of supply and demand and the quality of hydrological resources supports decision making to allocate water for sustainable production and irrigation.</p> <p>2.4. At least two incentives (e.g., annual per-hectare payments in return for maintaining forest cover, state-funded results-based payments designed with environmental and socioeconomic targets, carbon sequestration certification) to promote sustainable agriculture and forest production piloted.</p> <p>2.5. Updated land tenure records and land use change</p>			
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<sup>4</sup> Rehabilitation is understood as actions to repair damaged or blocked ecosystem functions (“simplified ecosystem” rather than a return to the indigenous, historical ecosystem), with the primary goal of raising ecosystem productivity for the benefit of local people (Based on: J. Aronsod, C. Fled, E. Le Floch, C. Ode, and R Pontanier. “Rehabilitation of degraded ecosystems in arid and semi-arid lands.” I. A view from the South. *Restoration Ecology*, March, 1993).

<sup>5</sup> Ibid.

		<p>Accessible markets for producers implementing sustainable practices including:</p> <p>a. At least two products (one for large-scale producers [e.g., sugarcane, banana, and cocoa] and one for small-scale producers [e.g., vegetables, beans, root crops, and plantains]) with enhanced value chains placed in markets.</p> <p>b. At least 20% increase in farmers/producers' net income (differentiated by gender) from sustainable production by project end.</p> <p><i>Indicators will be confirmed and baseline and targets will be determined during the PPG.</i></p>	<p>assessment in participating farms assist the piloting of incentives mechanism.</p> <p>2.6. Training program for small and large producers, including women and vulnerable groups, to implement sustainable production practices.</p> <p>2.7. Extension work program through the Extension Service of the Department of Agriculture and the University of Belize improves production, enhances value chains for key products, and builds awareness among small-scale and large-scale producers about markets for sustainable products.</p> <p>2.8. Business management capacity of producers (including women) to implement sustainable practices improved through targeted training and technical support (business plan development, accounting, financing, and marketing).</p>			
3. Knowledge Management and Learning		<p>Best practices and lessons are accessed and applied in other production landscapes and watersheds in the country and internationally.</p> <p><i>Indicators will be confirmed and baseline and targets will be determined during the PPG.</i></p>	<p>3.1. Participatory monitoring program assesses the delivery of GEBs: biodiversity conservation and integrated watershed management to improve hydrological functions and services for agro-ecosystem productivity.</p> <p>3.2. Experiences, best practices, and lessons learned about biodiversity conservation and SLM/water management in production landscapes systematized and made available through a national platform for public and private stakeholders for use in other production landscapes and watersheds in the country.</p>		225,000 BD: 150,750 LD: 74,250	670,029
Subtotal					4,865,650	14,358,667

Project Management Cost* (PMC) <sup>6</sup> (BD: 163,536; LD: 79,747)	GEFTF	243,283	717,933
<b>Total Project Cost</b>		<b>5,108,933</b>	<b>15,076,600</b>

\* This would include any Direct Project Costs if the GoB requests direct project services from UNDP in support to NIM execution t.b.d in the PPG

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ( )

### C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	Government of Belize	Grants	11,300,000
Recipient Government	Government of Belize	In-kind	3,000,000
GEF Agency	UNDP	Grants	450,000
CSO	Caribbean Community Climate Change Centre	Grants	326,600
<b>Total Co-financing</b>			<b>15,076,600</b>

### D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES), FOCAL AREA AND THE PROGRAMMING OF FUNDS <sup>a)</sup>

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) <sup>b)</sup>	Total (c)=a+b
UNDP	GEFTF	Belize	Biodiversity	(select as applicable)	3,434,254	326,254	3,760,508
UNDP	GEFTF	Belize	Land Degradation	(select as applicable)	1,674,679	159,094	1,833,773
<b>Total GEF Resources</b>					<b>5,108,933</b>	<b>485,348</b>	<b>5,594,281</b>

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

### E. PROJECT PREPARATION GRANT (PPG)<sup>7</sup>

Is Project Preparation Grant requested? Yes  No  If no, skip item E.

### PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: \$132,420 USD					PPG Agency Fee: \$12,580 USD		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee <sup>8</sup> (b)	Total c = a + b
UNDP	GEFTF	Belize	Biodiversity	(select as applicable)	89,014	8,456	97,470
UNDP	GEFTF	Belize	Land Degradation	(select as applicable)	43,406	4,124	47,530
<b>Total PPG Amount</b>					<b>132,420</b>	<b>12,580</b>	<b>145,000</b>

### F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>9</sup>

<sup>6</sup> For GEF Project Financing up to \$2 million USD, PMC could be up to 10% of the subtotal; above \$2 million USD, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

<sup>7</sup> PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

<sup>8</sup> PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

<sup>9</sup> Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#) will be aggregated and reported during mid-term and at the

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	606,684.29 Hectares (area of Belize River watershed)
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	15,000 Hectares (to be confirmed during PPG)

## **PART II: PROJECT JUSTIFICATION**

### *II.1. Project Description.*

II.1.1. The global environmental and/or adaptation problems, root causes, and barriers that need to be addressed.

1. Belize is located at the confluence of North and South America, and despite being a very small country (22,963 square kilometers [sq. km]), it is well-known for its high level of biodiversity, which comprises at least 1,014 native species of vertebrates and 3,750 species of plants. The country's many ecosystems include 65 terrestrial classes, 14 marine classes, 7 agriculture/silviculture/mariculture classes, 6 mangrove classes, 3 inland water classes, and 1 urban class. Belize still retains 61.6% of its natural forest cover; approximately 40% is protected under the National Protected Areas System and the remaining 20% is either on national lands or in private ownership.<sup>10</sup>

2. Belize's primary Key Biodiversity Area (KBA) lies within the Maya Mountains Massif (MMM), an area of approximately 510,000 ha in southwestern Belize, which is among the most intact tropical forests north of the Amazon. The area is a dominant land feature of the country and is composed of eight forest reserves (Chiquibul, Columbia River, Deep River, Maya Mountain, Mountain Pine Ridge, Sibun, Sittee River, and Vaca), two national parks (Noj Kaax Me'en Eligio Panti and Chiquibul), the Bladen Nature Reserve, the Cockscomb Basin Wildlife Sanctuary, the Caracol Archaeological Reserve, and the Victoria Peak Natural Monument.<sup>11</sup> The MMM is home to at least 662 plant species, including species of conservation concern such as the critically endangered endemic cycad (*Zamia decumbens*), the endangered fiddlewood (*Vitex gaumeri*), and the vulnerable big-leaved mahogany (*Swietenia macrophylla*). Thirty-seven percent (37%) of the 41 recorded endemic plants of Belize occur in the MMM and are restricted to the Belizean Pine Ecoregion.<sup>12</sup> At least 786 species of animals have been recorded for the region, including the endangered Baird's tapir (*Tapirus bairdii*), the jaguar (*Panthera onca*), the endemic Maya Mountain frog (*Lithobates juliani*), the endangered black howler monkey (*Alouatta pigra*), the endangered Central American spider monkey (*Ateles geoffroyi*), and two species of endemic fish: the Cave Chulin (*Rhamdia typhla*) and the Mountain Molly (*Poecilia teresae*). The MMM and is also the only known nesting area for the endangered northern subspecies of scarlet macaws (*Ara macao*).<sup>13</sup>

3. Belize has also been uniquely endowed with substantial surface and groundwater resources and has the highest per capita water resources in the Americas.<sup>14</sup> A dependable tropical/subtropical rainfall regime in the Northwest Caribbean region replenishes the freshwater resource after extended dry periods, which are often induced by recurrent atmospheric/oceanic phenomena such as the El Niño Southern Oscillation (ENSO), the North Atlantic Oscillation (NAO), and feedback mechanisms associated with climate change. Belize has a total of 18 major river watersheds with another 16 subwatersheds which drain the MMM and discharge into the Caribbean Sea<sup>15</sup>. This includes the (Figure 1) watershed, which is the largest (606,684.29 ha) watershed in the country and is home to 45% of the population. The subwatersheds

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conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF, SCCF or CBIT.

<sup>10</sup> United Nations Environment Programme. *National Environmental Summary, Belize 2011*. 43 pages.

<sup>11</sup> *Fifth National Report to the United Nations Convention on Biological Diversity: Belize (2014)*. Ministry of Forestry, Fisheries and Sustainable Development, Belmopan.

<sup>12</sup> Briggs, V.S., F.J. Mazzotti, R.G. Harvey, T.K. Barnes, R. Manzanero, J.C. Meerman, P. Walker and Z. Walker. 2013. "Conceptual Ecological Model of the Chiquibul/Maya Mountain Massif, Belize." *Human and Ecological Risk Assessment*, 19:317–340.

<sup>13</sup> *Ibid.*

<sup>14</sup> Caribbean Community Climate Change Centre. 2008. *National Integrated Water Resources Management Policy (including Climate Change) for Belize*. 23 pages.

