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Empowered lives.
Resilient nations.

United Nations Development Programme

Project title: Integrated management of production landscapes to deliver multiple global environmental benefits		
Country: Belize	**Implementing Partner:** Ministry of Sustainable Development, Climate Change and Disaster Risk Management (MSDCCDRM)	**Management Arrangements:** National Implementation Modality (full NIM)
UNDAF/Country Programme Outcome United Nations Multi-Country Sustainable Development Framework in the Caribbean: Inclusive and sustainable solutions adopted for the conservation, restoration, and use of ecosystems and natural resources.		
UNDP Strategic Plan Output: Output 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals, and waste.		
UNDP Social and Environmental Screening Category: Moderate	**UNDP Gender Marker:** GEN2	
Atlas Project ID: 00126230	**Atlas Output ID (formerly Project ID):** 00120353	
UNDP-GEF PIMS ID number: 6015	**GEF ID number:** 9796	
LPAC meeting date: 14th February 2022		
Project duration in months: 60		
Planned start date: February 2023	**Planned end date:** January 2028	
Expected date of Mid-Term Review: January 2026	**Expected date of Terminal evaluation:** October 2027	

Brief project description:

The objective of the project is to mainstream biodiversity conservation and sustainable land/water management into production landscapes in Belize. This will be achieved through a multifocal strategy that includes three interrelated outcomes that will enable an environment that comprises policies, financial mechanisms, and institutional capacities to deliver multiple global environmental benefits (GEBs) through sustainable production and improved value chains for key agricultural and forest products from the Belize River watershed (BRW), as well as knowledge management of the scaling-up of project results. This Global Environment Facility (GEF) investment will reverse fragmentation of forest ecosystems (including the clearance of riparian vegetation), biodiversity loss, and land degradation within production landscapes in the BRW with ecosystem remnants that are highly important in their role as biological corridors. The project will deliver GEBs using a participatory approach that ensures the equal distribution of benefits among men and women, with 1,700 people directly benefiting from the project. This will result in the establishment of 4,500 hectares (ha) of landscape management tools that promote connectivity between key biodiversity areas (KBAs) and forest remnants in production landscapes; 30,500 ha of landscapes under sustainable agriculture with biodiversity benefits; 15,000 ha of landscapes under sustainable land management in production systems; 750 ha of riparian forests and 300 ha of groundwater recharge areas restored in key areas of the BRW; and the stable presence of key indicator species (e.g., jaguar, howler monkeys,

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white-lipped peccary, and tapir) in forest patches/corridors of the production lands and KBAs. The project will span 5 years with a total investment of USD $5,183,933, which will be provided by the GEF and USD $75,000 by UNDP TRAC.

FINANCING PLAN	
GEF Trust Fund	USD 5,108,933
UNDP TRAC resources	USD 75,000
Cash co-financing to be administered by UNDP	USD 0
(1) Total Budget administered by UNDP	**USD 5,183,933**
PARALLEL CO-FINANCING	
UNDP	USD 500,000
Ministry of Natural Resources	USD 548,000
Ministry of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development	USD 1,955,000
University of Belize Environment Research Institute	USD 1,296,574
Friends for Conservation and Development	USD 345,000
Santander Sugar Group	USD 15,000,000
(2) Total co-financing	**USD 19,644,574**
(3) Grand-Total Project Financing (1)+(2)	**USD 24,828,507**

SIGNATURES

Signature: print name below DocuSigned by: 1A3949D205624DD... Dr. Osmond Martinez	**Agreed by Government** Ministry of Economic Development	**Date/Month/Year:** 11-Mar-2023
Signature: print name below DocuSigned by: 49AE0ED87C574FD... Dr. Kenrick Williams	**Agreed by Implementing Partner** Ministry of Sustainable Development, Climate Change and Disaster Risk Management	**Date/Month/Year:** 09-Mar-2023
Signature: print name below DocuSigned by: 9486E5BA6ABB408... Denise Antonio	**Agreed by UNDP**	**Date/Month/Year:** 08-Mar-2023

Key GEF Project Cycle Milestones:
Project document signature: within 25 days of GEF CEO endorsement
First disbursement date: within 40 days of GEF CEO endorsement

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Inception workshop date: within 60 days of GEF CEO endorsement
Operational closure: within 3 months of posting of TE to UNDP ERC
Financial closure: within 6 months of operational closure

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II. LIST OF ABBREVIATIONS

AWP	Annual Work Plan
BAIMS	Belize Agriculture Information Management System
BRW	Belize River Watershed
°C	Degrees Celsius
CBC	Central Belize Corridor
CBD	Convention on Biological Diversity
CSO	Civil Society Organization
EIA	Environmental Impact Assessment
EMIS	Environmental Management Information System
ENSO	Niño Southern Oscillation
ERC	Evaluation Resource Center
FAO	Food and Agriculture Organization
FCD	Friends of Conservation and Development
FCPF	Forest Carbon Partnership Facility
GCF	Green Climate Fund
GDP	Gross domestic product
GEB	Global Environmental Benefit
GEF	Global Environment Facility
GNSS	Global Navigation Satellite System
GoB	Government of Belize
GSDS	Growth and Sustainable Development Strategy
ha	Hectares
HDI	Human Development Index
IEO	Independent Evaluation Office
IFAD	International Fund for Agricultural Development
IICA	Inter-American Institute for Cooperation on Agriculture
IWM	Integrated Watershed Management
IWRM	Integrated Water Resources Management
J-CCCP	Japan-Caribbean Climate Change Partnership
KBA	Key Biodiversity Area
km	Kilometer
km2	Square Kilometers
km3/year	Cubic Kilometers per Year
KPI	Key Performance Indicators
LAC	Latin America and the Caribbean
LD	Land Degradation
m3	Cubic Meters
MSDCCDRM	Ministry of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development
MLLGRD	Ministry of Labour, Local Government and Rural Development
mm	Millimeters
MMM	Maya Mountains Massif
MNR	Ministry of Natural Resources
MTR	Mid-term Review
M&E	Monitoring and evaluation
NAP	National Action Programme
NAO	North Atlantic Oscillation
NBSAP	National Biodiversity Strategy and Action Plan
NCCPSAP	National Climate Change Policy, Strategy and Action Plan
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
NIM	National Implementation Modality
NIWR	National Integrated Water Resources
NIWRA	National Integrated Water Resources Authority
NMS	National Meteorological Service

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NPAS	National Protected Areas System
PA	Protected Area
PAC	Programme Advisory Committee
PACT	Protected Areas Conservation Trust
PB	Project Board
PIMS	Project Information Management System
PIR	Project Implementation Report
PMU	Project Management Unit
PPG	Project Preparation Grant
RCU	Regional Coordination Unit
R-PP	Readiness Preparation Proposal
RTA	Regional Technical Advisor
SBAA	Standard Basic Assistance Agreement
SDGs	Sustainable Development Goals
SESP	Social and Environmental and Social Screening
SGP	Small Grants Programme
SLM	Sustainable Land Management
SOP	Standard Operating Procedures
SSTrC	South-South and Triangular Cooperation
STAP	Scientific and Technical Advisory Panel
TAG	Technical Advisory Groups
TE	Terminal Evaluation
ToR	Terms of Reference
TRAC	Target Resource Assignment from the Core
UB	University of Belize
UNCCD	United Nations Convention to Combat Desertification
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
USD	U.S. Dollars
WWF	World Wildlife Fund

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III. DEVELOPMENT CHALLENGE

Environmental Context

1. Belize is located at the confluence of North and South America, and despite being a very small country (22,963 square kilometers [km^2]), 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 (NPAS) and the remaining 20% is either on national lands or in private ownership.[1]

2. Belize's primary Key Biodiversity Areas (KBA) lays 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.[2] 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.[3] 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*).[4] Belize harbors a total of 118 globally threatened species (9 critically endangered, 32 endangered, and 77 vulnerable) and a further 62 near threatened / of least concern. Of these, the critically endangered Central American River turtle ("hicatee") is considered at highest risk of local extinction.[5]

3. Belize has also been uniquely endowed with substantial surface and groundwater resources and has the highest per capita water resources in the Americas.[6] 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[7]. This includes the Belize River Watershed (BRW), which is the largest (597,500 hectares [ha]) watershed in the country and is home to 45% of the population. The subwatersheds of the MMM provide water security for over 128 communities and covers 55% of the total landmass of Belize.[8] 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^3/year) and internal renewable groundwater resources at 7.51 km^3/year.[9]

4. The BRW also contains a portion of one of the country's terrestrial corridors, the Central Belize Corridor (CBC), which provides connectivity from the Selva Maya Node/Rio Bravo Node to the MMM Node. The corridor comprised mostly of lowland broadleaf forest and lowland savannah extends over 75,000 ha, is a pivotal

[1] United Nations Environment Programme. *National Environmental Summary, Belize 2011*. 43 pages.
[2] *Fifth National Report to the United Nations Convention on Biological Diversity: Belize (2014)*. Ministry of Forestry, Fisheries and Sustainable Development, Belmopan.
[3] 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.
[4] Ibid.
[5] National Biodiversity Strategy and Action Plan, Belize. Ministry of Agriculture, Forestry, Fisheries, the Environment and Sustainable Development, Belmopan, Belize, 2016.
[6] Caribbean Community Climate Change Centre. 2008. *National Integrated Water Resources Management Policy (including Climate Change) for Belize*. 23 pages.
[7] 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.
[8] *Fifth National Report to the United Nations Convention on Biological Diversity: Belize (2014)*. Ministry of Forestry, Fisheries and Sustainable Development, Belmopan.
[9] http://www.fao.org/nr/water/aquastat/main/index.stm. Accessed January 2017.

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conservation area for Belize and the region as the Mesoamerican Biological Corridor. Three ecosystems have been identified as conservation targets within the Central Belize Corridor: freshwater ecosystems (the BRW), broadleaf forest (lowland broad-leaved moist forests and lowland broadleaved moist scrub forests, which become seasonally inundated), and savannah/pine savannah (importance for water retention and flood control).

Socioeconomic Context

5. The development challenge for this project is set against the backdrop of a country that remains highly susceptible to external impacts, including susceptibility to climate change, dependence on external trade, and exposure of the economy and human population to natural disasters. Added to this is the lack of comprehensive policies and strategies to guide the country's sustainable development and an internal economic structure that is limited by its small size and few sectors for the domestic provision of many goods and services.[10] [11] Belize is a small, upper-middle-income country with a population of approximately 367,000, and a per capita income of USD $4,360. Belize has undergone significant economic transformation over the last two decades, mainly due to the growing tourism industry and the commercial oil discovery in 2005; however, the importance of oil as a source of economic growth has declined in recent years. Between 2011 and 2016, the real GDP growth rate averaged 2.1 percent, (4.1 percent in 2014 and -1.5 percent in 2016); the economy experienced a mild recovery in 2017 with real GDP growing an estimated 1.2 percent and contributing to the decline in unemployment to 9.3 percent in 2017 (from 9.5 percent in 2016). In the medium term, economic expansion is projected to accelerate to approximately 2 percent per year due to increased tourism and the related transportation sector.[12]

6. Tourism and agriculture are the two single largest sources of income and employment in Belize. In 2017, tourism employs 37.3% of the population and represents 41.3% of the gross development product (GDP)[13]. Tourism is primarily natural- and cultural-resource-based, with visitors focusing on inland protected areas (Pas) and coastal marine areas. The agriculture sector accounts for 13 percent of GDP and is of crucial importance to poverty reduction and improving livelihoods. Although 800,000 ha, or about 38%, of Belize's total land area is considered potentially suitable for farming, only 7% of the land (about 78,000 ha) is used for farming. 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), 33% between 2 and 8 ha (5 and 20 acres), and 74% of the farms are below 20 ha (50 acres). [14] 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*).[15] The agricultural sector is significantly constrained by infrastructure weaknesses and is vulnerable to natural disasters and the effects of climate change, which have significantly impacted agricultural yields, food production, food prices, and the livelihood of the rural population, which accounted for 56% of total population in 2015.

7. In 2018 Belize had a Human Development Index (HDI) ranking of 0.708, which placed it at 106th out of 189 countries. Although the ranking puts Belize in the high human development category, it still ranks below the average (0.757) for countries in this grouping, as well as among others in Latin America and the Caribbean (0.757).[16] The country's HDI has decreased in recent years after scoring 0.715 in 2014. Inequality is high, as seen by the increase in the GINI coefficient from 40 percent (2002) to 53.1 percent (2013). Estimates suggested that 41 percent of the country's population lives below the poverty line; high levels of unemployment (9 percent in 2017) exacerbate

[10] Belize National Sustainable Development Report. Ministry of Forestry, Fisheries, and Sustainable Development, Belize United Nations Department of Social and Economic Affairs (UNDESA), United Nations Development Program (UNDP). Available at: https://sustainabledevelopment.un.org/content/documents/1012belize.pdf. Accessed February 2019.

[11] World Bank; International Finance Corporation; Multilateral Investment Guarantee Agency. 2017. Country Partnership Framework for Belize for the Period FY18-22. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/27145 License: CC BY 3.0 IGO.

[12] Ibid.

[13] World Travel and Tourism Council. Economic Impact – Belize Country Report, 2018. Available at https://www.wttc.org/economic-impact/country-analysis/country-reports/. Accessed February 2019.

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

[15] *Fifth National Report to the United Nations Convention on Biological Diversity: Belize (2014)*. Ministry of Forestry, Fisheries and Sustainable Development, Belmopan.

[16] Human Development Indices and Indicators. 2018 Statistical Update. United Nations Development Programme.