<sup>15</sup> Frutos, Ramon. 2003. *Progress and Constraints in Developing Integrated Water Resources Management in Belize*. Hydromet - Hydrological Report, Hydrology Unit, National Meteorological Service of Belize. 5 pages.

of the MMM provide water security for over 128 communities and covers 55% of the total land mass of Belize.<sup>16</sup> The large tracts of intact forest canopy of lowland Belize also play an important role in rainfall catchment, and are particularly important for refilling the country's aquifers. Internal renewable surface water resources for the country have been estimated at 15.258 cubic kilometers per year (km<sup>3</sup>/year) and internal renewable groundwater resources at 7.51 km<sup>3</sup>/year.<sup>17</sup>

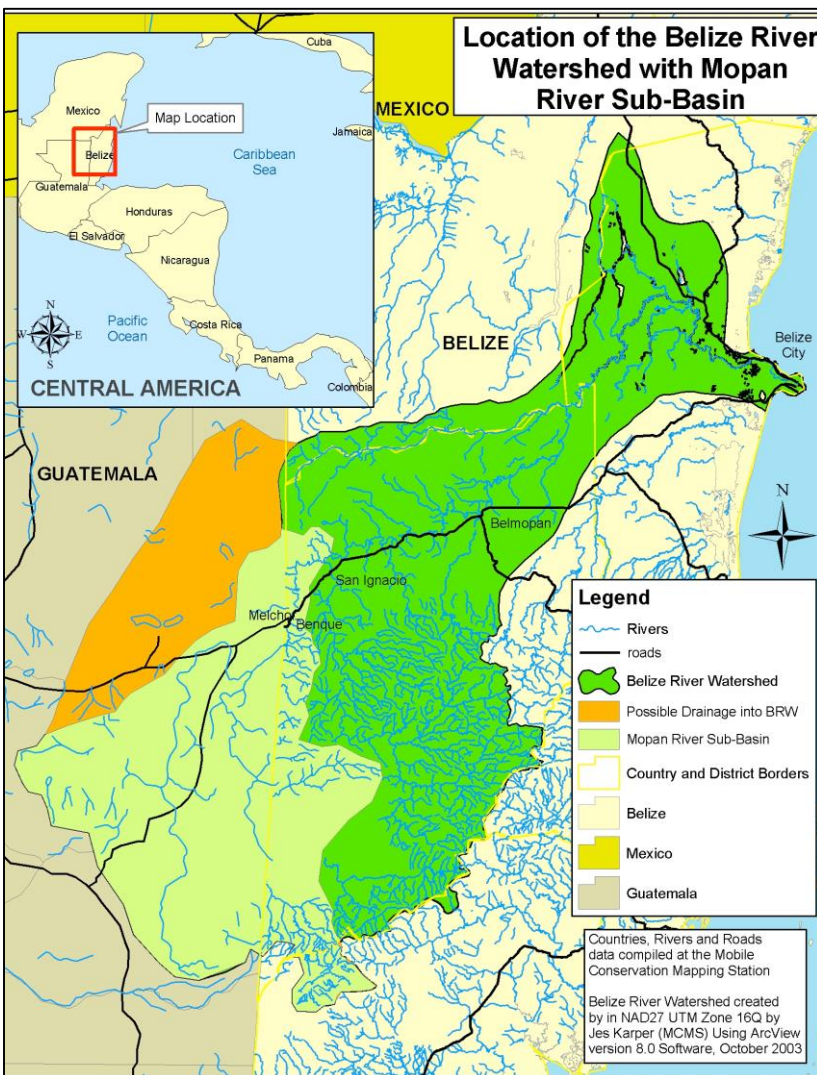


Figure 1. Belize River watershed.

4. Tourism and agriculture are the two single largest sources of income and employment in Belize. Tourism employs 28% of the population and represents 21% of the gross development product (GDP), while agriculture employs 10% of the labor force and contributes to 13% of the GDP.<sup>18</sup> Tourism is primarily natural- and cultural-resource-based, with visitors focusing on inland protected areas and coastal marine areas. Although 800,000 ha, or about 38%, of Belize's total land area is considered potentially suitable for farming, only 9.7% of the land (about 78,000 ha) is used for agricultural practices. Belize's agricultural sector is characterized by: a) milpa farming, based on slash-and-burn practices used to produce food for domestic consumption: maize, grown during the wet season, and a variety of other crops (including beans, vegetables, root crops, and plantains); and b) commercial farming, which includes export crops such as sugarcane, oranges, grapefruit, banana, and cocoa. Twenty-four (24%) percent of farms in the country have less than 2 ha (5 acres),

<sup>16</sup> *Fifth National Report to the United Nations Convention on Biological Diversity: Belize (2014)*. Ministry of Forestry, Fisheries and Sustainable Development, Belmopan.

<sup>17</sup> <http://www.fao.org/nr/water/aquastat/main/index.stm>. Accessed January 2017.

<sup>18</sup> <http://www.worldbank.org/en/country/belize/overview>. Accessed January 2017.



33% between 2 and 8 ha (5 and 20 acres), and 74% of the farms are below 20 ha (50 acres).<sup>19</sup> Although the timber industry has declined in importance within the country's economy, it still contributes towards export earnings, especially through an increase in recent years in exports of secondary hardwoods such as black poison wood (*Metopium brownie*) and black cabbage bark (*Lonchocarpus castilloi*).<sup>20</sup>

5. Despite the fact that 35.8% of Belize's land territory falls within protected areas, the country still faces significant challenges to protect its biodiversity and promote its sustainable use, particularly in production lands. The principal threats to Belize's terrestrial and freshwater biodiversity include habitat loss and fragmentation resulting from land use change (deforestation and ecosystem degradation), the unsustainable exploitation of forest resources (hunting, logging, and non-timber forest products), the use fire as a land-clearing tool for crop cultivation and pasture management, unsustainable use of freshwater resources (overexploitation of surface and groundwater supplies), pollution (agrochemicals, industrial/urban effluent, solid waste, sewage, sedimentation), unsustainable tourism practices (exceeding guide/visitor ratios, exceeding limits of acceptable change), transboundary incursions, and climate change.<sup>21</sup> In the MMM, threats to biodiversity and loss of forest cover include illegal logging, looting, hunting, and poaching from cross-border illegal incursions into Belizean territory. The MMM is too small to protect wide-ranging species in the long term and connectivity with other forest tracts and patches in the landscape is critical to maintain biodiversity. Outside of the protected areas, private and public forested lands are being converted to agricultural lands and/or being used for urban expansions or simply over-exploitation. Along rivers and streams, the clearance of riparian vegetation has become a major concern despite existing environmental norms for the protection for a 66-foot riparian buffer. Riparian vegetation plays a vital role in the control of agricultural runoff and water quality, and as habitat for biodiversity and for inland forest connectivity. Protecting against runoff that originates inland and reaches the sea through rivers is also critical for the safeguarding of lowland, coastal, and marine ecosystems such as pine savannas, wetlands and mangroves, coral reefs, and offshore cayes.

6. Land degradation in Belize is expressed through a decline in soil fertility and increased erosion that has resulted primarily from the deforestation and land conversion from forested land to agriculture, and from farming on marginal lands. Between 1980 and 2010, about 6.4% (44,560 ha) of the forests within protected areas and 25.2% (293,467 ha) outside protected areas were cleared.<sup>22</sup> Land degradation in Belize within the agricultural sector is evident in the large-scale operations and in the small farming and milpa systems. Land degradation in the agricultural sector has resulted from repeated farming, which depletes the nutrients, or from intensifying the use of the land beyond its productive capacity. The former is the case with large-scale cultivation of crops such as citrus and sugarcane, while the latter is usually the case in the milpa farming systems. In addition, the frequent and continued application of agrochemicals and pesticides accumulates in the soils, contributing to their degradation and also affecting the quality of water available for downstream users due to runoff. Forestry activities may have also contributed to land degradation; although the impact of these activities has not been fully assessed in the country, timber harvesting activities are known to result in soil compaction and erosion.<sup>23</sup>

7. In addition, increased demand for freshwater resulting from increasing population, economic activity, and agricultural expansion are increasingly contributing to land degradation and threatening the quality and availability of freshwater. The value for renewable internal freshwater resources per capita (cubic meters [m<sup>3</sup>]) reached a maximum value of 91,324 m<sup>3</sup> in 1987 and a minimum value of 48,019 m<sup>3</sup> in 2009, indicating a steady decline over the years.<sup>24</sup> There has been deterioration of water quality in watersheds—most notably in the Belize River watershed—due to sedimentation and urban and agrochemical contamination. Agrochemicals are generally associated with the citrus and banana industries, which enter the river as a result of clearance of riverine vegetation. In addition, products such as sugar, citrus, and bananas, three major crops that are cultivated are at risk of damage or unsustainability due to degradation of the land or drought.

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<sup>19</sup> Food and Agriculture Organisation (FAO). 2011. *Country Programming Framework for Belize: 2011-2015*. Available at [www.fao.org](http://www.fao.org). Accessed January 2017.

<sup>20</sup> *Fifth National Report to the United Nations Convention on Biological Diversity: Belize (2014)*. Ministry of Forestry, Fisheries and Sustainable Development, Belmopan.

<sup>21</sup> Ibid.

<sup>22</sup> Belize National Action Programme of the United Nations Convention to Combat Desertification. Document under development.

<sup>23</sup> *Belize's First National Report on the Implementation of the United Nations Convention To Combat Desertification (UNCCD) 2000* (Draft). Forest Department, Ministry Of Natural Resources, Environment, And Industry. Belmopan. 29 pages.

<sup>24</sup> United Nations Environment Programme. *National Environmental Summary, Belize 2011*. 43 pages.

8. The country is also highly vulnerable to climate change. The impacts of global climate change are likely to be felt through greater climate variability (changes in dry and rainy seasons), extreme events (hurricanes, floods, droughts) and damage to water resources, agricultural systems, natural ecosystems, human settlements, and coastal resources.<sup>25</sup>

9. The Government of Belize (GoB), in consultation with its stakeholders, have prioritized the conservation and sustainable use of biodiversity, the reduction of land degradation, and the protection of its freshwater resources as part of their national environmental strategies and plans. The GoB has defined as a goal of the National Biodiversity Strategy and Action Plan (NBSAP; 2016-2020) to mainstreaming biodiversity into all sectors of society so that by 2020 there will be a greater understanding and appreciation of biodiversity and its benefits and values. In addition, it intends to reduce direct and indirect pressures on Belize’s freshwater and terrestrial ecosystems to sustain and enhance national biodiversity and ecosystem services, including the implementation of National Land Use Planning Framework that will promote the sustainable management the agricultural and forestry sectors, the reduction of pollution, the restoration of degraded ecosystems, among other goals.<sup>26</sup> Belize is also moving towards promoting sustainable forest management, including issuing long-term forest licenses for the Forest Reserves. The revision of the National Forest Policy, National Forest Programme and the Forest Act will significantly strengthen Belize’s management of its forest resources and to eventually end short-term forest licenses. This effort will emphasize the importance of collaboration between the Forest Department and other governmental agencies, private sector agencies, non-governmental organizations (NGOs), and communities adjacent to forest reserves, and will underline the relationship between the conservation of biodiversity and the management of forest resources.<sup>27</sup>

10. To ensure the sustainable use and management of water resources, the GoB has adopted an Integrated Water Resource Management Policy (2008), which highlights the need to conduct a proper and comprehensive assessment of water resources and develop baseline of water quality for the various uses of water. In 2011, the GoB enacted the National Integrated Water Resources Act, which provides for the management, controlled allocation, and sustainable use and protection of the water resources of Belize. In addition, it provided for the establishment of a National Integrated Water Resources Authority (NIWRA) to coordinate and assist in regulating the water sector.<sup>28</sup> Ongoing initiatives under the NIWRA include developing current estimates of water availability and value, and implementing measures to ensure wise use and long-term sustainability of Belize’s water resources. Although the First National Action Programme of the United Nations Convention to Combat Desertification (UNCCD) was completed in 2006, currently no specific strategy to combat land degradation or drought exists in Belize. The initiatives that have been implemented to address issues of land degradation have not been coordinated and have had limited involvement from public and private institutions, resulting in limited fulfillment of the UNCCD.

11. Despite existing efforts for the conservation and sustainable use of biodiversity, the reduction of land degradation, and the protection of its freshwater resources in Belize, challenges persist. The **long-term solution** to addressing the existing threats to biodiversity and land degradation in Belize is to mainstream biodiversity conservation and SLM/water management into production landscapes. An integrated landscape/watershed approach to biodiversity, soil, and water conservation is needed to ensure that connectivity is maintained between protected areas and production lands for the survival of species and the ecological and hydrological processes of the multiple ecosystems present along a gradient that extends from the ridges of the Maya Mountains to the coastal wetlands and waters. A strategy is being proposed that will allow the development of a policy, institutional, and financial environment that is conducive to the delivery of multiple GEBs through the sustainable management of production landscapes, together with the implementation of sustainable production practices and improved value chains for key agricultural and forest products from the Belize River watershed. Nevertheless, there are currently barriers that prevent the achievement of this goal:

Ineffective mechanisms to ensure coordinated efforts and sharing of information to	There is little interinstitutional coordination in the public sector to promote sustainable production landscapes and integrated watershed management. There are numerous public institutions with overlapping functions limiting opportunities for joint
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<sup>25</sup> Food and Agriculture Organisation (FAO). 2011. *Country Programming Framework for Belize: 2011-2015*. Available at [www.fao.org](http://www.fao.org). Accessed January 2017.

<sup>26</sup> National Biodiversity Strategy and Action Plan, Belize. Ministry of Agriculture, Forestry, Fisheries, the Environment and Sustainable Development, Belmopan, Belize, 2016.

<sup>27</sup> United Nations Environment Programme. *National Environmental Summary, Belize 2011*. 43 pages.

<sup>28</sup> Ibid.

<p>promote sustainable management of production landscapes</p>	<p>programming and enforcement; thus, the allocation of financial resources and efforts to promote sustainable management of production landscapes are limited.</p> <p>Agencies that manage environmental and hydrological information have difficulty sharing information due to a lack of a common platform that would facilitate uploading and accessing information in support of decision-making. In addition, information is not regularly updated and additional training of staff is needed so that information gathering and management is conducive to address issues related to biodiversity conservation, integrated watershed management, SLM, and building resilience to climate change.</p> <p>Finally, there is a lack of economic incentives in the country to encourage production sectors to implement environmentally friendly production practices and prevent the degradation of forest, soil, and water resources. They are also unaware of the environmental and socioeconomic benefits derived from implementing sustainable production practices. The production sectors have limited knowledge about environmentally friendly production and lack participation in the development of strategies for the sustainable management of production landscapes</p>
<p>Limited available tools to bring together the public and private sectors to address threats to biodiversity and land and water resources degradation that result from conventional production practices</p>	<p>Although existing policies in Belize call for the development of Water Master Plans to allow for the integrated management of land and water resources, this planning tool is rarely used. There is a need to establish water resources baseline data (including the improvement of hydrological monitoring stations); identify, delineate, and protect aquifers and recharge areas; establish water allocation use criteria; and establish a framework to ensure the proper management and use of surface and groundwater resources. In addition, existing environmental norms require the protection of a 66-foot riparian forest buffer along rivers and streams to control runoff and protect water resources; however, there is lack of enforcement by environmental authorities and of incentives for farmers to comply with the norm. The extent of the damage already caused to riparian forest needs to be assessed in order to propose participatory mitigation measures, including the restoration of degraded areas.</p> <p>There is also a lack of conservation agreements between environmental authorities and farmers for the establishment of landscape management tools within their lands that would promote ecological connectivity by managing existing forest patches or establishing production practices that are conducive to increasing forest cover and the establishment of agro-ecological systems (e.g., agro-forestry, sylvopastoral systems). Producers lack the training and the technical and logistical support necessary to implement sustainable production practices, as well as access to incentives (e.g., tax benefits, certification, preferential pricing, payment for environmental services, and carbon credits) and markets for sustainable agricultural or forestry products. Producers require more information about existing markets to help them add value to their products, as well as training programs to improve their skills in business management to make them more competitive and eventually increase their net income from sustainable production. Finally, producers need to participate in monitoring the ecological benefits of adopting sustainable production practices so that this information will allow them to enhance agro-ecosystem productivity and to assess jointly with government agencies their contribution to the delivery of GEBs.</p>
<p>Absence of mechanism for knowledge sharing to enable replication and scaling up of successful biodiversity conservation and SLM experiences</p>	<p>The lack of a mechanism for knowledge sharing, knowledge forums, and targeted knowledge products in the country that will allow document and systematize best practices and lessons learned about biodiversity conservation and SLM/water management efforts limits the possibility of replication and scaling up. There is a lack of a national platform that will bring together the public sector, the private sector, and civil society to learn about biodiversity conservation, SLM, and watershed management. In addition, there is a lack of systematic monitoring results and limited</p>

	available data to assess the impact of interventions and to guide future planning and investments.
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## II.1.2. The baseline scenario and associated baseline projects.

12. Despite the substantial volume of surface water and groundwater in Belize, these resources are being threatened as demand has increased dramatically, particularly in support of the country's production sectors, and over exploitation of the resources within production landscapes is now becoming evident. Watershed destruction and consequential reduction in the water inventory and quality is tied directly to the country's production landscape.

13. Agricultural development is the main driving factor of deforestation in Belize. The consequences of forest lost to water resources, a resource that is key to the sector's sustainability, is dire. Belizean forests provide an essential economic foundation as they protect and replenish the country's vulnerable water resources. The linkages between the country's production sectors and landscapes and the health of its land and water resources have long since been realized; however, the country has only approached the integrated management of these resources with urgency and worked to prioritize its effective management during the last decade, but these effort have not been sufficient to addressed all the issues at hand.

14. Reflective of the importance of the effective management of water resources to future national development, a national Water Resource Policy was developed in 2008 identifying key principles of natural resources management and conservation linked to the protection of this valuable asset. Guiding principles of the policy state: a) water is a finite and vulnerable natural resource, essential to sustain life, the environment, the economy, and national development; b) watersheds and their surface and subterranean linkages to the marine environment are the basic functional units for achieving Integrated Water Resources Management; c) water has an economic value and the "user pays" principle is integral in ensuring the sustainability of the resource; d) global climate change, climate variability, and land use will have impacts on the availability and use of water resources; and e) the integrated management of the resources also contributes towards ensuring the resilience of agricultural areas to the effects of climate change, ensuring national economic and food security. Despite the importance of the national Water Resource Policy, its implementation has been limited and the pressure on the country's water resources has increased. In addition, the country has not developed a NAP for the UNCCD that would allow to effectively integrate water resource management and sustainable land management, let alone identify and allocate resources for the implementation of specific actions.