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poverty, with women and youth disproportionately affected.[17] Figures from 2015 suggested that women are twice as likely to be underemployed (one-fifth of all employed women) compared to 10 percent of males.[18]

Legal and Institutional Context

8. 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. Belize is party member of the Convention on Biological Diversity (CBD), ratified on March 3, 1994. 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.[19] 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.[20]

9. Belize is also party member of the United Nations Convention to Combat Desertification (UNCCD), ratified on July 23, 1998. To ensure the sustainable use and management of water resources, the GoB has adopted an Integrated Water Resource Management (IWRM) 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 (NIWR) 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.[21] 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 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.

Environmental Threats

10. Despite the fact that 35.8% of Belize's land territory falls within Pas, the country still faces significant challenges to protect its biodiversity and promote its sustainable use, particularly in production lands. The highest terrestrial threat to biodiversity is habitat loss and fragmentation resulting from land use change (deforestation and ecosystem degradation), with a deforestation rate of approximately 1% for the 2013-2014 period. Other to Belize's terrestrial and freshwater biodiversity include 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.[22] 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 Pas, private and public forested lands are being converted to agricultural lands and/or

[17] World Bank, 2014.In: United Nations. 2016. Country programme document for Belize (2017-2021).

[18] Statistics of the Nation, and the Statistical Institute of Belize, 2016. In: United Nations. 2016. Country programme document for Belize (2017-2021).

[19] National Biodiversity Strategy and Action Plan, Belize. Ministry of Agriculture, Forestry, Fisheries, the Environment and Sustainable Development, Belmopan, Belize, 2016.

[20] United Nations Environment Programme. National Environmental Summary, Belize 2011. 43 pages.

[21] Ibid.

[22] Ibid.

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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.

11. 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 Pas and 25.2% (293,467 ha) outside Pas were cleared.[23] 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.[24]

12. 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^3]) reached a maximum value of 91,324 m^3 in 1987 and a minimum value of 48,019 m^3 in 2009, indicating a steady decline over the years.[25] There has been deterioration of water quality in watersheds—most notably in the BRW—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.

13. The country is also highly vulnerable to climate change. Belize is one of countries in the world that is mostly affected by weather related events and other natural hazards. As such, Belize incurs annual losses of close to 4 percent of GDP due to natural disasters.[26] According to the UNDP Country Profiles studies, an increase in air temperature ranging from 2 °C – 4°C is projected by 2100 for Belize. 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.[27] Enhancing protection and restoration of forest ecosystems and building the resiliency of water catchment areas are among the government goals to protected water resources and biodiversity from the effects of climate change.

Underlying causes

14. Direct Drivers: Market demand, Conflicting Government sector-specific policies, Government incentives Livelihood diversification; Culture tradition Limited capacity for effective enforcement, Household needs (food, water, shelter, income). Indirect Drivers: National policies for economic growth, National poverty alleviation strategies; National and international market demand; Delay in implementation of national frameworks; Inadequate national investment in natural resource management; Porous border; Culture / tradition; and Poverty.[28]

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[23] Belize National Action Programme of the United Nations Convention to Combat Desertification. Document under development.

[24] *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.

[25] United Nations Environment Programme. *National Environmental Summary, Belize 2011*. 43 pages.

[26] Belize, Nationally Determined Contribution under the United Nations Framework Convention on Climate Change. Nationally Determined Contribution (NDC). Available at https://unfccc.int/files/focus/ndc_registry/application/pdf/belize_ndc.pdf. Accessed February 2019.

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

[28] National Biodiversity Strategy and Action Plan, Belize. Ministry of Agriculture, Forestry, Fisheries, the Environment and Sustainable Development, Belmopan, Belize, 2016.

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15. The **long-term solution** to addressing the existing threats to biodiversity and land degradation in Belize is to mainstream biodiversity conservation and sustainable land (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 Pas 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 environmental benefits (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 BRW. Nevertheless, there are currently barriers that prevent the achievement of this goal:

16. **Barrier 1. Ineffective mechanisms to ensure coordinated efforts and sharing of information to promote sustainable management of production landscapes**. 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 programming and enforcement; thus, the allocation of financial resources and efforts to promote sustainable management of production landscapes are limited. 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. 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.

17. **Barrier 2. 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**. 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. 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, silvopastoral systems).

18. 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.

19. **Barrier 3. Absence of mechanism for knowledge sharing to enable replication and scaling up of successful biodiversity conservation and SLM experiences**. 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

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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 available data to assess the impact of interventions and to guide future planning and investments.

IV. STRATEGY

20. The **project's objective** is to mainstream biodiversity conservation and sustainable land/water management into production landscapes in Belize. The project will use integrated landscape/watershed approach that will allow combining sustainable production of key agricultural and forest products and conservation practices in productive landscapes. This strategy will contribute to reducing the loss of biodiversity of global and local importance and the degradation of land in Belize.

21. **Project Component 1** will focus on developing an enabling environment (policies, financial mechanisms, and institutional capacities) for delivering multiple of GEBs through the sustainable management of production landscapes in the BRW.

22. **Project Component 2** will deliver multiple GEBs through sustainable production and improved value chains for key agricultural and forest products from the BRW. 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.

23. **Project Component 3** will allow systematizing best practices, and lessons learned about biodiversity conservation and SLM/water management in production landscapes of the BRW 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. Through this Component 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.

24. The project´s Theory of Change (Figure 1) is based on the premise that by strengthening the governance and financial structure for the conservation of biodiversity and ecosystem services through SLM/water management in production landscapes, and enhancing the capacity of the GoB to implement strategies for conservation and SLM/water management in production landscapes, Belize will be better positioned to mainstream biodiversity conservation and sustainable land/water management into production landscapes. This premise will be tested by supporting sustainable production and improving value chains for key agricultural and forest products (i.e., cohune palm/oil [*Attalea cohune*], livestock, and sugarcane) from the BRW. Landscape management tools (i.e., LMTs; i.e., biological micro-corridors, agroforestry, forest enrichment, live fences, windbreaks, and hedges) will be implemented in priority areas for biodiversity conservation and ecosystem connectivity together with integrated management for sustainable land and water resources use. Incentives (e.g., annual per-hectare payments in return for maintaining forest cover, state-funded results-based payments designed with environmental and socioeconomic targets, and carbon sequestration certification) will be made available for small-, medium-, and large-scale farmers to promote sustainable agriculture and forest production; access to markets for producers implementing sustainable practices will also be supported. This will result in the delivery of global environment benefits (GEBs), including enhanced connectivity between Pas, improved habitat for biodiversity (e.g., jaguar, white-lipped peccary, howler monkeys, and the tapir), and the restoration of degraded riparian forest and landscapes under SLM in production systems. In addition, the net income of farmers /producers (including women) will increase due to sustainable products with enhanced value chains placed in markets. Lessons learned, knowledge, and best practices from the implementation of this strategy will be captured, shared, and disseminated for their application in other production landscapes and watersheds in Belize and internationally.

25. The project´s Theory of Change includes several key assumptions. It is expected that the political will exists to implement the legal and policy reforms needed for mainstreaming biodiversity and promoting integrated watershed management and SLM in production landscapes through project Component 1 (Output 1.1), and that the national institutions will have the capacity for effective planning, implementation, monitoring, and enforcement (Outputs 1.2, 1.3, 1.4, and 1.5). Similarly, it is assumed that producers will be actively engaged in implementing sustainable production practices and the use of LMTs will contribute to biodiversity conservation and SLM (Output 2.1). The successful engagement of these stakeholders will depend on the availability of incentives to promote

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sustainable agriculture and forest production; accordingly, it is assumed that markets will exist for these products and that economic benefits will be attractive enough for farmers to implement sustainable production practices (Output 2.3). Finally, it is assumed that climate change and variability will be within normal ranges and the project outcomes will not be affected. The occurrence of extreme climate events such as hurricanes and tropical storms are common in Belize; the project will support activities that promote SLM and biodiversity conservation, including building resilient terrestrial and freshwater ecosystems and climate-smart agricultural practices that will contribute to reducing this risk.

Contribution to Sustainable Development Goals (SDGs) and to national development priorities

26. The project will mainstream conservation and sustainable use of biodiversity into production landscapes in the BRW 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 6 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*. The project will contribute to achieving the Aichi Targets, particularly Targets 1, 4, 5, 7, 8, 14, and 15.

27. The project is also framed within the GEF 6 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*.

28. The project is relevant to, and will contribute to, several of the SDGs: Goal 1: No poverty, by targeting vulnerable small farmers (men and women equally) and supporting sustainable production practices that will contribute to food security; Goal 5 – Gender equality, through benefits to women and men from biodiversity conservation and SLM activities, and women empowerment through their activity participation in related decision-making processes; Goal 6 – Clean water and sanitation, by protecting and restoring riparian forests and wetlands that contribute to groundwater recharge and promoting SLM and environmentally friendly agriculture that are conducive to reducing pollution in streams and rivers of the BRW; Goal 8 – Decent work and economic growth, by focusing on production sectors (agriculture and forestry) that employs a large sector of the population and adding value to selected products and decoupling economic growth from environmental degradation; Goal 13 – Climate action, by building ecosystem resilience to climate change and mitigation greenhouse gas (GHG) emissions, and Goal 15 – Life on land, through strengthening governance structures, including clear mandates regarding water and forest resources management, improving habitat to biodiversity, improving water quality, and reducing pressures to KBAs by promoting sustainable production practices and enhancing ecosystem connectivity in their surrounding landscapes.

29. The project is consistent with the NBSAP (2016-2020), which is based on Belize's commitment to the conservation and sustainable development of national biodiversity. The NBSAP has among its goals to mainstream biodiversity by fostering an understanding and appreciation of biodiversity, its benefits and values at all levels of society; reducing pressures and promoting the sustainable use of biodiversity and the supply of ecosystem services; maintaining and strengthening functional ecosystems and viable populations of Belize's biodiversity including a landscape approach and building resilience to climate change; and strengthening the provision of ecosystem services, ecosystem-based management, and the equitable sharing of benefits from biodiversity. The project will contribute to achieving all these goals though its two interrelated components.

30. 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.

31. The project will be aligned with Belize's National Action Programme (NAP)/UNCCD currently under development and which will identify factors contributing to desertification and the development of practical measures to combat desertification and mitigate the effects of drought. The project is also aligned with the

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Nationally Determined Contribution (NDC) under the United Nations Framework Convention on Climate Change (UNCCC), 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 BRW 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.

32. In addition, the project is consistent with the Growth and Sustainable Development Strategy (GSDS) 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 mains components the responsible stewardship of the environment integrating environmental sustainability into development planning, including planning for climate change and its effects.

33. 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.