15. The foundations for water resource management were set in place during the country's colonial era. The Hydrology Unit, established in 1970 as a section of the National Meteorological Service, has responsibility for the effective management of Belizean water resources. Since its inception as a unit, the country of Belize has continuously invested in the building of national capacities, expanding the mandate of the Unit from basic monitoring of resources to now include forecasting and early warning, integrated water resource management, and the continued assessment of the state of the nation's natural water resources as a key development asset. To this end, the country established a National Hydrological Monitoring Network. The program, initially funded by the British Overseas Development Agency, has now been institutionalized within the national governance framework for resource management. Since its establishment to the present, the Unit has continuously upgraded and expanded the National Hydrological Monitoring network through a combined effort of recurrent expenditure from fiscal budgets as well as a number of other projects related to hydrology, such as the Japan International Cooperation Agency implemented by the Caribbean Disaster Management Agency (CDEMA), the Caribbean Disaster Management (CADM) Project Phase II; the European Union Global Climate Change Alliance (EU-GCCA) Project; and currently, the Japan Caribbean Climate Change Partnership. These projects represent more than \$10,000,000 of investments over the past 10 years; however, these efforts have not been sufficient to reverse pressures on water resources. The Hydrology Unit still needs to be strengthened and provided with tools for improved services to water users and managers, including information about water demand and supply, flood and drought forecasting, and for developing sustainable water management and protective measures for water resources. This includes the development of Water Master Plans and Water Quality Control Plans for the country's 18 major watersheds as mandated by the National Integrated Water Resources Management Act of Belize (2011); currently, none of these plans has been developed.

16. Efforts to secure national watersheds and forest resources have been supported by key GEF-funded initiatives (Strengthening National Capacities for the Consolidation, Operationalization, and Sustainability of Belize's Protected Areas [GEF ID 3861]: \$975,000 USD, and The Management and Protection of Key Biodiversity Areas Project [GEF ID

4605]: \$6.089 million USD), targeting specifically the health and sustainability of the country's protected areas system and the protection of its biodiversity. It is this network of protected areas that ensures the integrity of the principal watersheds and allows for connectivity of watershed management units, thereby contributing to building national resilience to climate change and securing sustainable natural resource-based growth. In the wake of these projects, the Government of Belize in 2016 went on to commit \$7.9 million USD to the Chiquibul Initiative (2016-2018), a program designed to protect key protected areas/watersheds along Belize's western border. The Chiquibul region is the host of headwaters feeding the country's largest and most widely used watershed, the Belize River watershed. These initiatives have made important contributions to protect portions of watersheds and forest resources within protected areas, but have had limited impact on the protection of forest and water resources outside of protected areas and within production lands.

17. In fulfilling its mandate to foster and ensure the proper and best use of land, and recognizing that this is impacted by social, economic, and environmental factors, the Ministry of Natural Resources (MNR) is engaged in a process to update the National Land Use Policy and Planning Framework, a policy initially set in place with the support of the GEF-funded Sustainable Land Management Project (\$500,000 USD). The 2017 revised policy documents and action plan provides the basis for a comprehensive national land use plan. However, the implementation of land use policies has been difficult and enforcement has been limited. This is reflected in the fact that riparian forests continue to be degraded (mostly due to the expansion of agriculture) despite that existing regulations regarding the division and consolidation of land in Belize dictate that a 66-foot buffer along water bodies should be maintained as a conservation area.

18. In addition, the National Meteorological Service (NMS), through the Energy Resilience for Climate Adaptation (ERCAP) project (2016- 2017) to be implemented through the Belize Electricity Limited (BEL), will be investing \$1.2 million USD for water management in the Belize Rive watershed. This will include strengthening the hydrometeorological network with the installation of six (6) hydrometeorological automatic stations and six (6) automatic rain gauges to be placed in the Macal River basin for the monitoring of rainfall and water inputs to the Chalillo Dam; the installation of fourteen (14) automatic weather stations; training in radar image interpretation for BEL and NMS staff; calibration of the radar to provide more accurate data; and updated software for the manipulation and display of radar data. Despite these efforts, the hydrometeorological network will remain incomplete and the information needed to guide decision making for sustainable water management and for forecasting and designing protection measures will continue to rely on patchy data.

19. Baseline projects also includes a \$600,000 USD investment in 2017 as part of the Japan Climate Change Initiative, which will promote climate-smart agriculture, water management, and the development of the National Adaptation Plan for water and agriculture. Finally, the GoB will invest in the Belize River watershed through its recurrent budget (2016-2018) approximately \$2,321,805 USD for land management, \$178,627 USD in hydrology and water management, \$4,798,982 USD to support agriculture development and provide extension services, and \$1,799,775 USD in forestry resources management. Despite the GoB's efforts, government budgets are very limited as the country has struggled to recover from the economic slowdown that resulted from the global economic crisis of 2008, particularly due to declines in tourism and direct foreign investment. In addition, the country's high vulnerability to natural hazards and climate change, which has resulted in the country being impacted by multiple related-event during the last decade causing extensive damage to infrastructure and the agriculture sector, has resulted in budget constraints within the government and limits its ability to finance biodiversity conservation and sustainable land/water management initiatives.

20. The limitations of the baseline outlined above demonstrate that resources from the GEF are necessary to deliver global environmental benefits.

II.1.3. The proposed alternative scenario, GEF focal area<sup>29</sup> strategies, with a brief description of expected outcomes and components of the project.

21. The project will add value to existing baseline investments by enabling a policy, financial, and institutional environment that will be conducive to the delivery of global and national benefits through sustainable management of production landscapes. The project will invest in strengthened governance and financial structure for the conservation of biodiversity and ecosystem services through SLM/water management in production landscapes, and the ability of the

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<sup>29</sup> For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

MNR and the Ministry of Agriculture, Fisheries, Forestry, the Environment, and Sustainable Development (MAFFESD) to implement strategies for conservation and SLM/water management in production landscapes.

22. In addition, the project will add value to existing baseline investments directed at the integrated management of the Belize River watershed, which is the largest watershed in the country. Through sustainable production and improved value chains for key agricultural and forest products from the watershed, biodiversity conservation and SLM will be enhanced, the area of agriculture and forest production under sustainable practices will be increased, and producers implementing sustainable practices will have access to markets. This will be achieved by working closely with farmers, producers, and government agencies, and by ensuring the equitable distribution of project benefits among women and men.

#### GEF focal area strategies

23. The GEF alternative scenario will mainstream conservation and sustainable use of biodiversity into production landscapes in the Belize River watershed and will enable a policy, institutional, and financial environment that is conducive to the delivery of multiple GEBs through the sustainable management of production landscapes. It is framed within the GEF biodiversity focal area strategy, more specifically Objective 4 (BD-4): *Mainstream biodiversity conservation and sustainable use into production landscapes/seascapes and sectors*; Program 9: *Managing the Human-Biodiversity Interface*.

24. The project will also contribute to achieving the Aichi Targets, particularly *Target 1*: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably; *Target 4*: By 2020, at the latest, governments, businesses, and stakeholders at all levels have taken steps to achieve or have implemented plans for sustainable production and consumption and have kept the impacts of use of natural resources well within safe ecological limits; *Target 5*: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced; *Target 7*: By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity; *Target 8*: By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity; *Target 14*: By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable; and, *Target 15*: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

25. The GEF alternative scenario is also framed within the Land Degradation focal area strategy, more specifically Objective 1 (LD-1): *Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods*, Program 1: *Agro-ecological Intensification*; and Program 2: *SLM for Climate-Smart Agriculture*; and Objective 3 (LD-3): *Reduce pressures on natural resources by managing competing land uses in broader landscapes*, Program 4: *Scaling-up sustainable land management through the Landscape Approach*.

#### *Component 1. Enabling environment (policies, financial mechanisms, and institutional capacities) for delivering multiple global environmental benefits (GEBs) through the sustainable management of production landscapes*

26. This project component will develop an enabling environment to allow mainstreaming of biodiversity conservation and SLM considerations into the production landscapes in Belize, using a landscape/integrated water management approach. It will allow overcoming barriers that prevent coordinated efforts and sharing of information to promote sustainable management of production landscapes. This will include the revision and harmonized policies and legislation for riparian forest protection (National Lands Act), forest management (Forest Act), water management and irrigation (National Integrated Water Resources Act), river sand mining (Mines and Minerals Act), and environmental management, river discharges, and water quality (Environmental Protection Act) to provide clarification guidelines regarding agencies' jurisdictions and competencies, and allowing for the development of mechanisms to improve co-programming and investment and protocols to reduce the clearance and degradation of riparian forests, discharges to water bodies, illegal water withdrawals, and mining in rivers. The strengthening of protocols and their institutionalization will be done taking into consideration Programme Planning as a country. It will also include the expansion of the information management system of the NIWRA/Land information Center, Ministry of Natural Resources (MNR), and establish links with other

information systems of other agencies such as the Forestry Department, Department of Environment, and the National Climate Change Office. The expanded information management system will be housed within the MNR and the NIWRA/Land information Center will be responsible for its maintenance. Once the project has concluded, the information management system will become part of the national framework supporting measurement, reporting, and verification (MRV) and an early warning system. Sustainability will be supported as it is mainstreamed into national structure and work programs. To facilitate the monitoring and enforcement of legislation and policy governing land use and land use conflicts, the project will support the Lands and Surveys Department (MNR) by equipping and training its technical and field staff.

27. To encourage production sectors (agriculture, tourism, forestry, and urban development and industry) to implement environmentally friendly production practices and prevent the degradation of forest, soil, and water resources, financial incentives will be developed and established following a feasibility analysis that will be conducted using PPG funds. The project aims to replicate Ecuador's Socio Bosque Program (annual per-hectare payments in return for maintaining forest cover), which has been successful in reducing deforestation by establishing conservation agreements between the government and private and communal (including indigenous) landholders. Under these agreements, and in line with the STAP recommendations regarding payment for ecosystem services (PES), yearly monetary payments will be made in return for maintaining forest cover. Key agreement terms to be negotiated might include: a) private landholders or communities wishing to participate sign a short standard agreement based on a voluntary "opt-in," no-negotiation approach; b) the agreements could have a term of 20 years; c) applicants should have legal title to the land; d) applicants could submit an individual or community investment plan; e) participants would be required to maintain intact forest cover in the areas under contract; and f) participants could agree to undergo annual monitoring. Payments would be conditional upon performance. During the PPG, the feasibility of replicating the Socio Bosque Programme will be fully assessed and the agreement terms will be outlined. Payments will be made through PACT, Belize's national conservation trust; revenues for the trust are primarily derived from a conservation fee of \$3.75 USD paid by visitors to Belize (50% of PACT's revenue), a 15 percent commission from the cruise ship per-passenger tax, fiduciary services, and interest earned on its term deposits. Similarly, the project will consider state-funded results-based payments designed with environmental and socioeconomic targets following experiences from Brazil's social protection programmes; the feasibility of the Brazilian PES will also be assessed during the PPG.

28. A carbon sequestration model inspired by the successful experience of the GEF-UNDP Project 3590 *Mainstreaming biodiversity in the coffee sector in Colombia* will also be considered in Belize. This model used a Clean Development Mechanism methodology (AR-AMS0001, above-ground and below-ground tree and woody perennials biomass and below-ground biomass of grasslands) to estimate the amount of carbon sequestered by the landscape management tools (i.e., biological micro-corridors, agroforestry, forest enrichment, live fences, windbreaks, and hedges) during the lifetime of the project in Colombia. This project sold over 17,000 tons of carbon at an average of \$6 USD per ton of carbon. The buyers identified by the project included companies and individuals willing to offset their emissions. A similar approach based on this successful experience will be replicated and adjusted to conditions in Belize.

29. The National Integrated Water Resources Management Act of Belize (2011) mandates that Water Resources Master Plans (WRMPs) should be prepared for river basin, groundwater, and coastal zone management, including water quality control plans for all surface water and groundwater resources. However, the development and implementation of WRMPs have been very limited due to a lack of adequate funding strategies. The project will support the NIWRA/MNR to devise and operationalize funding strategies so that WRMPs can be developed and implemented. This will include the collection of fees for water use and other funding sources that will be identified during the PPG.

30. By project's end, the governance and financial structure for the conservation of biodiversity and ecosystem services through SLM/water management in production landscapes will have been strengthened, including updated legislation that will increase the riparian forests buffer reserve from 66 feet (20 meters). In addition, government and private funding available for sustainable production in priority sectors will have increased by at least 30% (baseline will be determined during the PPG and target will be confirmed), and two financial incentive mechanisms will be available to promote sustainable production. Five government agencies will have formalized agreements to provide updated georeferenced information enhancing inter-agency cooperation and facilitating decision-making through improved mechanisms for information sharing. Finally, the capacity of staff of key agencies (public and private) responsible for or interested in biodiversity conservation, integrated watershed management, SLM, and building resilience to climate change will

improve by 30% as measured through GEF/UNDP capacity development indicators (baseline will be determined during the PPG).

*Component 2. Delivering GEBs through sustainable production and improved value chains for key agricultural and forest products from the Belize River watershed*

31. Through this project component, multiple GEBs for biodiversity conservation and SLM/water management will be delivered through the implementation of sustainable production and improved value chains for key agricultural and forest products from the Belize River watershed. The Belize River watershed was selected as the implementation site for this project given that it is the largest watershed in the country and one of the most heavily used. This strategy will overcome existing barriers that prevent bringing together the public and private sectors to address threats to biodiversity and land and water resources degradation that results from conventional production practices. A Water Master Plan for the Belize River watershed will be developed through a participatory process under the guidance of NIWRA/MNR, allowing for the integrated management of soil and water resources and providing guidelines and lessons learned for integrated watershed management nationally. As part of the Water Master Plan, existing stresses and the level of damage to riparian forests will be assessed, providing baseline information for outlining management strategies, including the rehabilitation of 500 ha (1,235 acres) of degraded riparian forests. Similarly, critical groundwater recharge areas will be identified, mapped, delineated, (based on extent, quantity, quality, recharge rate, etc.) and stressors assessed so that at least 50% of these can be better protected to build more stable water supplies. Additional meteorological stations, wells, and flow and stage gauges will be installed within the watershed to build a more robust hydrological monitoring network that will allow for improved sustainable water management, sustainable water allocation for production, and building resilience to climate change through improved flood and drought forecasting. The implementation of a participatory program for sustainable soil management will reduce erosion by 20%, improving water quality and agro-ecological productivity.

32. In addition, through this component landscape management tools will be implemented in priority areas resulting in 2,500 ha (6,177.6 acres) with biological micro-corridors, agroforestry systems, forest enrichment, live fences, windbreaks, and hedges, etc.), which will provide habitat for biodiversity, enhance forest connectivity, and improve soil productivity. Conservation agreements with participating producers/farmers will be established, which will provide guidelines and follow-up to the implementation of the landscape management tools. To ensure a stable supply of plant material, at least five nurseries of endemic and native plants will be established (target to be confirmed during the PPG phase).

33. Also, 15,000 ha (37,065 acres) of sustainable agriculture and forest production will be established (target will be confirmed during the PPG). To accomplish this, the project will pilot at least two of the financial incentives to be institutionalized through Component 1, in close to 500 hundred small- and large-scale farms, benefiting women and men equally. Sustainable agriculture and forest production will benefit from the sustainable allocation of water and irrigation, based on the assessment of the current supply and demand and the quality of hydrological resources in the Belize River watershed. Sustainable production will also include the piloting of at least one energy system (gasification/biogas) for the management of agriculture and forest production wastes and a training program for small- and large-scale producers, including women and vulnerable groups, to facilitate implementation.

34. As an additional incentive to farmers, the project will facilitate access to markets for sustainable products. Current gaps in value chains for at least two products for large-scale producers [e.g., sugarcane, banana, and cocoa] and one for small-scale producers [e.g., vegetables, beans, root crops, and plantains]) will be assessed considering sustainability in production and conservation agreements, as well as the limitations of the existing markets. A work extension program will be implemented with the support of the national agriculture and forestry extension services (MAFFESD) to improve production, enhance value chains for key products, and build awareness among small- and large-scale producers about markets for sustainable products. Training and technical support will be provided to producers implementing sustainable practices to improve their skills in areas such as business plan development, accounting, financing, and marketing. Extension services, training, and technical support will be provide with support from the Extension Service of the Department of Agriculture and the University of Belize/Central Farm Campus, which is recognized in the Caribbean and Central America as a center for training, research, and development in sustainable agriculture. By project's end, the farmers/producers' net income will have increased by at least 20% (baseline and target to be established during the PPG) resulting from the implementation of sustainable production practices by project end.

*Component 3: Knowledge Management and Learning*



35. This component will allow systematizing best practices, and lessons learned about biodiversity conservation and SLM/water management in production landscapes of the Belize River watershed and to ensure that these are made available for use in other production landscapes and watersheds in the country. It will also support adaptive management so that the project integrates experiences that result during implementation of the activities in the new programmatic cycles of the project.

36. The project results as outlined in the project results framework will be monitored annually and evaluated periodically during project implementation to ensure the project effectively achieves these results. The gender mainstreaming plan, which will take into account the needs of women and outline activities that address gender-differentiated needs and impacts related to biodiversity conservation and its sustainable use and impacts to SLM/watershed management, will also be monitored through this project component. Finally, Project-level monitoring and evaluation (M&E) will be undertaken in compliance with UNDP requirements as outlined in the UNDP Programme and Operations Policies and Procedures and UNDP Evaluation Policy.

II.1.4. [Incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, and [co-financing](#).

37. The project will add value to existing baseline investments through a landscape/watershed management approach to reduce threats to biodiversity and land degradation, with emphasis on production lands. The comparison of baseline and alternative scenarios and global environmental benefits of the project is summarized below:

<b>Current practice (baseline)</b>	<b>Alternative to be put in place by the project</b>	<b>Global Environmental Benefits</b>
The conservation of biodiversity and SLM/water management depends on various public agencies with overlapping functions, limiting opportunities for joint programming and enforcement	Strengthened governance structures, including clear mandates regarding water and forest resources management, improved co-programming and investment between public agencies	<ol style="list-style-type: none"> <li>1. 606,684.29 ha of improved management of landscapes contribute to the conservation of globally significant biodiversity and ecosystem goods and services.</li> <li>2. 2,500 ha of landscape management tools provides habitat to biodiversity and improves soil productivity.</li> <li>3. 500 ha (1,235 acres) of degraded riparian forests rehabilitated contributes to ecosystem connectivity and improves water quality.</li> <li>4. Reduction of the erosion rate by 20% as a result of the implementation of sustainable production practices improves water quality.</li> <li>5. 50% of key groundwater recharge areas rehabilitated and protected builds ecosystem resilience to climate change and more stable water supplies.</li> <li>6. 500 number of agriculture and forestry farms covering 15,000 ha (37,065 acres) under sustainable production.</li> <li>7. Presence of key indicator species (jaguar, puma, white-lipped peccary) in forest patches/corridors in production lands and protected areas.</li> </ol>
The Lands and Surveys Department has limited capacity to enforce legislation for riparian forest protection	The Lands and Surveys Department has equipped and trained staff to monitor and enforce legislation and policy governing land use and land use conflicts, including riparian forest protection	
Decision-making regarding biodiversity conservation is supported by dispersed and limited environmental and hydrological information	Mechanisms and protocols to improve data-gathering and formalized agreements for improved information-sharing between institutions	
Economic incentives to encourage production sectors to implement environmentally friendly production are not used	At least two incentives (e.g., annual per-hectare payments in return for maintaining forest cover and carbon sequestration) to promote sustainable agriculture and forest production available and piloted	
Although existing policies in Belize call for the development of Water Master Plans to allow for the integrated management of land and water resources, this planning tool is rarely used	A Water Master Plan for the Belize River watershed developed through a participatory process allows integrated management for sustainable land and water resources use and protection	
Conventional agriculture and forest production practices in the Belize River watershed is non-sustainable	Increase in the area of agriculture and forest production under sustainable practices through economic incentives, technical support and extension	

	services, access to markets, and training	
Limited participation of women in biodiversity conservation and SLM/water management initiatives	Gender mainstreamed into biodiversity conservation and SLM/water management project activities measured using gender indicators	

#### II.1.5. Global environmental benefits (GEFTF)

38. The project strategy will contribute to the global environmental benefits presented in the table above, including the conservation and sustainable use of biodiversity of global importance in production landscapes adjacent to Belize’s primary KBA in the MMM. This includes the Chiquibul Forest, which consists of three protected areas (Chiquibul National Park, Chiquibul Forest Reserve, and the Caracol Archaeological Reserve). This forest forms part of the Maya forest ecosystem, is home to a rich diversity of flora and fauna, and is critical for the provision of water and other ecosystem services.