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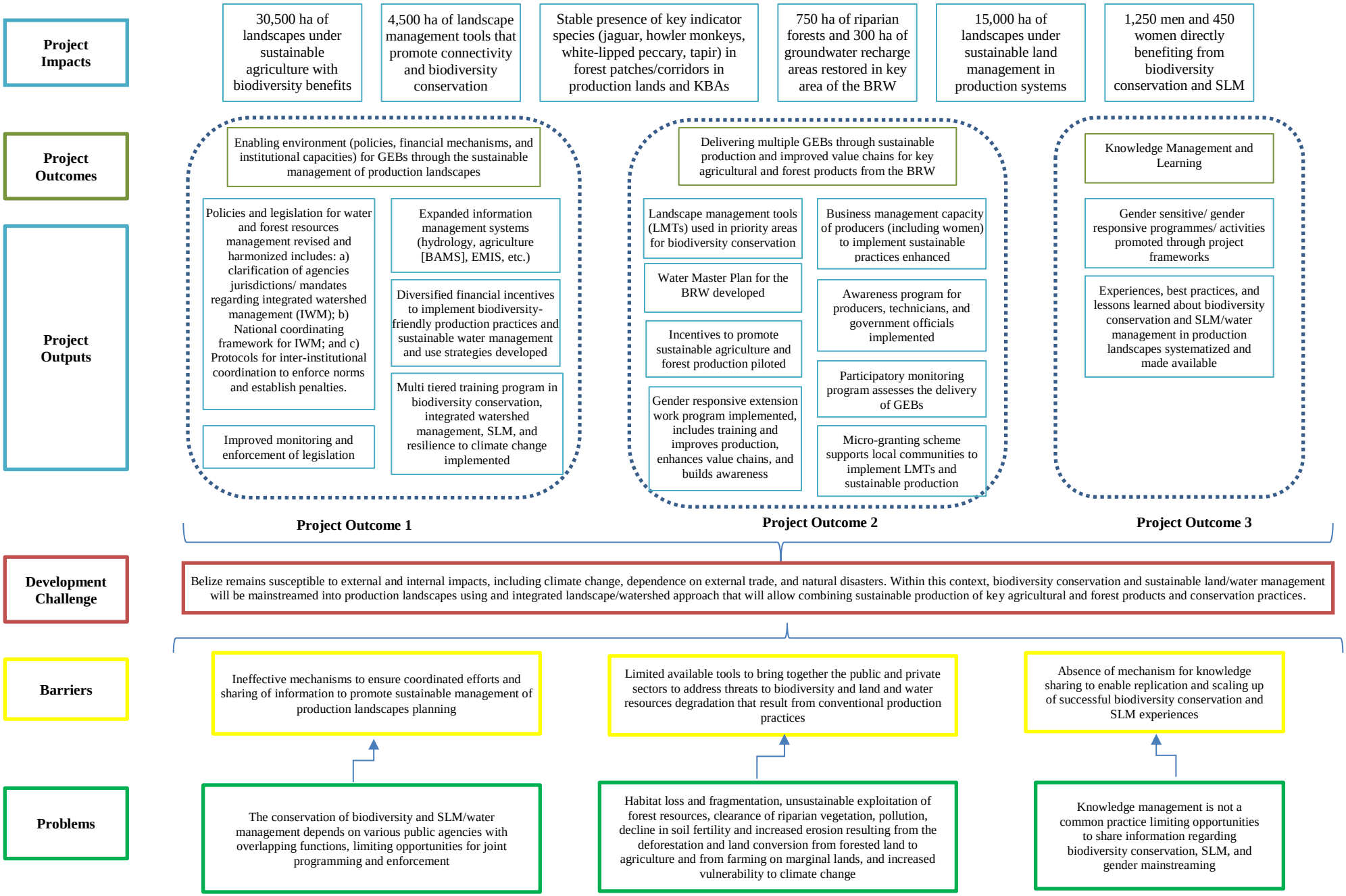
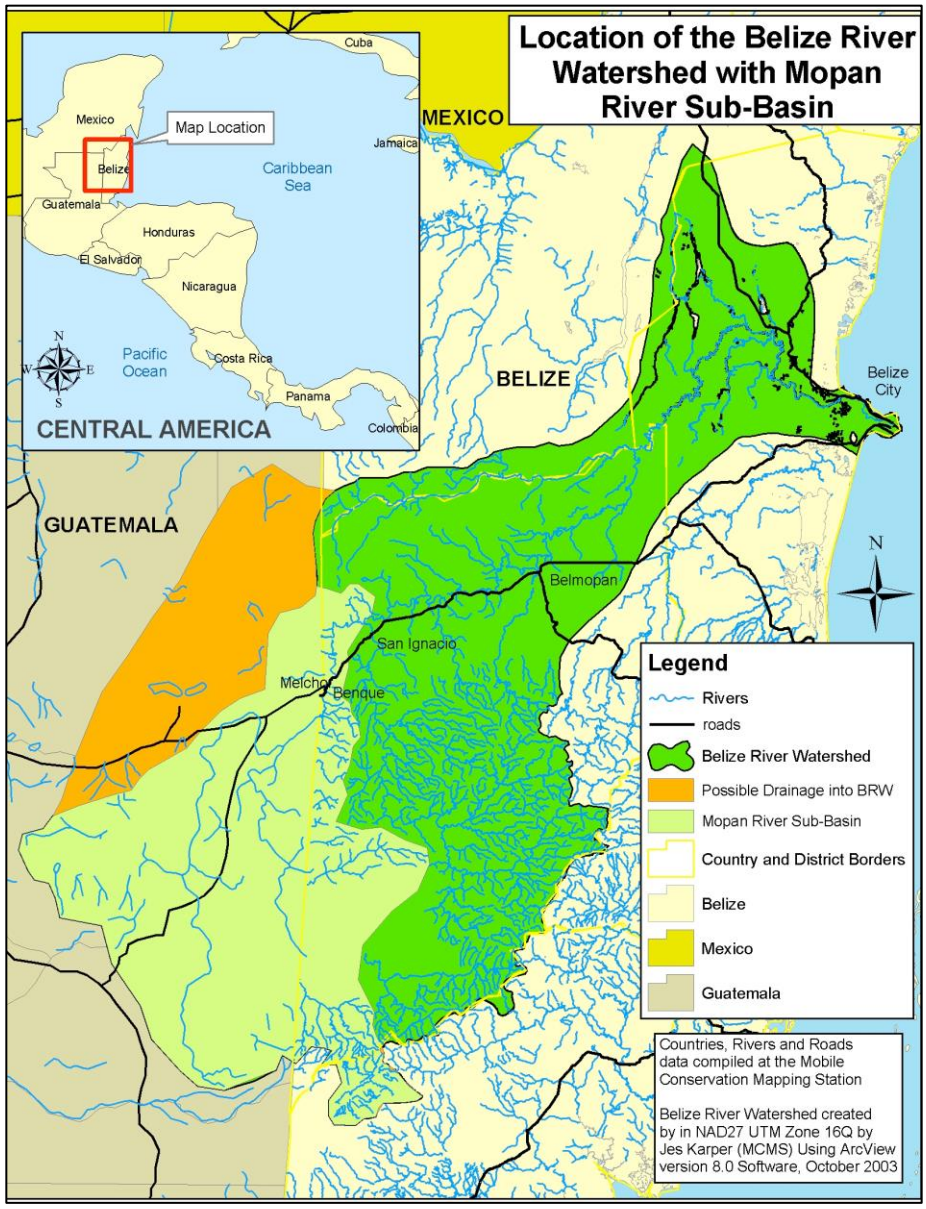


Figure 1. Theory of Change

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Project area

34. The project will be implemented in the BRW, which is the largest watershed in the country and one of the most heavily used. The BRW is located in central regions Belize and covers an area from the mountains in the Cayo District to the Caribbean Sea in the east (Figure 2). A detailed description of the BRW (i.e., target landscape) is included in Annex N.



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V. RESULTS AND PARTNERSHIPS

Expected Results*:*

35. The Project objective is to mainstream biodiversity conservation and sustainable land/water management into production landscapes in Belize.

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

Outcome 1.1. Strengthened governance and financial structure for the conservation of biodiversity and ecosystem services through sustainable land (SLM)/water management in production landscapes*.*

Outcome 1.2. Increased ability of the government to implement strategies for conservation and SLM/water management in production landscapes.

36. 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; and barriers to make economic incentives available for the production sectors to implement environmentally friendly production practices and prevent the degradation of forest, soil, and water resources.

Output 1.1. Revised and harmonized policies and legislation for riparian forest protection (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, water quality (Environmental Protection Act), and tourism and transportation legislation results in:

a. Clarification guidelines of agencies jurisdictions/ mandates regarding water management.

37. Although there is no legislation in Belize specifically governing watershed management, there are several pieces of legislation that govern different related aspects. Among these, the National Integrated Water Resources Act (2011) is the principal legal document for watershed management. The legal framework for natural resources management, including water resource management, is fragmented and dispersed across multiple agencies, departments, and ministries, thus making coordination difficult and highly bureaucratic. A summary of GoB agencies and the water-related responsibilities of each agency is presented in Annex M. In addition, neither the National Integrated Water Resources Act nor the IWRM Policy (2008) has been fully institutionalized by all GoB departments and agencies sharing water resource management responsibilities. Accordingly, through this output the project will support the development of guidelines to clarify agencies' jurisdictions and mandates for water resources management. A comprehensive assessment of existing policies and legislation that allow for an enabling IWRM institutional environment and harmonized jurisdictions/roles will be conducted. This will include a review of key legislation identified in policy baseline assessments related to forest management (Forest Act), land and water resources management (National Integrated Water Resources Act, Environmental Protection Act, Environmental Impact Assessment [EIA] Regulations, and Environmental and Safety Regulations under the Mines and Minerals Act), fiscal incentives (Fiscal Incentive Act), and overall integrated management of watersheds to clarify and consolidate the roles of primary institutions in IWRM, including the Agriculture Department Irrigation Unit (Ministry of Agriculture, Fisheries, Forestry, the Environment, Sustainable Development [MSDCCDRM]); the Coastal Zone Management Authority and Institute, the Department of the Environment (MSDCCDRM), the Department of Lands and Surveys (Ministry of Natural Resources [MNR]), the Fisheries Department (MSDCCDRM), the Forest Department (MSDCCDRM), the Geology and Petroleum Department (Ministry of Economic Development and Petroleum), the Hydrology Unit (MSDCCDRM), the Lands Information Center (MNR), the Ministry of Health, the Public Utilities Commission, and the Ministry of Labour, Local Government and Rural Development (MLLGRD). Workshops and meetings will be held to discuss existing conflicts, make recommendations for harmonization and avoidance of duplications, and for drafting guidelines addressing all needs identified.

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b. National coordinating framework for integrated watershed management defined and enabled.

38. A governance and institutional analysis of IWRM-related agencies will be completed with recommendations for harmonized, inclusive, and tiered IWRM governance. This will include an institutional review of current governance structure at the national and local levels related to IWRM (water resources management, SLM, climate change, and biodiversity management). The governance and institutional analysis will be used to guide the establishment of Inter-Agency Coordinating entity for IWRM. Terms of reference (ToR), standard operating procedures (SOPs), and guidelines for Inter-Agency Coordinating entity will be drafted and the operational framework will be defined with clear guidelines following from the institutional review. In addition, capacity-building actions and resource support will be provided by the Inter-Agency Coordinating entity to facilitate inter-agency/ministry/department meetings. Jointly with the project team, the Inter-Agency Coordinating entity will lead efforts for the harmonization of legislation specific to watershed management as described above to improve cooperation and communication between the government at all levels and the public and the private sector, with increased participation of women and community stakeholders in the governance and management of water resources.

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.

39. The degradation of riparian forests/buffers, the contamination and pollution of soil and water through runoff and discharge, and the modification of the hydrological dynamics through excess water withdrawal and river mining (sand and gravel) are problems affecting most watersheds in Belize, particularly the BRW. Lack of enforcement of conservation laws, particularly those associated with environmental clearance and compliance, maintenance of riparian buffers and forest connectivity, and land use has been a principal cause of forest, soil, and water resources degradation. To improve the enforcement of existing laws and regulations, the project will improve the inter-institutional coordination between the MSDCCDRM and the MNR. The existing framework for rule breaking will be reviewed to identify gaps and duplications and areas for improvements will be identified. Similarly, the policy and institutional framework will ensure penalties are reviewed so that legislative infractions are clearly outlined and articulated. Existing protocols in practice for enforcement and norms of interagency coordination and collaboration in monitoring and enforcement between MSDCCDRM and MNR will also be reviewed and updated. This will include developing enhanced protocols for the coordinated application of fees and penalties and an assessment of the financial and human resources needed for optimal cooperation.

40. To facilitate enforcement and the establishment of penalties though enhanced interinstitutional coordination, through this output, the project will also support the development of an Integrated Watershed Management Strategy and plan for the BRW. The strategy and plan will outline the steps needed to enforce over 10 years biodiversity, soil, and water conservation and management. It will also outline decentralization responsibilities among agencies and ministries at the national and local levels. Lessons learned and best practices from implementation will be documented to inform future similar initiatives in other watersheds around the country. A joint enforcement agreement between MSDCCDRM and MNR will be developed and endorsed, including a joint protocol outlining specific activities, resource sharing, information exchange, etc., for more effective monitoring and enforcement.

Output 1.2. *Improved monitoring and enforcement of legislation*.

41. To enforce existing legislation and legislation updated through Component 1, the project will develop a participatory enforcement awareness strategy aimed at the halting of illegal and unsustainable practices within the BRW. The strategy will be designed to enable local communities to safeguard their natural heritage and ecosystem services with the support of decision makers and law enforcers. Sensitization sessions for communities/stakeholders on existing legislation and penalties related to IWRM will be conducted jointly with the MNR and MSDCCDRM. This will promote collaborative planning and joint implementation of actions that comply with all applicable environmental laws and regulations within watershed communities. A workshop will be held for the comprehensive overview of the major air, water, and chemical legislation and regulations (Protection of Environment through Criminal Law), which will provide local law enforcement, prosecutors, and judges/magistrates with important information on environmental protection laws, environmental crimes being committed locally, and the associated financial, social, and environmental costs.

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42. Improved monitoring will be achieved at the national and local levels. At the national level, the project will provide equipment and infrastructure support to the National Forest Monitoring System to improve land use change monitoring. In addition, it will enhance the operation of the Friends for Conservation and Development (FCD) capabilities/capacities, including an expansion of FCD's Geographic Unit, to provide accurate and timely monitoring of forest cover change within the project's target area. This will allow FCD to provide annual updates on forest degradation/rehabilitation within the project area as a means of tracking the effectiveness of planned interventions. In addition, the project will build capacities/capabilities of resource managers (government staff, non-governmental, and private sector partners) in spatial data analysis. To this end, a training program will be design and implemented to enhance resource managers' capabilities (technical support, technical managers/subject matter specialist) in geographic information system (GIS) analysis, including GIS in land use mapping, GIS in land use/land cover change mapping, global positioning system (GPS) plotting, and other relevant capacities for land use/land cover monitoring that will strengthen the national spatial data infrastructure and will inform decision-makers and environmental authorities about planning and enforcement actions. In addition, the project will support the optimization of the hydrological monitoring network (meteorological stations, wells, flow and stage gauges, etc.) and support the provision of related data for sustainable water management and the design of protection measures including flood and drought forecasting within the BRW. This will allow the expansion and enhancement of the hydrological and climate monitoring capacity of the Hydrology Unit of the MNR.

43. At the local level, participatory monitoring will include the identification of relevant key performance indicators (KPIs) and metrics with gender targets and the development of clear protocols for collaborative monitoring and enforcement at various levels/tiers in the project target landscape (watershed, regions, communities/villages) jointly with the Lands and Survey Department/MNR. A community-based monitoring program will be designed and implemented for the consistent tracking and public reporting of water resources, biodiversity, and land use in the project's target area. The community-based monitoring program will include training and monitoring tools that will enable men, women, and youth in the BRW communities to regularly track and report on the status of water resources, biodiversity, and land use.

44. Routine surveys of environmental law enforcement and compliance will be conducted. Results will be documented to track enforcement trends for a number of Belize's key environmental laws; these will also help to identify tools and opportunities to enhance compliance.

Output 1.3. 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.

45. The project will design an incentives program capable of supporting male and female landowners (private sector, community, etc.) in undertaking works to enhance the biodiversity values and sustainable land and water management of their lands. The goal of the program will be to facilitate the ability of male and female landowners to adopt resource use and production practices that minimize adverse impacts on the environment. These incentives will be evaluated against successful implementation, change adaptation, and feasibility of implementation. Feasibility assessments conducted during the PPG evaluated 12 different economic incentives[29] that could be promoted through the incentives program. Among these, the top four economic incentives were taxation/fines (taxes levied against production inputs/processes that rely on or in some way contribute to unsustainable use of environmental and natural resources which puts such processes at a price disadvantage), Fair Trade mechanisms (an independent certification mechanism that can provide a price advantage to participants and requires participants to adhere to certain standards for workers' right and sustainable production practices), ecotourism certification (independent certification that companies claiming to be eco-friendly to attract a market advantage actually operate in a sustainable manner), and carbon credits (a permitting system in which a party is allowed a specific quantum of greenhouse gas emissions [credits] that can be traded for financial gains if they do not use the permits [avoid the emissions]). Of these, Fair Trade mechanisms, ecotourism certification, and carbon

[29] Taxation/Fines, Fair Trade, Eco-Tourism Certification, Carbon Credits, Funds Transfer Subsidy, Local Controlled Forest Protection, Online Environmental Licensing, Tax Exemption, Educational Program, Water Fund Transfer Subsidy, Funds Transfer Subsidy to Local Agricultural Sector, and Water Well Program.

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credits indicate more pronounced beneficial environmental impact than the higher-scoring taxation approach; however, implementing a taxation scheme appears to be the most easily and readily implementable approach to encouraging sustainable practices in production landscapes. Further assessment will be conducted as part of the design of the diversified financial incentives and consultations will be held with local and national stakeholders for a final decision regarding the incentives to be promoted by the project.

46. To facilitate the implementation of the financial incentives program, the project will support the MSDCCDRM with the requisite technical assistance in the form of a financial advisor/financial strategist for optimal management performance of the incentives program. This support will allow for sound fiscal and operational management and will enhance institutional and governance capacity at the watershed level. In addition, a review of the existing strategies, programs, policies, and legislation that may lead the sustainable/unsustainable use of natural resources will be conducted so that amendments supporting incentives-based biodiversity mainstreaming/SLM can be supported. This will allow the alignment of the incentives program with these efforts and will promote consistency with existing national finance mechanisms and different natural resources management programs, including the BRW management plan.

47. Once defined, the financial incentives program will be socialized initially in the BRW and eventually in other areas of the country once lessons learned from its implementation are systematized. To this end, a comprehensive strategy will be implemented to strengthen and sustain the efforts of MSDCCDRM in advocating changes to reduce land degradation and for the conservation of biodiversity through the use of incentives and policy levers.

Output 1.4. Expanded information management systems (e.g., hydrology, Belize Agriculture Information Management System [BAIMS], Environmental Management Information System [EMIS], etc.) includes mechanisms and protocols such as databases and online map viewer for data gathering, access and information sharing between institutions to strengthen biodiversity conservation, land/water resource management, and sustainable agricultural management.

48. The project will conduct an assessment of environmental and agroecological information needs to support biodiversity conservation, land/water resource management, and sustainable agricultural management in production landscapes with a primary focus in the BRW. This will include information needs and management capability of the MSDCCDRM, NIWRA, Land Information Center/MNR, and Ministry of Health, including their ability to validate and use data developed by the National Meteorological Service (NMS). At the local level, user information needs will also be assessed, including farmers, water users, local communities, and utility/water companies, among others. In addition, the project will establish protocols for collecting, storing, and validating data, including development of mechanisms and guidelines for data and information sharing/access (raw or processed data). This will include coordinating actions with the *Japan-Caribbean Climate Change Project* (J-CCCP), which is funded by the Government of Japan in partnership with the UNDP, and which is supporting the NMS in developing technologies that, among other things, will facilitate meteorological and climate data for the country.

49. The project will expand the capacities of existing management information systems (e.g., Environmental Management Information System [EMIS], Land Information Center and BAIMS) by facilitating better real-time data acquisition and analysis, proactively supporting the management of resources within the BRW, and functioning as nodes of the National Statistics System. In addition, the project will support the adoption of "Environmental" KPIs as prescribed by the Statistical Institute of Belize (Environment Statistics Self-Assessment Tool) survey, which will support the provision of gender-disaggregated environmental data. This will contribute to the implementation of the monitoring and evaluation framework of the national GSDS to monitor and report on the formalization of KPIs for sustainable environmental management as part of national development policy and planning, and contributing to the Critical Success Factor 3: Sustained or Improved Health of Natural, Environmental, Historical, and Cultural Assets.

50. A document archiving system for published technical articles and non-published technical documents related to the BRW (and watersheds throughout the nation) will be developed. It is estimated that there are between 7,000 to 9,000 documents relative to biology, ecology, geology, hydrology, agriculture, forestry, archaeology, anthropology, and sociology that are dispersed among different institutions and libraries with valuable information that can aid decision makers and planners to mainstream biodiversity conservation and sustainable land/water

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management into production landscapes in Belize. Similarly, a BRW/National Water Quality Database for historical and current research, assessment, and monitoring data for surface (river stage, flow, discharge, and basic physical/chemical parameters water quality, including basic parameters, heavy metals, pesticides, other organic pollutants) and groundwater (geographical extent, geology, volume, yield, discharge volume) will be established at the NHS/NMS. This water quality data will complement data maintained by the DoE (compliance and EIA data) and protocols will be developed for sharing and storing data, including archiving databases from the EIAs that have accumulated over the years. Government staff will be trained to perform activities related to information collection, storing, management, and sharing, including specialized training to build capacities in field data collection and the utilization of technology in collection methods, tools, and surveys. Finally, an online map viewer database (including site photos, graphs, maps, etc.) will be set up for open access by all stakeholders, and will include a component for an online atlas. This database will be updated continually and will provide an interactive system for stakeholders to access the data from their sites of interest.

Output 1.5. Multi-tiered training program to build institutional capacities (public and private) in biodiversity conservation, integrated watershed management, SLM, and building resilience to climate change.

51. The project will implement a gender-oriented training programme that will be multi-tiered. At the technical level it will target decision makers, financial institutions such as the Development Finance Corporation, and extension officers and technicians/agronomist from large farms. At the operational level it will target landowners and farmers (including women), as well as community groups, etc. Support will be provided for the participation of national government staff and watershed stakeholders in capacity building for multi-tiered systems to support natural resources management, with a target of 50% access by women and youth stakeholders. The training will focus on information sharing, stakeholder engagement, and building core capacities for sustainability of initiatives established by the project for conservation of biodiversity, integrated watershed management, SLM, and building resilience to climate change. Training will be delivered through workshops/symposiums, online learning management systems, courses/webinars, international/local short courses, and workshops; fellowship at the University of Belize (UB), South-South exchanges; field/on the ground learning; and knowledge sharing events.

52. During the PPG, a capacity/needs assessment of the Department of Environment/MSDCCDRM, Hydrology Unit/MNR, Department of Forestry/MSDCCDRM, Department of Fisheries/MSDCCDRM, UB-Natural Resource Management, Sustainable Development Unit/MSDCCDRM, Department of Agriculture/MSDCCDRM, Lands and Survey Department/MNR, MNR Policy Unit, and the Department of Rural Development/MLLGRD was conducted using the UNDP/GEF Capacity Development Scorecard. Assessment results indicated that there are varying degrees of capacities to mainstream biodiversity and to promote SLM and IWRM in production landscapes, and some institutions may be operating without the necessary capacities to accomplish this goal. To assess progress in capacity building to support biodiversity conservation and SLM and IWRM in production landscapes, the UNDP/GEF Capacity Development Scorecard will be applied by the project team at the mid- and end-points of the project.

53. A needs assessment for improved community-based capacities that support planning, monitoring, and enforcement of activities for improved biodiversity conservation and land use management in the BRW will be conducted as part of project implementation. This will include an assessment of knowledge and skills, infrastructure, human resources, data, and other needs to improve local capacity for planning, implementation, and monitoring and enforcement.

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

Outcome 2.1: Multiple GEBs delivered.

Outcome 2.2: Increased area of agriculture and forest production under sustainable practices.

Outcome 2.3: Accessible markets for producers implementing sustainable practices.

54. A human impact mapping assessment and the diagnostics study carried out for the BRW, identified major stressors affecting the watershed. These stressors are associated primarily with agriculture production, resource exploitation supporting livelihoods and large-scale extraction processes which drives land use conversion. Component 2 proposes to work across the 597,500-ha watershed, in six (6) prioritized regions located primarily

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within the middle and lower reaches of the watershed. The project approaches the delivery of GEB in an integrated and multidisciplinary manner, considering human interface with watershed resources and critical environmental systems and focuses on the incremental value that project investment can provide to GEBs. Strategic investments across the watershed are expected to deliver cumulative impacts at a scale great enough within the national context to truly contribute to the delivery of GEBs.

55. The intervention as is presented recognizes sustainable development as being central to the generation of GEBs, and inspires and engages management entities, the private sector, local peoples and communities in activities designed to address loss in forest cover and land use conversion, ecosystem connectivity, the management and exploitation of water resources, and sustainable production. The Approach of integrated systems management accommodates for multiple land management goals across heterogeneous landscapes, integrating conservation priorities among a wider set of goals in land use planning exercises at different scales.

Output 2.1. Landscape management tools used in priority areas for biodiversity conservation, including:

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)*.

b. *Rehabilitation and management strategies for riparian forests implemented alongside programme for participatory soil management to reduce erosion and improve water quality*.

c. *Improved forest monitoring system for improve land-use change monitoring within the BRW*

56. The BRW is characterized by various Pas: the Caracal Archaeological Reserve Chiquibul Forest Reserve, Chiquibul National Park, Noj K'a'ax Meen Eligio Panti National Park, Mountain Pine Ridge Forest Reserve, Thousand Foot National Monument and Vaca Forest Reserve are all located in the upper regions, while others such as the Crooked Tree Wildlife Sanctuary, Community Baboon Sanctuary, and Labouring Creek Jaguar Corridor Wildlife Sanctuary are located in the lower portions of the watershed. Together this network of protected areas forms the backbone of biodiversity conservation across the watershed. Although the upper reach of the watershed still retains more than 89% of forest cover due to the existence of blocked protected areas, alternately the middle and lower reaches of the watershed is heavily degraded due to increasing human pressures for development which has led to a situation where habitat conversion outside of the network has outpaced formal conservation features; the result of this being severe fragmentation of ecological networks and habitats. As areas outside existing PA networks are not subjected to special regimes of protection; proponents of the project have introduced two prioritization scenarios for areas outside of the PA networks: conservation and restoration. The priority areas for conservation and restoration has been identified and, in an effort, to ensure both scale and impact on intervention, the project focus on the area in the Middle Belize River Watershed from Succotz village to Big Balls and a small portion of the Lower Belize River Watershed from Big Falls up to Flower's Bank Village in the Community Baboon Sanctuary, where tensions have arisen as areas important for biodiversity do not spatially co-occur within Pas and increasing level of deforestation, riparian deforestation and high levels of bank failure have been recorded.

57. The proposed project output supports opportunities for conservation of biodiversity outside Pas through the strengthening of corridors, the rehabilitation/ restoration of critically degraded priority landscapes and the provision of environments free of pollution. A key result is the formalization and promotion of conservation agreements as a tool for effective resource management outside the existing network of Pas.

58. For the most part, use of conservation agreements in Belize have been limited in its use of concessions permitting the sustainable use and management of natural resources in public lands, primarily in protected areas via the Forest Act and the National Protected Areas Systems Act. While the above-mentioned agreements have benefited significantly the effective management of forest resources, there exists a general paucity of tools addressing the rapid conversion of lands supporting the expansion of the agriculture frontier.

59. Traditional small-scale and mechanized large-scale agriculture is considered a major source of livelihood within the watershed. As of 2016 the agriculture sector comprised an estimated 131,561 ha of the watershed. This represents an estimated 22 % of the total area the watershed surface area in the Belizean side. The agriculture sector and by extension the large-scale expansion of the agriculture frontier is concentrated in the middle reaches and to a lesser extent in the lower reaches of the watershed. To this end, the project is expected to introduce both a system

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of voluntary agreements with watershed communities, as well as a system which incentivizes large operators to actively participate in the sustainable management of production landscapes, contributing to the delivery of as much as 50,000 ha of lands under improved management.

60. It is envisioned that agreements will be as follows:

a) A cooperation agreement amongst the primary government departments with core mandates for resource management in production landscapes, i.e. Agriculture Department, Forest Department, National Hydrological Service, Department of Natural Resources and the Department of the Environment for the delivery of integrated services.
b) Cooperation agreements between the GoB and community groups including the Valley of Peace Farmers Association, the Community Baboon Sanctuary Women's Group, and the Belize River Valley Livestock Enterprise.
c) Conservation agreements/letter of agreements between the GoB and communities, individual farms and families, which allows for the minimal provision of conservation of biodiversity, forest, water and soil resources.

61. The utilization of conservation agreements in engaging large private sector holdings such as Santander Farms Ltd., and Big Falls farms is crucial for the maintenance of corridor connectivity as well as ecosystem functionality within the watershed. The White-Water Lagoon and its surroundings, determined to be an ecologically sensitive area encompasses approximately 121 ha is owned by Santander Farms Ltd. The Big Falls Farm containing 3 parcels of land totaling 14,569 ha is integral for the maintenance of corridor connectivity within the Belize Wester Biological corridor. The project provides the opportunity to work with the landowners to place the forested areas under some type of easement or trust that allows only sustainable usage.