39. In addition, the project will yield significant benefits for globally significant biodiversity by contributing to consolidate the Central Belize Corridor (CBC) that provides biological connectivity to protected areas in the Belize River watershed/Maya Mountain Massif (MMM). The corridor encompasses three ecosystems: freshwater ecosystems, broadleaf forests, and savannas and pine savannas. The broadleaf forests, especially riparian forests, help to maintain the integrity of the Belize River that supplies water to communities and agricultural developments in the corridor area, the Belize River Valley, and Belize City. The broadleaf forests also help to maintain the integrity of the soil and resilience of biodiversity and the production sectors to climate change impacts. These forests provide habitat for wide-ranging animals, including the near-threatened jaguar (*Panthera onca*), the near-threatened puma (*Puma concolor*), and the vulnerable white-lipped peccary (*Tayasu peccary*) to move between the Rio Bravo Conservation and Management Area (RBCMA) in the north and the MMM, thereby contributing to viable populations of these and other species. Central Belize is currently one of the major deforestation hotspots for Belize, including the deforestation of riparian forests. The project will contribute to strengthening the CBC and the delivery of global environmental benefits (GEBs) through the implementation of landscape management tools in production landscapes, which include micro corridors between existing forest patches that are critical for the movement of biodiversity between protected areas (i.e., RBCMA and MMM). The delivery of biodiversity GEBs will include maintaining the presence of key indicator species (jaguar, puma, and white-lipped peccary) in forest patches/corridors in production lands and protected areas.

40. The savannas and pine savannas play an important role in water retention and flood control and provide habitat and connectivity for many animals, including the endangered yellow-headed parrot (*Amazona oratrix*); the Mexican black howler (*Alouatta pigra*), which is considered the most endangered howler monkey of the genus; and the endangered Central American spider monkey (*Atteles geoffroyi*). The predominant tree species of the pine savannas is the vulnerable *Pinus caribaea* var. *hondurensis*, which requires periodic low-intensity burns for its regeneration. Approximately 25 percent of Belize’s wildfires occur in savannas and pine savannas; most are due to agricultural and other human activities. Other threats in lowland savannas include non-sustainable agriculture or livestock production. The project will reduce these threats and facilitate the conservation of savannas and pine savannas in the Belize River watershed by implementing actions and providing incentives to promote sustainable production practices, such as sustainable agriculture.

41. Central Belize contains the most important watershed in the country, which is the Belize River watershed. This watershed is the largest, most populated, and has the highest annual rate of deforestation of the five largest watersheds in the country. This watershed is expected to experience a decline in water volume over the next few decades from land use and climate change impacts. Major threats and challenges to the Belize River and its associated systems include riparian deforestation, erosion, sedimentation, nutrient loading and contamination from runoff, altered flow regimes, aquatic habitat alteration, and decline in the population of the critically endangered Central American river turtle (*Dermatemys mawii*). The project will contribute to the protection of riparian forests by updating legislation that protects them and improving interagency coordination to enhance monitoring and enforcement of the legislation. The project will also enhance policy that governs land use and land use conflicts that lead to deforestation and degradation of the riparian forests, and the restoration of degraded areas to improve habitat for globally important biodiversity. In addition, by favoring sustainable agriculture, the project will contribute to reducing erosion and nutrients loads, thereby improving

water quality and stabilizing flows regimes, which are essential for the survival of freshwater biodiversity, including the Central American river turtle.

42. Similarly, the project strategy will contribute to SLM by promoting the adoption of agro-ecological methods and approaches that will promote conservation agriculture and forestry in selected farms within the Belize River watershed. Through the adoption of best production practices, erosion rates will be reduced, improving soil productivity and water quality. By adopting an integrated landscape/watershed management, including the protection and restoration of riparian forest and of groundwater recharge areas together with SLM interventions, the project will make important contributions to improving hydrological functions and services for agro-ecosystem productivity.

#### II.1.6. Innovation, sustainability and potential for scaling up.

43. The project is innovative at the national level as it will use an integrated landscape/watershed approach to reduce threats to biodiversity and land degradation in production landscapes where part of 20% of the country's remaining protected areas located. The conservation and sustainable use of these forests will enhance connectivity with larger forest tracts located in public lands and protected areas for the long-term survival of many species that are part of Belize's rich biodiversity and for the steady supply of ecosystem services, including hydrological services and the mitigation of climate change. The project will also introduce innovative sustainable agricultural practices and economic incentives for producers, which will be effective as income-generating mechanisms and to improve agro-ecosystem productivity. Belize directs significant resources to protected areas, especially through the Protected Areas Conservation Trust (PACT), Belize's national conservation trust. The project will innovate by using PACT to promote conservation of forests outside protected areas (i.e., production lands) for the first time. This will be achieved using an incentive mechanism through which conservation agreements between the government and private and communal (including indigenous) landowners and landholders will receive yearly monetary payments through PACT in return for maintaining forest cover. The project will implement this integrated landscape/watershed approach in the Belize River watershed, which will result in new knowledge regarding biodiversity conservation and sustainable and water management to assist in the implementation of similar efforts in other landscapes and watersheds around the country.

44. The basis for the ecological sustainability of the project includes the rehabilitation of degraded riparian forests, the implementation of landscape management tools, and promoting the conservation of forest patches within private lands. Through these activities, ecological connectivity will be enhanced, contributing to the long-term survival of species of global importance, particularly wide-ranging species. Ecological sustainability will be further achieved by updating legislation that protects these species and improving interagency coordination to enhance monitoring and enforcement to prevent deforestation and forest degradation that results from land use change, particularly the expansion of agriculture.

45. The institutional sustainability of the project will result from clarification of agencies jurisdictions/mandates regarding water and forest resource management; the development of protocols for inter-institutional coordination to enforce norms and establish penalties related to the conversion of forests to other land uses, particularly the expansion of agriculture; and through training activities at the national level to enhance institutional capacities (public and private) in biodiversity conservation, integrated watershed management, and sustainable land management. Institutional sustainability will be further achieved by providing planning and monitoring tools to the public and private sectors to facilitate long-term decision-making and implementation of similar future efforts.

46. The basis for the financial sustainability of the project's outcomes lies in enhanced inter-agency cooperation and programming, which will lead to increased public and private investment to support sustainable production practices. In addition, the project will make use of Belize's conservation trust fund (PACT) to make payments to landowners and landholders to promote the conservation of forest in production lands. PACT is a well-established mechanism that will allow payments to continue beyond project completion. In addition, the project will look into diversifying the sources of funding for the sustainability of payments, including green taxes earmarked for forest conservation in production lands, voluntary contributions from national and/or international companies, possibly linked to some form of environmental offsetting, and international cooperation funds.

47. The basis for the socioeconomic sustainability of the project lies in the ability to facilitate access to incentives (i.e., annual per-hectare payments in return for maintaining forest cover) and markets (i.e., national carbon markets) to small- and large-scale producers that adopt environmentally friendly production practices. Socioeconomic sustainability will be

further achieved through enhanced agro-ecological productivity resulting in additional income, thereby making it attractive for producers to continue using sustainable production practices beyond the life of the project.

48. The project has great potential for scaling-up at the national level. The development and implementation of the Water Master Plan for the Belize River watershed will provide lessons learned regarding biodiversity conservation, sustainable land management, integrated water management, sustainable production, and gender mainstreaming that will be used for the implementation of similar efforts in up to 17 major watersheds in Belize, including five trans-boundary river basins with neighboring countries (Mexico and Guatemala). Knowledge and best production practices will be shared with similar projects in the LAC region and that are part of UNDP-GEF Regional Coordination Unit (RCU) project portfolio (e.g., Colombia, Costa Rica, Guatemala, and Honduras). Through Component 3 of the project, knowledge-management activities will be implemented to collect and share lessons learned in a systematic and efficient manner; this will also ensure that new knowledge generated through the project is expanded and replicated through regional, national, and local information management platforms.

II.2. Stakeholders. Will project design include the participation of relevant stakeholders from civil society organizations (yes  /no ) and indigenous peoples (yes  /no )? If yes, identify key stakeholders and briefly describe how they will be engaged in project preparation.