62. Within the framework of this output, the project also intends to implement a riparian forest restoration strategy and a Forest Protection Strategy for the project area. The riparian strategy establishes riparian management zones within the watershed, and provides the guidance, specifying silvicultural treatments and approaches to rehabilitation within prioritized zones. It is the aim of the project to restore some 750 ha of structurally complex riparian forests that provide the ecological functions to meet conservation objectives. As rising timber demand, land clearance to accommodate the expansion of the agricultural frontier and general development within the BRW results to fragmentation of forested areas/ corridors, the proposed forest Protection Strategy is expected to provide effective guidance for protection of remaining areas of forest stands, targeting specifically priority areas with incomplete protection by promoting better implementation and enforcement of existing law ensuring that development planning considers conservation, landholding, forestry, local community and broader public interest. The strategy covers five key areas: policy framework, protective action, management practice, long-term opportunities and funding. Established nurseries managed by participating communities and institutions will support the implementation of both strategies, particularly restoration actions.

<u>Output 2.2</u>. Water Master Plan for the BRW developed through a participatory process allows integrated management for sustainable land and water resources use:

a. Critical groundwater recharge areas identified and mapped and delineated based on extent, quantity, and quality, recharge rate, etc.

b. Baseline study of supply and demand and the quality of hydrological resources supports decision making to allocate water for sustainable production and irrigation.

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.

d. Operationalization of funding strategy developed and mechanisms for implementation defined, 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, DOE, and water users, following a water use data analysis.

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63. The BRW is under serious threat from unsustainable agricultural practices, which reduce the quality of the watershed ecosystem and interfere with the ecological services provided by this vital land unit. This watershed is important in that it provides water to as much as 70% of the country's population, with groundwater sources supplying about 95% of the rural population. Leading causes of impact to the watershed are habitat alteration, pollution, flow modification, pathogens, and invasive species. Habitat alteration involves deforestation of steep slopes, riparian areas, wetlands, and groundwater recharge areas. Pollution results not just from non-point source agricultural runoff, but also from point-source urban sewage discharge, food processing facilities, and stormwater discharge drains. Flow modification is the result of impoundment of streams and rivers, diversion of water through canals, and water abstraction for potable water supply, industry use, and agricultural irrigation.

64. At present, much of the landscape within the BRW contributing to the recharge of unconfined aquifers has been cleared of vegetation. This coupled with increasing numbers of wells being dug into confined aquifers, to supply industry and rural population needs, points to a possible future water resource crisis within the country's largest watershed. The identification, assessment, and protection of groundwater recharge zones is a basic need within the BRW (and the country in general), especially considering the expansion of agriculture that is already threatening several known recharge zones.

65. To effectively respond to the threats to water resources within the watershed, the project introduces a Water Master Plan, which supports a cross-sectoral approach to water resource management. The BRW Water Master Plan is meant to facilitate planning for development and management of water resources within the watershed; and support decision making to allocate water for sustainable production and irrigation in the region. A Water Master Plan designed for the BRW is likely to include and be designed based on a series of physical parameters including seasonal and multi-annual flow and yield characteristics of the Mopan River, Macal River, and Belize River, an estimated extent and yield of groundwater province(s) of the BRW (providing base flow and possibly flood absorption for the main rivers) as well as resource use/ abstraction and human influence including contribution to pollution and the degradation of the resource base. It is informed by a watershed-based water balance, which considers the current status and future projections of water resources in quantity and quality, setting pressure on it when considering their spatial and temporal distribution of supply, availability and demand.

66. As the Water Master Plan must rely on continual data analysis, in order to implement adaptive strategies within uncertain times of global climate change and accelerating human impacts, the project also contributes to an optimized hydrological network capable of providing data for sustainable water management and designing protection measures including flood and drought forecasting within the BRW.

67. Putting a price on water usage, a payment for environmental services strategy has been a topic of discussion. Water pricing has traditionally been focused on groundwater removal and the cost of energy for pumping that water. The project is also expect to evaluate and adopt modalities for collection of fees for water use and pricing strategy to determine the most cost-efficient means of securing user funds for water use management and conservation. The proposed strategy seeks to facilitate reform as well to provide transparency and predictability on how water will be priced and will consider the impact of the on women's and men's ability to support and sustain production, in the region of influence. The pricing strategy takes into consideration the results of the integrated and dynamic basin water balance.

Output 2.3. 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.

68. Historically, the GoB expends around $1.2 billion a year on average to support capital projects and recurrent expenses across its various line ministries and departments executing its development policies and public mandates. Of this $1.2 billion, approximately, 41% or $485M on average is spent on activities arguably connected to sustainable development objectives. While sustainable development accounts for around 41% of total public expenditure, only 4% of that spending is classifiable as focused on sustainable production in landscapes and aquatic environments. Data from the Inter-American Development Bank's 2014, Private Sector Assessment Report, indicates that an average of $136.5 million dollars or 60% of foreign investment inflows were associated with sectors that directly rely on the natural environment in some major supportive or extractive way for the production of goods and services.

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69. Financial incentives are a core component of natural resources conservation and environmental protection programmes because they can be utilized to motivate stewardship behavior. Access to improved prices based on the proven implementation of sustainable practices in production processes can have positive impacts not only on the environment but also on small producers' livelihoods and consumer health. In identifying suitable incentive mechanisms, which can be adopted within the BRW, during the PPG twenty-nine (29) regional initiatives (projects/programs) across seven countries as well as nine local programs from Belize. The top three economic incentives identified for possible application within the watershed included taxation/fines, Fair Trade mechanisms and eco-tourism certification. Of these three, both Fair Trade mechanisms and eco-tourism certification indicate more pronounced beneficial environmental impact than the more high scoring taxation approach, however, implementing a taxation scheme appears to be the most easily and readily implementable approach to encouraging sustainable practices in production landscapes. A Fair Trade programme also has the additional benefit of social justice and is more easily applied to include small producer organizations.

70. The project, as written, proposes the development and piloting of at least 2 incentive programmes with large landowners and private sector enterprises as a means of successfully motivating behavioral change away from destructive practices in the extraction and use of natural resources. The ready-to-implement design focuses on forest protection given the crucial role of standing forests in regulating nutrients in watersheds and protecting soil and water quality; and on agriculture as the most outstanding single driver of land use change and downstream water quality as well as its economic relevance. More specifically mechanisms are geared towards integrating sustainable management practices along the value chain for goods and services that rely on natural resources in their production processes.

71. Small-, medium-, and large-scale farmers of sugarcane, livestock, and cohune oil within the target site who are willing to sign voluntary agreements for conservation and sustainable production through Output 2.1 will be eligible to access incentives. Voluntary agreements will include mutually agreed-upon collaborative actions and will specify at a minimum, the objectives, goals, commitments and penalties, M&E of the agreement, mechanisms for the resolution of conflicts, and other relevant information. In addition, they will include action plans that clearly define the yearly actions to be implemented and those responsible for the costs and financing, and monitoring; the agreement will be revised annually based on the action plan performance. Agreements will be signed between the eligible farmers and the MSDCCDRM with the MNR, providing monitoring support and following protocols for inter-institutional coordination to enforce norms and establish penalties related to clearing of riparian forests and polluting freshwater ecosystems; these will be developed through Output 1.1. GEF support for this output will be in the form of facilitating access to incentives by eligible famers and assistance for monitoring agreements and performance at the farm level as part of a land use change monitoring system to be developed under Output 2.1 for the implementation of landscape management tools. There is a long-term government commitment to sustain these schemes after project completion, as the piloting of incentives is a response to a larger commit from the Government of Belize to develop incentives to implement biodiversity-friendly production practices and sustainable water management and use strategies nationally, which will be achieved through Output 1.3.

72. The project will support best sugar cane production practices, which may include improved water management for irrigation; organic fertilization, including using leftover sugar cane straw as ground cover; and reduced use of agrochemicals. In addition, owners of sugar cane farms supported by the project will implement activities that result in the conservation and rehabilitation of riparian forests and other ecologically sensitive areas (i.e., water recharge areas), thereby contributing to maintaining and enhancing ecosystem connectivity, providing biodiversity habitat, reducing soil erosion, and improving surface water and groundwater quality. These best practices will be documented and disseminated as part of the knowledge management plan under Component 3. This will include sharing information with the Ministry of Agriculture, Fisheries, Forestry, Environment, and Sustainable Development (MSDCCDRM) and famers' associations such as Orange Walk and the Corozal Cane Farmers Association, both of which represent many of the 5,300 cane farmers that produce sugar cane in northern Belize.

73. The durability of interventions such as tree planting and setting aside of steep slopes will be ensured by framing these efforts within a national strategy for riparian forest restoration and protection. Currently this strategy is framed within the national framework for resource management. As such, the Forestry Department will be strengthened to execute its mandate for the protection and restoration of forests in the country. The project supports the emplacement of key elements of programme sustainability, such as establishing community and

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national nurseries, as well as supporting efforts to engage communities in decentralized efforts for protection. It should be noted that the commitments referenced in the project are expected to be legally binding, as the government of Belize has agreed to formally adopt these as tools for effective resource management. Conservation agreements will be legislated through amendments to the regulations, which enable the existing Forest Act and the Environmental Protection Act.

Output 2.4. Gender responsive extension work program; to include training for small and large producers, including women and vulnerable groups, to implement sustainable production, post-production and livelihood practices; delivered through a capable Extension Service of the Department of Agriculture, the University of Belize, Galen University, and UNDP's Green Commodities Programme improves production, enhances value chains for key products, and builds awareness among small-scale and large-scale producers about markets for sustainable products.

74. Despite the critical role women play in agricultural development their access to extension and rural advisory services delivery is limited. Consultation during the PPG confirmed that male farmers had more access to agricultural extension delivery than their female counterparts, Women farmers pointed out repeatedly that their participation in sector development would be enhanced by their access to information and training resources. Limitations against female farmers can be overcome if extension package delivery is gender responsive in its consideration of value chain enhancement.

75. Extension / Information services is critical for the enabling of sustainable increase the productivity and profitability of smallholder farmers. The project supports the Department of Agriculture/ and other training institutions in their delivery of a national goal to Support agricultural expansion within sustainable and inclusive growth paths. Traditional agricultural extension services face critical personnel shortages and many times offer direction, which are not taken up by farmers as the advice provided is generic and not wholly responsive to individual farmer needs. The Project will support the expansion of extension capacities through the addition of 2 extension persons within the BRW and the introduction of an expansive programme for capacity building of extension service providers (public and private systems).

76. The output adopts key lessons from the Food and Agriculture Organization (FAO) of the United Nations intervention "Capacity Development Support to Rural Women on the Socio-economic and Gender Aspects of Sustainable Rural Development." This approach combines different capacity development modalities, including capacity needs assessment, development of training of trainers' material, gap analysis, pilot training of trainers, pilot training of rural women, a field visit and a study tour, with an objective to increase extension capacity to design and deliver gender-sensitive to both female and male farmers.

77. A gender responsive work programme will be delivered to project beneficiaries participating in the delivery of green value chains for a minimum of two (2) priority commodities. Green value chains will be supported through technical assistance from UNDP Green Commodity Programme and the engagement of sector actors, with investments bring made available to support the enhancement of key value chain lines.

78. UNDP's Green Commodity Programme recognizes that smallholder farmers produce most of the world's agro-commodity crops. Managed sustainably, commodity production has the potential to become a powerful engine for rural development in producer countries. UNDP's Green Commodities Programme works with governments, farmers, companies, civil society and other stakeholders to build a shared vision for national commodity sectors, and a joint commitment to action. Through the Commitment to Action initiative, the programme brings together the public and private sectors, with civil society. Green value chains are dependent on environmentally responsible production and manufacturing. This intervention aims to increase the effectiveness of private sector collaboration with governments to protect and strengthen agricultural commodity production and supply chains as well as improve farmer competitiveness in the markets by working for a greater integration of producers, retailers and consumers in the value-chain. Strategic small-scale investments are made to trigger transformation within sectors.

Output 2.5. Business management capacity of producers (including women) to implement sustainable practices improved through targeted training and technical support for agrobusiness development and private and cooperative support services.

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79. Most smallholders are restricted in their abilities to invest in sustainable production options as weak business management have made them un-bankable, restricting access to investment capital needed for improving farm performance. Financial tools are essential to encourage investors to make financial services available to smallholders. Under Output 2.5, direct project resources have been committed to support the provision of training and best practice guidance to small-scale producers and retailers, including women-owned businesses, to improve the productivity, capacity, logistics and market efficiency can greatly increase sustainability aspects of production. The project, through an introduced sustainable agrobusiness development programme will promote commodity management and best farm management practices meant to guide the efficient and sustainable use of watershed resources. Support will be provided for the development of three (3) strategies for integrating smallholders more effectively into green supply chains; as well as develop four (4) business plans for selected producer groups, with at least 50% of plans developed supporting youth or women lead enterprises. The primary objective of this process is to build the capacity of producers and processors for maintaining sustainable systems while improving their profitability and manage their businesses.

80. Business plans are expected to costs the implementation of best management practices for improved production and processing as well as clearly define development objectives and provide guidance for the access to finance (debt, equity and grant) and will be complemented with effective marketing strategies which considers developed through the review of domestic markets for goods and services, the review of potential export markets and a capacity assessment of export readiness. New capacities and limited small-scale investments are meant to inspire innovation in production and processing systems.

81. In addition, the project will support an initiative to provide agro-processing incubation opportunities through the Department of Agriculture Food Processing Unit (Central Farm Training Center), which will support sustainable agricultural production and climate-smart agriculture. In addition, there will opportunity for small system start-ups through a micro-granting programme (Output 2.8).

Output 2.6. Awareness program for producers, technicians, and government officials in the production sector (agriculture, tourism, forestry, and urban development and industry) informs and builds capacity to sustain and maintain the environmental and socioeconomic benefits of sustainable production practices and the availability of financial incentives and on-going programs to facilitate implementation.

82. Positive changes in land use practices at the landscape/watershed level can be more effected if the general population is aware of the issues and recognize the need for changes. To this end, awareness on biodiversity conservation, SLM, and sustainable production practices will be the focus of awareness programme under this output. Key considerations to be built in the programme are that it must include activities aimed at engaging women and the youth. In the case of the women, experience from past projects indicate that women generally are more open to interaction with other women, thus one conditionality that will be placed is that women should be part of the team implementing the awareness activities. Experience has shown that where change in attitudes and behavior is desired, the process of planning in a landscape and/or watershed is often as important as the plan itself. Since biodiversity conservation, SLM, and sustainable production should be seen within the wider social-ecological landscape, a key objective of the awareness programme should be to socialize the project and its objectives as well as existing planning instruments such as the BRW Management Plan.

83. The project will rely on experienced agencies such as the FCD to plan and implement the program, which will include: a) a watershed pride campaign; b) development of educational materials and brochures, etc.; c) a farmers field schools approach; d) tailored messaging in different languages (creole, English, Spanish, and low German); e) based on the audiences (youth, farmers, government, and private sector) the use of the best awareness-raising mechanisms; and f) the use of different communication modes such as social media, posters, radio, TV, messaging, and reports.

Output 2.7. Participatory monitoring program assesses the delivery of GEBs: biodiversity conservation and integrated watershed management to improve hydrological functions and services for agro-ecosystem productivity.

84. The BRW underpins Belize's cultural, economic, environmental and social historical development and remains very critical for its sustainable development. Going forward, the management of this important multi-use, multi-stakeholder watershed will require integrated sustainable use and management. Simple participatory

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monitoring within the watershed is considered highly beneficial for watershed management as it actively engages communities in a practice, which raises watershed health awareness in local communities as well as serve to advance goals of environmental stewardship.

85. The proposed community watershed conservation programme formalizes partnerships between community stewards and management and regulatory agencies functioning within the watershed. The programme is designed to build a comprehensive and accurate picture of prevailing watershed conditions through the monitoring of watershed riparian forest, bank erosion, groundwater quality, surface water quality, wildlife, plant life and n the impacts of local land use management on watershed services. The intervention is supported by the UB and the FCD who contribute expertise in community engagement and system monitoring. The UB and FCD will provide simple participatory tools that can be used by local communities. These tools provide for sufficient monitoring coverage at a low cost, expanding on the national database and allowing for additional data points for better determination of watershed trends. If and where necessary, participatory monitoring could be accompanied by further in-depth monitoring which is implemented by government line agencies using more sophisticated tools

86. The programme which formalizes a network of community monitors, engages eleven (11) critical watershed communities (see map below; population: 16,931 – M8583/F8349) in conservation education and monitoring. As designed, the programme represents an extension of a programme already in place within communities of the upper reaches of watershed, administered by the NGO group FCD.



<u>Output 2.8</u>. Micro-granting scheme with provides direct incentives/ investments to local communities participating in riparian restoration, conservation agreements and sustainable production.

87. This output is the mechanism utilized by project to fund Community Smart Growth Projects within the BRW, i.e. projects that protect the environment while support the generation of benefits for watershed residents. Building on lessons garnered from UNDP's administration of various small granting programmes, the initiative will be utilized to incentivize community support in planned project actions. The mechanism targets some 1,500 direct beneficiaries with the support of micro-grants valuing $2,500 to $15,000. Grants will be made available to local community groups and organizations supporting their involvement in processes designed to safe guard the integrity of the watershed and watershed functions such as riparian/ landscape rehabilitation, community monitoring networks, sustainable production systems, sustainable agro-processing, education, alternative livelihood and development options, etc.

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88. Gender equality and women's empowerment is a critical element of Output 2.8. Thus, within the framework of Outcome 2.8 women will be encouraged to participate and take leadership in community-based projects.

89. The mechanism targets community planting more than 100,000 seedlings of native species along river basins and areas of interconnection within the biological corridors, as well as support the voluntary participation of some 500 smallholder/small producers subject to their signing of conservation and good social practices agreements.

Component 3. Knowledge Management and Learning.

Outcome 3.1: Best practices and lessons are accessed and applied in other production landscapes and watersheds in the country and internationally.

90. This project component will the implementation of the Gender Action 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. This component will allow systematizing best practices, and lessons learned about biodiversity conservation and SLM/water management in production landscapes of the BRW 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. Finally, Project-level 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.

Output 3.1. Gender-sensitive/gender-responsive programmes/activities promoted through project frameworks.

91. The project will develop a gender-sensitive/gender-responsive strategy to ensure that gender is effectively mainstreamed. During the PPG, a gender analysis was conducted that provided the baseline information for the development of a Gender Action Plan (Annex G); the implementation and monitoring of the plan will be the main activity under this output. For effective gender mainstreaming, awareness and sensitization activities for national and local authorities and local communities will be conducted so that the links are ensured between gender equality/women's empowerment and biodiversity conservation, SLM, and sustainable production. This will be achieved in conjunction with Outputs 1.5, 2.4, and 2.6. Best practices and lessons learned on gender mainstreaming will be documented and shared. A Gender Expert will be part of the project's PMU, and will be responsible for the implementation of the Gender Action Plan, working closely with the M&E and Safeguards Expert.

Output 3.2. Experiences, best practices, and lessons learned about biodiversity conservation and SLM/water management in production landscapes captured, systematized and made available through various platforms for public and private stakeholders for use in other production landscapes and watersheds in the country, informing future projects and strategies.

92. The systemization of the project's experiences will be performed on an annual basis and will be used internally to inform the project management team in the execution of its functions, the Project Execution Unit in its implementation, and the project's stakeholders and beneficiaries. The lessons learned will be input into the project iterative management process and will guide project management adaption. This systemization will occur at several levels, including at the project management level, stakeholder involvement and management level, and during the implementation of project activities to document best practices and knowledge generation at the local level. The lessons learned and best practices will be compiled, collated, and packaged into several formats (e.g., brochures and flyers, electronic forms, short videos, and impact documentaries) that are geared towards specifically targeted groups and audiences, using community groups and/or NGOs to assist in capturing lessons learned and best practices. These products will also serve to build and enhance community stewardship as well as awareness of the project activities and to measure the project's impacts. The dissemination of information will allow the replication and the scaling-up of best practices in other areas of ecosystem connectivity, production landscapes, and watersheds in the country.

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93. The project will also support the participation of government, private, and community stakeholders in conferences to share experiences, best practices, and lessons learned about biodiversity conservation and SLM/water management in production landscapes, and in global/ regional forums with for information exchange. A UNDP CO Programme Associate expert in communications and knowledge management, in collaboration with the Project Manager, the Project Board, and the PMU, will identify and systematize the project's experiences and best practices in SLM, biodiversity conservation, IWRM, riparian forest restoration, sustainable production, and gender mainstreaming, among other topics.

94. M&E of the project's implementation will be conducted following GEF and UNDP guidelines and according to the M&E plan described in Section VII of this project document. The main tasks of the M&E plan include an inception workshop, annual monitoring of indicators in project results framework, annual project implementation reports (PIR), annual NIM Audits, third party monitoring spot-checks, ongoing monitoring of environmental and social risks, ongoing monitoring of the Stakeholder Engagement Plan and the Gender Action Plan, Project Board meetings, oversight mission by the UNDP-GEF team, mid-term and terminal GEF7 core indicators updates, and an Independent Mid-term Review (MTR) and an Independent Terminal Evaluation (TE), among other activities.

Partnerships:

95. 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.

96. 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.

97. 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.

98. 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 BRW, will be promoted.

99. The project will also coordinate action and incorporate lessons learned from the *GEF Small Grants Programme (GEF SGP)* – over the years, the GEF SGP has been partnered with FCD to address conservation challenges via projects such as the Community Capacity Building and Climate-Smart Innovative Agroecological Practices In the Vaca Forest Reserve (2016 -2018) and the Combatting Climate Change in the Vaca Forest Reserve Project (ongoing).

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100. The project will also build synergies with the *Resilient Rural Belize (Be-Resilient) Project*, which initiative is expected to be officially launched in 2019 and will be financed via a loan in the amount of US$20 million from the International Fund for Agricultural Development (IFAD). The objective of this project is to build overall resilience to climate change by adopting new or improved climate resilient practices, increasing and diversifying agricultural production, and by facilitating their access to commercial market chains for the off-take of their surplus production. Of the 23 communities across the country to be targeted by this investment, five of these are in the middle portions of the BRW where the project proposed herein will be implemented (i.e., Valley of Peace, Buena Vista, La Gracia, San Antonio and Seven Miles).

101. 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.

102. 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.

103. Synergies will be established with the *Conservation and sustainable use of the Selva Maya Commissioned by: German Federal Ministry for Economic Cooperation and Development (BMZ).* This project is supporting key governmental and civil society actors to carry out coordinated measures for the protection and sustainable use of biodiversity and natural resources in the Selva Maya. During the PPG, meetings were held between the Belize GEF6 project formulation team and the BMS/GIZ Selva Maya project staff to initiate this cooperation process.

104. The project will also share information with IW projects regarding water management strategies through the GEF's IW:LEARN program. This may include projects such as GEF ID 10172 *Towards the Transboundary Integrated Water Resource Management (IWRM) of the Sixaola River Basin shared by Costa Rica and Panama*, and GEF ID 9246 *Integrated Environmental Management of the Río Motagua Watershed* (Honduras and Guatemala).

105. In addition, the project will build synergies with the Inter-American Institute for Cooperation on Agriculture (IICA) so that lessons learned regarding sustainable agriculture are shared through platforms such as: a) IICA Play, an open access and innovative platform designed to access knowledge by making technical and educational content and other information related to crop production and livestock farming available to producers, researchers, students, and young professionals; and b) Warriors – the brainchild – IICA, an online discussion forum that provides a platform to raise awareness and demonstrate the pivotal role of rural women in global food production, as well as to assist in empowering them and improving their socioeconomic conditions.

Risks and Assumptions*:*

106. The overall project risk categorization is moderate risk. The project activities are designed ensuring minimal or no risks of adverse social or environmental impacts. During the project design stage, the social and environmental screening was completed (see Annex E). As per standard UNDP requirements, the Project Manager will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e., when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks, as well as environmental and social grievances will also be reported to the GEF in the annual PIR. The detailed risk management strategy for the project is included in Annex H.

107. Key project assumptions are as follows: a) political will exist to implement through project Component 1 the legal and policy reforms needed for mainstreaming biodiversity and promoting integrated watershed

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management and SLM in production landscapes; b) national institutions will have the capacity for effective planning, implementation, monitoring, and enforcement; c) producers will be actively engaged in implementing sustainable production practices and using LMTS will contribute to biodiversity conservation and SLM; d) markets will exist for sustainable products and economic benefits will be attractive enough for farmers to implement sustainable production practices; and e) climate change and variability will be within normal ranges and the project outcomes will not be affected.

Stakeholder engagement plan:

108. The successful implementation of the project will largely depend on the effective communication and coordination with the multiple project stakeholders and the implementation of mechanisms to ensure these stakeholders' participation. The key national and sub-national stakeholders include MSDCCDRM; MNR; NIWRA, and FCD, among others. At the local level, the most relevant stakeholders are organizations of small- and medium-size farmers, producers' associations, women's groups, and local communities. The project's Stakeholder Engagement Plan is included in Annex F, and includes information summarizing the main PPG workshops convened and stakeholder meetings conducted, among other aspects; a list of people consulted during project development is included in Annex L.

Gender equality and empowering women:

109. According to the UNDP Gender Marker Rating, the project is categorized as GEN2: gender equality as a significant objective. During the PPG, a gender analysis for the prioritized landscape and a detailed Gender Action Plan (included as Annex G) were developed to ensure gender mainstreaming in the project; specific gender-based indicators will be used for monitoring and a gender specialist will be part of the Project Management Unit (PMU) to facilitate improvements to gender equality and women's empowerment.

South-South and Triangular Cooperation (SSTrC):

110. The project will promote south-south cooperation with the other countries in the region that are implementing similar initiatives (e.g., Colombia, Costa Rica, Grenada, Guatemala, Honduras, and Panamá); this will be achieved through exchanges with the Country Offices and the Regional Office for Latin America and the Caribbean (LAC) of the UNDP. Technically qualified staff and groups of experts in the issues addressed by the project from these countries will have many opportunities to exchange experiences and knowledge. Finally, successful experiences will have a prominent place in the lessons learned that would be disseminated to ensure their widespread adoption and replication in other LAC countries.

Sustainability and Scaling Up:

111. The environmental, social, institutional, and financial aspects of sustainability are closely related and will be addressed through an integrated project design that combines biodiversity conservation through enhanced ecosystem connectivity and IWRM, institutional capacity-building at various levels, and farm- and producer-level on-the-ground interventions that promote sustainable production and SLM in an integrated manner. Environmental sustainability will be ensured by strengthening government capacities in biodiversity conservation and land use/watershed planning, information management, and monitoring tools and practices; the restoration of degraded riparian forests and the implementation of LMTs (i.e., biological micro-corridors, agroforestry, forest enrichment, live fences, windbreaks, and hedges); promoting the conservation of forest patches within private lands, building ecosystem connectivity between KBAs, and contributing to the long-term survival of species of global importance through enhanced habitat, in particular wide-ranging species; integrating SLM and biodiversity conservation principles in watershed-level planning and management processes; and by introducing sustainable agricultural practices at the farm level that support soil, water, and biodiversity conservation. Social sustainability will be pursued through extensive involvement of Civil Society Organizations (CSOs) and producers' groups using a gender focus, including in participatory watershed planning processes through consultations, training, and technical assistance related to the use of financial incentives and the adoption of sustainable agriculture and SLM techniques at the farm level. Sustainability of the gender-responsive extension work/training program for small and large producers, including women, will be supported through the systematic capturing, analysis, and dissemination of technical documentation, experiences, and lessons learned by the dedicated knowledge management actions, and long-term

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support through the Extension Service of the Department of Agriculture, the UB, the Galen University, and UNDP's Green Commodities Programme.