Stakeholder	Role in the project
Ministry of Natural Resources (MNR)	The MNR is the Operational Focal Point of the GEF. It is charged with the management of the country's vital natural resources. It will provide specific relevant information to guide the activities for SLM and biodiversity conservation. It will be responsible for the direction, coordination, execution, and oversight of the project, as well as maintaining adequate communication for national partners of the project and the GEF.
Lands and Surveys Department	The Lands and Surveys Department has prime responsibility for all aspects of land tenure in Belize, including enforcing protection of riparian and coastal forests. This department is under the MNR.
Hydrology Unit/National Integrated Water Resources Authority (NIWRA)	The Hydrology Unit is responsible for collecting data on the quantity, quality, and variability of Belize's natural water resources. It advises the government on watershed management and on environmental concerns and disasters such as: floods, droughts, and water pollution. It is also responsible for coordinating the development of National Water Master Plans and the issuance of permits for water resources use, including drilling for groundwater) and water abstraction. The Hydrology Unit is under the MNR.
Ministry of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development (MAFFESD)	The MAFFESD is responsible for ensuring food security, generating income and foreign exchange, creating employment, and conserving natural resources in order to grow the economy, reduce poverty, and empower the local population for sustainable development. It is also responsible for the following sectors and departments: Climate Change, Coastal Zone Management Authority, Environment, Fisheries, Forestry, Protected Areas and Reserves, and the Protected Areas Conservation Trust (PACT).
Forest Department	The Forest Department promotes the sustainable management of Belize's forest resources and the protection and management of forest reserves. The Department works to safeguard livelihoods through the maintenance of environmental services such as water availability, soil development and protection, and maintaining a productive forest for both timber and non-timber products, including wildlife and medicinal plants for traditional and cultural uses. The Forest Department is under the MAFFESD.
Department of the Environment (DOE)	The DOE is responsible for fostering the prudent use and proper management of the natural resources of Belize; the preservation, protection, and improvement of the environment; and the control of pollution, thus ensuring a better quality of life for present and future generations. The DOE is under the MAFFESD.
Department of Agriculture	The Department of Agriculture is responsible for developing and transferring environmentally friendly technologies/practices that will make farming more sustainable and farmers more competitive. The Department has four main thematic programs (livestock development, crop development, fruit tree and marketing, agro-processing and extension services), three district agriculture stations, and one experimental station at Central Farm. The Department of Agriculture is under the MAFFESD.
Private sector	The private sector is composed of the farmers and agricultural associations, tourism operators, business owners, and urban developers who will receive benefits from the project through incentives and training, and will participate in the implementation of SLM and biodiversity conservation activities. Belize's agricultural sector is characterized by two main sub-sectors: a) a fairly well-organized traditional export sector for sugar, banana, and citrus, which are main sources of agricultural employment and foreign

	exchange earnings; and b) a small-scale farm sector, which produces food mainly for local consumption (e.g., corn, vegetables, root crops, and beans).
Non-governmental organizations (NGOs)	NGOs will provide information and experiences regarding biodiversity conservation and will facilitate coordination with beneficiary groups, farmers, biodiversity conservation organizations, etc. NGOs participating in the project would include Friends for Conservation and Development (FCD), which works for maintaining the integrity of natural and cultural resources of the Chiquibul Forest and also pioneering a landscape management program in the Vaca Forest Reserve; the Association for Protected Areas Management Organization (APAMO), an association of non-governmental protected areas management organizations that advocates for the sustainability and improved management of Belize's protected areas system; the Belize Audubon Society, which is dedicated to the sustainable management of the country's natural resources through leadership and strategic partnerships with stakeholders for the benefit of people and the environment; among others.
Local communities and community organizations	The local communities in the project region are generally dedicated to the production of basic grains (corn and beans) and vegetables, which are characterized as subsistence activities. The farmers who benefit from the project will be those tied to SLM, conservation of water resources, and development of agroforestry and agro-ecological systems. Local communities may be represented by organized groups such as the National Association of Village Councils and District Association of Village Councils (NAVCO), a collaborative umbrella organization representing the village councils of Belize dedicated to sustainable human development of the rural communities.
Indigenous peoples and indigenous organizations	Local Belizean creoles (persons of at least partial Black African descent or any person who speaks Kriol as their first or only language) and members of the Mopan Maya community live along the Belize River and in the western portion of the Belize River watershed, respectively. Belizean creoles and members of the Mopan Maya community will participate in the final project design and its implementation, particularly through conservation agreements for the implementation of landscape management tools for biodiversity conservation and the development of the WRMP for the Belize River watershed. In addition, they will be beneficiaries of incentives, training, and extension services for the implementation of sustainable agriculture and forest production. The Kriol Council, an umbrella organization that works with the Government of Belize to safeguard their cultural identity, represents Belizean creoles nationally. The Mopan Maya are represented by the Belize National Indigenous Council (BENIC) membership organization, which provides opportunities for training, information gathering, and advocacy on indigenous issues. The project will involve the Kriol Council and BENIC in aspects related to the revision and harmonization of policies and legislation for riparian forest protection, forest management, and integrated water resource management to ensure further participation of indigenous and ethnic groups in the project
UNDP	The UNDP is the GEF implementing agency that will provide guidance, institutional support, and administrative technical assistance, as well as theoretical and practical knowledge at the national level for the effective execution of the project.

II.3. *Gender Equality and Women's Empowerment*. Are issues on [gender equality](#) and women's empowerment taken into account? (yes /no ). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

49. A central aspect in the development of the project is the consideration of gender. Women will play a central role during the final project design through their participation in workshops, meetings, decision making, and other venues. In addition, they will be given opportunities equal to those given to men so that their vision for the implementation of sustainably managed production and improved supply chains for key agricultural and forestry products is expressed equally, considering the role and priorities of both men and women, granting them the opportunity to express themselves as members of government institutions, the private sector, and civil society organizations. In addition, as generators of goods and services they will benefit from the project through incentives for the development of environmentally friendly production practices. The project's benefits will contribute to food security for the women and their families; for example, through sustainable agriculture and improved income derived from sustainable production and incentives. To ensure that gender considerations are duly incorporated into the final project design, during the PPG phase a consultant specializing in gender will be contracted who will conduct a thorough gender assessment, with particular focus in the Belize River watershed, and develop a specific gender-mainstreaming plan for the project. It is anticipated that the project will be categorized at least as "Gender Responsive" according to UNDP's gender results effectiveness scale: i.e., results addressed

differential needs of men or women and equitable distribution of benefits, resources, status and rights but do not address root causes of inequalities in their lives. Finally, the final design of the project will adopt and report on the GEF6 indicators for gender.

II.4. *Risks*. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

<b>Risk</b>	<b>Level *</b>	<b>Risk mitigation strategy</b>
Limited cooperation among government agencies with competency for biodiversity conservation and SLM/water management limits the delivery of results	L/M	The project will actively involve government agencies beginning in the design phase to ensure their support and participation in the project. Representatives from the different government agencies involved in the project will be invited to participate in the Project Board to facilitate cooperation, decision making, and project follow-up.
Limited institutional capacities for planning, management, and monitoring	M	The risk will be reduced by working with and strengthening relevant institutions at the national and local levels to ensure the feasibility of using integrated approach to biodiversity conservation and sustainable land/water management. The project will invest in addressing key capacity gaps during the PPG phase and will establish a baseline using capacity development indicators including the ability to develop and implement financial incentives to promote sustainable production, which has had little development in the country. Capacity gaps will be addressed during implementation.
Limited benefits for the producers who adopted environmentally friendly practices maintains the pressure on biodiversity, forests, soils, and water resources	M	To address this risk, during the PPG phase, a feasibility analysis of the incentives will be performed, as well as an analysis of the interest of the potential users to adopt environmental-friendly production practices. In addition, the project will invest in the development of new skills and provide technical support to ensure that the necessary knowledge and tools are in place to facilitate the adoption of the incentives by producers. Finally, the project will facilitate access to markets for environmentally friendly products increasing their net income from sustainable production.
Climate change affects forests and hydrological resources, which are essential to ecological sustainability in production landscapes	L	The actions of the project directed towards reducing threats forest and hydrological resources will result in ecosystems and species populations that are more resilient to climate change and variability. The rehabilitation of degraded riparian forests will help to prevent flooding and erosion in critical areas along the Belize river and its tributaries, benefiting the biodiversity present there, as well as human population and production lands.

II.5. *Coordination*. Outline the coordination with other relevant GEF-financed and other initiatives.

50. The project will coordinate actions with the GEF project *Management and Protection of Key Biodiversity Areas in Belize* (GEF ID 4605) currently under implementation (2014-2019) with support from the World Bank. This project's objective is to strengthen natural resource management and biodiversity conservation through the mitigation of threats to KBAs in Belize. In particular, coordination of actions will be sought regarding enhanced coordination among Government agencies charged with conservation and management of natural resources and enhancing sustainable forest management practices, and the training of staff in key agencies for better assessment and monitoring so that efforts are complemented between the two projects and lessons-learned are incorporated into programming to enhance the cost-effectiveness of results. The KBA project includes activities within the Chiquibul National Park, located in the Chiquibul forest region, while the project proposed herein will focus on the production landscapes surrounding this and other KBAs in the region, avoiding duplication of efforts. Both projects will have the MNR as and Executing Partner, which will facilitate the coordination of activities.

51. The project will also coordinate efforts with the *Climate Resilient Infrastructure Project (CRIP)*, which has financial support from the World Bank. The CRIP will include the update of the National Land Use Policy and Planning Framework and the preparation of an action plan for its implementation.