112. Institutional sustainability will be achieved through the clarification of national government agencies jurisdictions/mandates regarding water and watershed management and by promoting inter-agency cooperation and programming, which will lead to increased public and private investment to support sustainable production practices. It will also be achieved through collaborative planning with local communities and joint implementation of actions that comply with all applicable environmental laws and regulations, as well as improved monitoring and enforcement capacity with community participation. Expanded information management systems will provide reliable and real-time information to support decision-making. Finally, financial sustainability will be achieved by facilitating access to incentives and markets to small- and large-scale producers who adopt environmentally friendly production practices. Additional income will be generated, and productivity will be improved, thereby making it attractive for producers to continue using sustainable production practices beyond the life of the project.

113. The project has great potential for scaling-up at the national level. The development and implementation of the Water Master Plan for the BRW 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 that are part of UNDP-GEF Regional Coordination Unit (RCU) project portfolio (e.g., Colombia, Costa Rica, Grenada, Guatemala, Honduras, and Panama) and networks such as the Conference of the Parties of the CBD, the Panorama Portal "Solutions for a Healthy Planet", and Good Growth Partnership (the latter with support from the UNDP's Green Commodities Programme).

VI. PROJECT MANAGEMENT

Cost efficiency and effectiveness*:*

114. Cost efficiency will be achieved through various means, including strong collaboration with ongoing initiatives. In addition, in-kind and cash cofinancing has been secured from the GoB, which will increase the cost efficiency and impact of the project.

115. Under Component/Outcome 1, cost-effectiveness is built primarily through actions to eliminate redundant investments that result from overlapping functions for biodiversity conservation and sustainable land and watershed management among environmental agencies. Clarifying mandates and developing mechanisms for inter-agency cooperation will result in cost savings through joint programming and enforcement and information sharing (Outputs 1.1, 1.2, and 1.4). In addition, Component 1 will benefit from ongoing or planned investments by the GoB (e.g., MNR and MSDCCDRM) and its partners for biodiversity conservation and watershed management (e.g., UB and WWF: Management Plan for the Belize River Watershed, 2018; J-CCCP; and FCD) (Output 1.4), as well as a training effort under this and other initiatives (Output 1.5).

116. Under Component/Outcome 2, the implementation of LMTs (Output 2.1) and the strengthening of value chains for products (Outputs 2.4 and 2.5) will include the use of the experiences and lessons learned through other GEF-related projects and exchanges among project teams. This will reduce the time of implementation and cost though replication of best practices. The project will also make use of the UNDP's Green Commodities Programme experience in supporting farmers to adopt more sustainable production practices and assisting them to forge partnerships to sell their products in national and international markets (Outputs 2.4 and 2.5).

117. Under Component/Outcome 3, the project will cooperate closely with the MNR and MSDCCDRM gender offices to establish working linkages with key stakeholders to mainstream gender issues related to biodiversity conservation and SLM, and to implement the Gender Action Plan (Output 3.1).

118. The project will seek to maximize the financial resources available for project activities, which will be included in Annual Work Plans and discussed and approved by the Project Board to ensure that proposed actions are relevant and necessary. Cost-effectiveness will be taken into account when implementing project activities

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without compromising the quality of the outputs. When hiring third-party consultants/service providers, the project will follow a standard recruitment and advertising process with at least three competitors for each consultant position. Selection will be based on qualifications, technical experience, and financial proposal, to ensure the best consultant (individual or organization) is hired at the optimal price. A cost-reducing measure will be to rely on existing staff within the UNDP Country Office (CO) to conduct communications, knowledge management, and M&E activities, which is less expensive than hiring consultants to perform these activities. Economy fares will be applied for necessary air and road travel, and appropriate lodging facilities will be provided to the project staff that ensures staff safety and cost - effectiveness. Housing the PMU within the MSDCCDRM will ensure cost - effectiveness in terms of reducing management operations (e.g., rent and utilities), while building project ownership by the GoB. The Protected Areas Conservation Trust (PACT) will support the national mechanism in maintaining operational efficiencies associated with high value procurement during implementation.

119. Expenses will be accounted for according to UNDP rules and in line with the GEF policy. The project will follow a tendering process for equipment purchase and any printing/publishing that accounts for more than USD $10,000, comparing at least three vendors. In case there is a single vendor for any activity, the appropriate official norms will be followed to obtain approval from UNDP.

Project management*:*

120. The Project Management Unit (PMU), led by the Project Manager, will be based at the MSDCCDRM Headquartered in Belmopan. Project staff and consultants will travel to prioritized sites in the BRW as needed. The PMU will oversee the day-to-day execution of project activities and will have responsibility for, among others: a) operational planning, managing, and executing the project, including the direct supervision of project activities sub-contracted to specialists and other institutions; b) coordinating the management of financial resources and procurement; c) reporting on the application of resources and results achieved; d) preparing reports and any proposals for adaptive management of the project, if required, and based on inputs from the project M&E plan; e) promoting inter-institutional synergies; and f) disseminating project results. A Project Finance Associate and a Project Assistant will be hired to provide operational support.

121. The project promotes a decentralized (third Party) execution among its implementation arrangements; in support of this the PMU will liaise regularly with technical staff based in the MNR- Hydrology Unit, Department of Environment, Department of Agriculture, the Forest Department, CARDI, the University of Belize, and Friends of Conservation and Development, benefitting from their expertise and time contribution. The Protected Area Conservation Trust (PACT) will also support the PMU with high value, international procurement, utilizing its procurement platforms to expanding PMU capability for the sourcing of specialist goods and services and the management and servicing of international contracts.

122. Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information**:** To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[30] and the GEF policy on public involvement[31].

[30] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

[31] See https://www.thegef.org/gef/policies_guidelines

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VII. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): Goal 1 – End poverty in all its forms everywhere; Goal 5 – Achieve gender equality and empower all women and girls; Goal 6 – Ensure access to water and sanitation for all; Goal 8 – Decent work and economic growth; and Goal 15 – Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss.

This project will contribute to the following country outcome included in the UNDAF/Country Programme Document (United Nations Multi-Country Sustainable Development Framework in the Caribbean): Inclusive and sustainable solutions adopted for the conservation, restoration and use of ecosystems and natural resources.

This project will be linked to the following output of the UNDP Strategic Plan: Output 1.3: Solutions developed at national and sub-national levels for sustainable management of natural resources, ecosystem services, chemicals and waste.

	Objective and Outcome Indicators	Baseline	Mid-term Target	End of Project Target	Data Collection Methods and Risks/Assumptions
Project Objective: To mainstream biodiversity conservation and sustainable land/water management into production landscapes in Belize	Indicator 1 (GEF7 Core Indicator 4): Area (hectares) of landscapes under improved practices (sum of Indicators 6, 9, and 10 below)	0 ha	27,250 ha	50,000 ha	Updated GEF7 Core Indicator 4 Project technical reports Risks: Project team fails to engage stakeholders to adopt improved practices Assumptions: Interest from the central government, private sectors and farmers in biodiversity conservation and sustainable land/water management
	Indicator 2 (GEF6 Core Indicator 11): Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment	0	Male: 350 Female: 150	Male: 1,250 Female: 450	Farmer and household surveys/interviews (unstructured and/or semi structured) Updated Gender Action Plan Updated GEF7 Core Indicator 11

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					Risks: Landowners are reluctant to incorporate SLM and biodiversity conservation objectives in production landscapes Assumptions: Government officials and farmers and producer organization in the prioritized watershed will be actively engaged in SLM and biodiversity conservation activities.
Component 1: Enabling environment (policies, financial mechanisms, and institutional capacities) for delivering multiple global environmental benefits (GEBs) through the sustainable management of production landscapes Outcome 1.1: Strengthened governance and financial structure for the conservation of biodiversity and ecosystem services through sustainable land (SLM)/water management in production landscapes Outcome 1.2: Increased ability of the government to implement strategies for conservation and SLM/water management in production landscapes	Indicator 3: Number of updated and drafted laws and policies	0	2 - Draft revisions of: a) EIA Regulations; and b) NIWR Act	6 - Laws and policies updated: a) National Lands Act; b) National Utilization Act; c) EIA Regulations ; d) NIWR Act; e) Fiscal Incentive Act) - Integrated Water Resources Management Policy drafted	Document content analysis Drafts of update legislation Official gazette Draft of policies Final Policy endorsed by Cabinet Risks: Project team and Implementing Partner fail to engage key project partners Assumptions: Continued political will to strengthen strengthened governance biodiversity and ecosystem services through SLM/water management in production landscapes
	Indicator 4: Change in government and private funding aligned to support sustainable production in priority sectors (agriculture, tourism, forestry, and urban development and industry)	- GOB: US$25.32 million (BZ$51 million) - Private sector: US$56.37 million (BZ$113.5 million)	- GOB: US$29.311 million USD (BZ$58.65 million) (increase by 15%) - Private sector: US$61.74 million (BZ$124.3 million) (increase by 6%)	- GOB: US$32.91 million (BZ$66.3 million) (increase by 30%) - Private sector: US$65.31 million (BZ$131.5 million) (increase by 14%)	Government budgets and accounts Private sector budgets and accounts Risks: Target to may not be achieved because of decreasing national

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					budgets and unstable markets Assumptions: There is interest by the Government and the private sector to investment in SLM/water management
	Indicator 5: Change in the capacity 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.	Department of Environment/MSDCCDRM: 37% Hydrology Unit/MNR: 38% Department of Forestry/MSDCCDRM: 44% Department of Fisheries/MSDCCDRM: 7% UB-Natural Resource Management: 63% Sustainable Development Unit/MSDCCDRM: 47% Department of Agriculture/MSDCCDRM: 44% Lands and Survey Department/MNR: 35% MNR Policy Unit: 33% Department of Rural Development/MLLGRD: 58%	Department of Environment/ MSDCCDRM: 52% Hydrology Unit/MNR: 53% Department of Forestry/MSDCCDRM: 59% Department of Fisheries: 22% UB-Natural Resource Management/MSDCCDRM: 78% Sustainable Development Unit: 62% Department of Agriculture/MSDCCDRM: 59% Lands and Survey Department/MNR: 50% MNR Policy Unit: 48% Department of Rural Development MLLGRD: 73%	Department of Environment/ MSDCCDRM: 67% Hydrology Unit/MNR: 68% Department of Forestry/MSDCCDRM: 74% Department of Fisheries/MSDCCDRM: 37% UB-Natural Resource Management: 93% Sustainable Development Unit/MSDCCDRM: 77% Department of Agriculture/MSDCCDRM: 74% Lands and Survey Department/MNR: 65% MNR Policy Unit: 63% Department of Rural Development MLLGRD: 88%	Results of reapplied Capacity Development Scorecard: focal group interviews Risks: Knowledge drain and implementation capacity constraints at government due to the staffing limitations Project team and Implementing Partner fail to engage key project partners Assumptions: Continued political will to strengthen governance of biodiversity and ecosystem services through SLM/water management in production landscapes
Outputs: 1.1. Revised and harmonized policies and legislation for riparian forest protection and management (National Lands Act and National Lands Utilization Act), water management and irrigation (National Integrated Water Resources Act), environmental management, river discharges, and water quality (Environmental Impact Assessment Regulations under the Environmental Protection Act, NIWR Act and Fiscal Incentives Act) and integrated management of watersheds (Integrated Watershed Management Policy) results in: a. Clarification of agencies jurisdictions/ mandates regarding integrated watershed management.					