52. Similarly, the project will coordinate actions with the *Japan-Caribbean Climate Change Project (J-CCCP)* funded by the Government of Japan in partnership with the UNDP. This initiative brings together policy makers, experts, and representatives of communities vulnerable to climate change for developing and implementing climate change policies and promoting the transfer of adaptation and mitigation technologies. The project favors an integrated approach and will make use of accurate scenario predictions and vulnerability assessments that will be developed for the country.

53. The project will also build synergies with the *Monitoring and Protection of the Headquarters of Chiquibul Forest* project funded through Belize's Protected Areas Conservation Trust (PACT). This project aims at promoting the conservation of water resources in the Chiquibul Forest through sustained enforcement, ecosystem monitoring and public outreach and awareness. The project is being implemented by FCD, a non-profit NGO based in Belize. A joint enforcement effort will be maintained by FCD, the Belize Defense Force and police, in two southern conservation posts and a nationwide public outreach campaign will be launched on the importance of the Chiquibul watershed. The sharing of information between the two projects regarding the environmental condition and the extent of illegal extraction activities in the Chiquibul watershed, which forms part of the headwaters of the larger Belize River watershed, will be promoted.

54. The project will also follow closely the development and implementation of the REDD+-related efforts in Belize. Strategy. The Government of Belize submitted the Readiness Preparation Proposal (R-PP) to the Forest Carbon Partnership Facility (FCPF) in 2014, and is currently in discussion with the World Bank to formalize an agreement to begin its implementation. REDD+ may presents the opportunity to gain additional financing to minimize deforestation and forest degradation in production landscapes in the Belize River watershed and to incentivize the sustainable use of forests (e.g., silviculture, agroforestry, and agro-ecology) and forest products. REDD+ efforts are being led by the Forest Department, Ministry of Forestry, Fisheries and Sustainable Development, which will also be a key of partner of the project presented herein

55. Lessons learned from the GEF project *Integrating protected area and landscape management in the Golden Stream Watershed* (GEF ID 2068) will be considered, including aspects related to gender considerations during design and implementation and the empowerment of women through their participation in sustainable production practices, development of strategies to ensure active community involvement, and promoting ownership of the project among government agencies, among others.

II.6. *Consistency with National Priorities*. Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes  /no  ).

56. Belize is party member of the Convention on Biological Diversity (CBD), ratified on March 3, 1994. The project is consistent with the National Biodiversity Strategy and Action Plan (NBSAP) (2016-2020), which is based on Belize's commitment to the conservation and sustainable development of national biodiversity. The NBSAP includes the following goals: 1. Mainstream biodiversity by fostering an understanding and appreciation of biodiversity, its benefits and values at all levels of society. The project will contribute to this goal by enabling the conditions (policies, financial mechanisms, and institutional capacities) for mainstreaming biodiversity into the country's production lands, and more specifically mainstreaming biodiversity into production lands in the Belize River watershed through the implementation of landscape management tools used in priority areas for biodiversity conservation and promoting sustainable agriculture and forest production. 2. Reduce pressures and promoting the sustainable use of biodiversity and the supply of ecosystem services. The project will contribute to this goal by reducing existing threats to biodiversity in the Belize River watershed, including addressing deforestation and degradation of riparian forests, implementing sustainable agriculture practices that reduce the use of agrochemicals and control erosion, protecting against agricultural runoff that affects freshwater and costal ecosystems, and building strong partnerships between government agencies for improved enforcement of regulations regarding forests and water resources conservation. 3. Maintain and strengthen functional ecosystems and viable populations of Belize's biodiversity including a landscape approach and building resilience to climate change. The project will contribute to strengthening functional ecosystems, particularly broadleaf forests and riparian forests, by promoting their conservation and sustainable use in production lands, which will lead to more stable and resilient ecosystems. In

addition, by creating micro corridors and restoring degraded riparian forests, the project will contribute to providing enhanced habitat for populations of species of global and local importance and promoting connectivity between forest patches in production lands and protected areas. This will serve to improve the resilience of these species to climate change through increased mobility and by providing refuge against temperature changes and tropical storms, which in the past two decades have increased in frequency and have significantly affected the country. 4. Strengthen the provision of ecosystem services, ecosystem-based management, and the equitable sharing of benefits from biodiversity. The project will contribute to the conservation of forests in the MMM, which are vital for providing water in the Belize River watershed, maintaining soil productivity, controlling erosion and sedimentation, stabilizing rivers banks, and building carbon stocks. In addition, it will contribute to ecosystem-based management by implementing a landscape conservation strategy wherein forest and freshwater ecosystems will be managed sustainably in the production lands surrounding protected areas and KBAs. Finally, the project will contribute to the equitable sharing of benefits from biodiversity by promoting sustainable forest production and forest conservation equally among landowners and local community members, including women and indigenous peoples.

57. Belize is also party member of the UNCCD, ratified on July 23, 1998. Belize's First National Action Programme (NAP) of the United Nations Convention to Combat Desertification is currently being drafted. Although the final draft of the NAP has not yet been made public, we had access to a brief summary of it. The project will address causes of land degradation in Belize as outlined in the NAP, such as: a) deforestation with direct risk of erosion, soil structure deterioration, and loss of soil productivity; b) non-sustainable farming, including farming on steep slopes, which leads to increased use and dependence of fertilizers, erosion, and further soil degradation as well as reduced water quality through runoff; c) livestock over-grazing, which leads to soil compaction, erosion, leaching of nutrients, and paves the way for invasive weeds; and d) logging, which promotes soil erosion and creates access to illegal farming through the construction of access roads. During the PPG phase of the project, alignment with the NAP will be further detailed.

58. The project is also aligned with the Nationally Determined Contribution (NDC) under the United Nations Framework Convention on Climate Change (UNFCCC), and which has among its priorities to design and implement an integrated water resources management (IWRM) programme in watersheds; enhance protection of water catchment (including groundwater resources); develop water conservancy management systems; conduct water resource assessment (especially groundwater); develop flood controls and drought monitoring; strengthen the human resource capacity in the water sector and strengthen the compliance monitoring capacity of staff; undertake water policy reform; adopt better soil and water management agricultural practices; and maintain and restore healthy forest ecosystems by sustainable forest management, increasing afforestation and reforestation in order to increase the resilience of human communities. The project will address all these priorities, particularly in the Belize River watershed and the production landscapes within, which have been prioritized for project implementation. In addition, the project responds to the National Climate Change Policy, Strategy and Action Plan (NCCPSAP), 2015-2020, which provides policy guidance for the development of an appropriate administrative and legislative framework, in coordination with other sectoral policies, for a low-carbon development path for the country. In addition, the NCCPSAP also seeks to encourage the development of the country's NDC and to communicate it to the UNFCCC.

59. In addition, the project is consistent with the Growth and Sustainable Development Strategy (2016–2019). The Strategy adopts an integrated, systemic approach and encompasses medium-term economic development, poverty reduction and longer-term sustainable development issues. This planning document also provides detailed guidance on priorities and on specific actions to be taken during the planning period, including actions that contribute to longer term development objectives beyond 2019. Similarly, the project is consistent with The National Development Framework for Belize: Horizon 2030, which has as one of its main components the responsible stewardship of the environment integrating environmental sustainability into development planning, including planning for climate change and its effects.

60. Finally, the project is also coherent with Belize's Rural-Area Based Development Strategy, which aims to make rural areas a more attractive place to live and work in and where people can find a better life by providing them with the means to generate their own development, to adapt to new economic circumstances, and to be valued as they deserve to by all of society. It also has the goal of promoting the participation of the private production sector and of civil society in general through leadership training for the integrated and sustainable management of rural territories.

## II.7. Knowledge Management.



61. Knowledge-management activities will be included as part of the project's Component 3. Knowledge Management and Learning. Results from the project will be disseminated within and beyond the project intervention area through a number of existing information sharing networks and forums. In addition, the project will participate, as is relevant and appropriate, in UNDP-GEF sponsored networks that are organized for senior staff working on projects that share common characteristics. The UNDP-GEF RCU has established an electronic platform for sharing lessons learned among the project managers. The project will identify and participate, as is relevant and appropriate, in scientific, policy-based, and/or any other networks that may be of benefit to project implementation. The project will identify, analyze, and share lessons learned that might be beneficial for the design and implementation of similar future projects. Identifying and analyzing lessons learned is an ongoing process, and the need to communicate such lessons as one of the project's central contributions is a requirement to be delivered no less frequently than once every 12 months. The UNDP-GEF shall provide a format for this exchange and will assist the project team in categorizing, documenting, and reporting the lessons learned. Specifically, the project will ensure coordination in terms of avoiding overlap, sharing best practices, and generating knowledge products of best practices in the area of biodiversity conservation, and SLM with the current projects of Belize's portfolio.


**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

**A. RECORD OF ENDORSEMENT<sup>30</sup> OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):**  
 (Please attach the [Operational Focal Point endorsement letter](#)(s) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Ms. Sharon Ramclam	Chief Executive Officer	MINISTRY OF NATURAL RESOURCES	02/17/2017

**B. GEF AGENCY(IES) CERTIFICATION**

**This request has been prepared in accordance with GEF policies<sup>31</sup> and procedures and meets the GEF criteria for project identification and preparation under GEF-6.**

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Adriana Dinu, Executive Coordinator UNDP-GEF		3/28/2017	Santiago Carrizosa, Senior Technical Advisor, EBD	+507 302-4510	Santiago.carrizosa@undp.org

**C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)**

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PIF.

<sup>30</sup> For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

<sup>31</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, SCCF and CBIT.