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b. National coordinating framework for integrated watershed management defined and enabled. c. Protocols for inter-institutional coordination to enforce norms and establish penalties related to the clearing of riparian forests, discharges to water bodies, illegal water withdrawal, and mining in rivers. 1.2. Improved monitoring and enforcement of legislation. 1.3. 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. 1.4. Expanded information management systems (e.g., hydrology, agriculture (BAIMS, GSMU, etc.), includes mechanisms and protocols such as databases and online map viewer for data gathering, access and information sharing between institutions to strengthen biodiversity conservation, land/water resource management, and sustainable agricultural management. 1.5. Multi-tiered training program to build (public, communities, and private) in biodiversity conservation, integrated watershed management, SLM, and building resilience to climate change.					
Component 2: Delivering multiple GEBs through sustainable production and improved value chains for key agricultural and forest products from the Belize River watershed Outcome 2.1: Multiple GEBs delivered Outcome 2.2: Increased area of agriculture and forest production under sustainable practices Outcome 2.3: Accessible markets for producers implementing sustainable practices	Indicator 6 (GEF7 Core Indicator 4.1): Area (ha) of landscape management tools that promote connectivity and biodiversity conservation.	0	2,250 ha	4,500 ha (landscape management tools; i.e., biological micro-corridors, agroforestry, forest enrichment, live fences, windbreaks, and hedges)	Field reports/field verification Project reports Updated GEF7 Core Indicator 4.1 Risks: Extreme climatic events and hazards (e.g. hurricanes, tropical storms, prolonged drought) jeopardize the measures introduced Assumptions: Sampling efforts are optimal
	Indicator 7*:* Population densities of key indicator species jaguar [*Panthera onca*], white-lipped peccary [*Tayasu peccary*]), Black howler monkey [*Alouatta pigra*], tapir [*Tapirus bairdii*] in riparian zones/forest patches/corridors in production lands and KBAs	Jaguar *[Panthera onca]*: 6-7 individuals/100 km² (data for the Belize Central Corridor) White-lipped peccary (*Tayasu peccary*): 1.09 individuals/km² Howler monkey (*Alouatta pigra*): 32 individuals/km² (Community Baboon Sanctuary, Belize River Valley) Tapir (*Tapirus bairdii*): population study currently underway (suggested estimate: 8 individuals / 10 km²) (Species densities to be verified during the project inception phase)	Maintained levels of density	Maintained levels of density	Transect surveys/visual counts, spot mapping, camera trapping Field reports Project reports Risks: Landowners/farmers are reluctant to adopt best management practices that favor biodiversity Assumptions: Environmental/climate variability within normal range. Sampling efforts are optimal
		Riparian forests: 0 ha	Riparian forests: 250ha	Riparian forests: 750 ha	Field/plot surveys

	Indicator 8 (GEF7 Core Indicator 3): Area (ha) of land restored	Groundwater recharge areas: 0 ha	Groundwater recharge areas: 100 ha	Groundwater recharge areas: 300 ha	Project reports Updated GEF7 Core Indicator 3 Risks: Increase in riparian forest protection not achieved Assumptions: Interest among landowners and authorities to protect riparian zones
	Indicator 9 (GEF7 Core Indicator 4.1): Area of landscapes under sustainable agriculture with biodiversity benefits	0 ha	10,675 ha	30,500 ha	Field and farmer/plot surveys Updated GEF7 Core Indicator 4.1 Risks: Changes to the use of lands and resources Assumptions: There is willingness by farmers to incorporate environmental sustainability criteria as part of their production activities. Environmental/climate variability within normal range. Sampling efforts are optimal
	Indicator 10 (GEF7 Core Indicator 4.3): Area of landscapes under sustainable land management in production systems	0 ha	5,250 ha	15,000 ha	Field and farmer/plots surveys Updated GEF7 Core Indicator 4.3 Risks: Changes to the use of lands and resources Assumptions: There is willingness by farmers to incorporate environmental sustainability criteria as part of their production activities

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	Indicator 11: Number of products with enhanced value chains placed in markets.	0	3 under development - Cohune Oil Production (small scale): training and technical assistance provided for sustainable production, adding value to products, and marketing - Livestock (small and medium-sized farmers): training and technical assistance provided for sustainable production and marketing - Sugar Cane (small and medium-sized farmers; and large scale/Santander Farms): training and technical assistance provided for sustainable production and marketing	3 - Cohune Oil production (small scale) with new products developed (e.g., body oils and soaps) and products sold into at least one export market - Sustainable Livestock products (small-scale producers) and products sold into at least one national or export market - Sustainable Sugar Cane (small and medium-sized farmers; and large scale/Santander Farms) and product sold into at least one export market	Field reports Belize Agriculture Information Management System (BAIMS) Reports Business agreements/sale receipts (document analysis) Risks: Limited benefits for the producers who adopted environmentally friendly practices Assumptions: Markets available
	Indicator 12: Farmers /producers' net income (differentiated by gender) from sustainable products (cohune oil, livestock, and sugarcane) with enhanced value chains placed in markets by project end.	Net Income men: $ X Net income women: $ X Net income of at least 80% of participating farmers (male/ female) documented at project inception (year 1)	Net Income men: $X + 20% Net income women: $X + 20% Participating farmers show at least 20% increase based on year 1 estimate.	Net Income men: $X + 40% Net income women: $X + 40% Participating farmers show at least 40% increase based on year 1 estimate.	Belize Agriculture Information Management System (BAIMS) Reports Updated Gender Action Plan Household surveys/interviews (unstructured and/or semi structured) Risks: Limited benefits for the producers who adopted environmentally friendly practices Women participation is hindered by social and cultural preferences for women to maintain household. Assumptions: Markets available. Females and males willing to adopt improved practices

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					Proposed practices are cost-effective. Propose practices have low barrier for uptake, especially among female farmers.

Outputs:

2.1. Landscape management tools used in priority areas for biodiversity conservation.

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).

b. Rehabilitation and management strategies for riparian forests implemented alongside programme for participatory soil management to reduce erosion and improve water quality.

c. Improved forest monitoring system for enhanced land-use change monitoring within the BRW.

2.2. Water Master Plan for the BRW developed through a participatory process allows integrated management for sustainable land and water resources use:

a. Critical groundwater recharge areas identified and mapped and delineated based on extent, quantity, and quality, recharge rate, etc.

b. Baseline study of supply and demand and the quality of hydrological resources supports decision making to allocate water for sustainable production and irrigation.

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.

d. Operationalization of funding strategy developed and mechanisms for implementation defined, 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, DOE, and water users, following a water use data analysis.

2.3. 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.

2.4. Gender responsive extension work program; to include training for small and large producers, including women and vulnerable groups, to implement sustainable production, post-production and livelihood practices; delivered through a capable Extension Service of the Department of Agriculture, the University of Belize, Galen University, and UNDP's Green Commodities Programme improves production, enhances value chains for key products, and builds awareness among small-scale and large-scale producers about markets for sustainable products.

2.5. Business management capacity of producers (including women) to implement sustainable practices improved through targeted training and technical support for agrobusiness development and private and cooperative support services.

2.6. Awareness program for producers, technicians, and government officials in the production sector (agriculture, tourism, forestry, and urban development and industry) informs and builds capacity to sustain and maintain the environmental and socioeconomic benefits of sustainable production practices and the availability of financial incentives and on-going programs to facilitate implementation.

2.7. Participatory monitoring program assesses the delivery of GEBs: biodiversity conservation and integrated watershed management to improve hydrological functions and services for agro-ecosystem productivity.

2.8 Micro-granting scheme with provides direct incentives/ investments to local communities participating in riparian restoration, conservation agreements and sustainable production.

Component 3: Knowledge Management and Learning Outcome 3.1: Best practices and lessons are accessed and applied in other production landscapes and	Indicator 13: Number of documents on successful farmers' and community experiences, and practices about integrating SLM and biodiversity conservation practices, and gender	0	5	10	Applied community-based Research Reports Visual and other documentation of environmentally appropriate production practices

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<table>
<tr><td rowspan="2">watersheds in the country and internationally.</td><td rowspan="2">mainstreaming in the BRW are disseminated in-country and internationally</td><td rowspan="2"></td><td rowspan="2"></td><td rowspan="2"></td><td>Annual Community of Practice Proceedings and Reports
Monitoring reports
Documented project-specific lessons learned</td></tr>
<tr><td>Risks: NA
Assumptions: Wide-ranging and timely dissemination of project results and lessons learned. Communities supportive and willing to participate in research and knowledge production.</td></tr>
<tr><td colspan="6">Outputs:
3.1. Gender sensitive/ gender responsive programmes/ activities promoted through project frameworks.
3.2. Experiences, best practices, and lessons learned about biodiversity conservation and SLM/water management in production landscapes captured, systematized and made available through various platforms for public and private stakeholders for use in other production landscapes and watersheds in the country, informing future projects and strategies</td></tr>
</table>

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VIII. MONITORING AND EVALUATION (M&E) PLAN

123. 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.

124. Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. The UNDP Country Office will work with the relevant project stakeholders to ensure UNDP M&E requirements are met in a timely fashion and to high quality standards. Additional mandatory GEF-specific M&E requirements (as outlined below) will be undertaken in accordance with the GEF M&E policy and other relevant GEF policies[32].

125. In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report. This will include the exact role of project target groups and other stakeholders in project M&E activities including the GEF Operational Focal Point and national/regional institutes assigned to undertake project monitoring. The GEF Operational Focal Point will strive to ensure consistency in the approach taken to the GEF-specific M&E requirements (notably the GEF-7 Core Indicators) across all GEF-financed projects in the country. This could be achieved for example by using one national institute to complete the GEF-7 Core Indicators for all GEF-financed projects in the country, including projects supported by other GEF Agencies.[33]

M&E Oversight and monitoring responsibilities:

126. Project Manager: The Project Manager is responsible for day-to-day project management and regular monitoring of project results and risks, including social and environmental risks. The Project Manager will ensure that all project staff maintain a high level of transparency, responsibility and accountability in M&E and reporting of project results. The Project Manager will inform the Project Board, the UNDP Country Office and the UNDP-GEF Regional Technical Advisor (RTA) of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted.

127. The Project Manager will develop annual work plans based on the multi-year work plan included in Annex A, including annual output targets to support the efficient implementation of the project. The Project Manager will ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality. This includes, but is not limited to, ensuring the results framework indicators are monitored annually in time for evidence-based reporting in the GEF PIR, and that the monitoring of risks and the various plans/strategies developed to support project implementation (e.g. ESMP, gender action plan, stakeholder engagement plan etc..) occur on a regular basis.

128. Project Board: The Project Board will take corrective action as needed to ensure the project achieves the desired results. The Project Board will hold project reviews to assess the performance of the project and appraise the Annual Work Plan for the following year. In the project's final year, the Project Board will hold an end-of-project review to capture lessons learned and discuss opportunities for scaling up and to highlight project results and lessons learned with relevant audiences. This final review meeting will also discuss the findings outlined in the project terminal evaluation report and the management response.

129. Project Implementing Partner: The Implementing Partner is responsible for providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes, and is aligned with national systems so that the data used and generated by the project supports national systems.

130. UNDP Country Office: The UNDP Country Office will support the Project Manager as needed, including through annual supervision missions. The annual supervision missions will take place according to the schedule outlined in the annual work plan. Supervision mission reports will be circulated to the project team and Project Board within one month of the mission. The UNDP Country Office will initiate and organize key GEF M&E activities including

[32] See https://www.thegef.org/gef/policies_guidelines
[33] See https://www.thegef.org/gef/gef_agencies

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the annual GEF PIR, the independent mid-term review and the independent terminal evaluation. The UNDP Country Office will also ensure that the standard UNDP and GEF M&E requirements are fulfilled to the highest quality.

131. The UNDP Country Office is responsible for complying with all UNDP project-level M&E requirements as outlined in the UNDP POPP. This includes ensuring the UNDP Quality Assurance Assessment during implementation is undertaken annually; that annual targets at the output level are developed, and monitored and reported using UNDP corporate systems; the regular updating of the ATLAS risk log; and, the updating of the UNDP gender marker on an annual basis based on gender mainstreaming progress reported in the GEF PIR and the UNDP ROAR. Any quality concerns flagged during these M&E activities (e.g. annual GEF PIR quality assessment ratings) must be addressed by the UNDP Country Office and the Project Manager.

132. The UNDP Country Office will retain all M&E records for this project for up to seven years after project financial closure to support ex-post evaluations undertaken by the UNDP Independent Evaluation Office (IEO) and/or the GEF IEO.

133. UNDP-GEF Unit: Additional M&E and implementation quality assurance and troubleshooting support will be provided by the UNDP-GEF Regional Technical Advisor and the UNDP-GEF Directorate as needed.

134. **Audit**: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies on NIM implemented projects.[34]

Additional GEF monitoring and reporting requirements:

135. Inception Workshop and Report: A project inception workshop will be held within 2 months from the First disbursement date, with the aim to:

a. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
b. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
c. Review the results framework and monitoring plan.
d. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
e. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
f. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
g. Plan and schedule Project Board meetings and finalize the first-year annual work plan.
h. Formally launch the Project.

136. The Project Manager will prepare the inception report no later than one month after the inception workshop. The inception report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board.

137. GEF Project Implementation Report (PIR): The Project Manager, the UNDP Country Office, and the UNDP-GEF Regional Technical Advisor will provide objective input to the annual GEF PIR covering the reporting period July (previous year) to June (current year) for each year of project implementation. The Project Manager will ensure that the indicators included in the project results framework are monitored annually in advance of the PIR

[34] See guidance here: https://info.undp.org/global/popp/frm/pages/financial-management-and-execution-modalities.aspx

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submission deadline so that progress can be reported in the PIR. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR.

138. The PIR submitted to the GEF will be shared with the Project Board. The UNDP Country Office will coordinate the input of the GEF Operational Focal Point and other stakeholders to the PIR as appropriate. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

139. Lessons learned and knowledge generation: Results from the project will be disseminated within and beyond the project intervention area through existing information sharing networks and forums. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to the project. The project will identify, analyze and share lessons learned that might be beneficial to the design and implementation of similar projects and disseminate these lessons widely. There will be continuous information exchange between this project and other projects of similar focus in the same country, region and globally.

140. GEF-7 Core Indicators: GEF-7 Core Indicators will be used to monitor GEBs. The baseline/CEO Endorsement GEF-7 Core Indicators – submitted as Annex B to this project document – will be updated by the Project Manager/Team (not the evaluation consultants hired to undertake the MTR or the TE) (indicate other project partner, if agreed) and shared with the mid-term review consultants and terminal evaluation consultants before the required review/evaluation missions take place. The updated GEF-7 Core Indicators will be submitted to the GEF along with the completed Mid-term Review (MTR) report and Terminal Evaluation (TE) report.

141. Independent Mid-term Review (MTR): An independent mid-term review process will begin after the second PIR has been submitted to the GEF, and the MTR report will be submitted to the GEF in the same year as the 3rd PIR. The MTR findings and responses outlined in the management response will be incorporated as recommendations for enhanced implementation during the final half of the project's duration. The terms of reference, the review process and the MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC). As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final MTR report will be available in English and will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and approved by the Project Board.

142. Terminal Evaluation (TE): An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terminal evaluation process will begin three months before operational closure of the project allowing the evaluation mission to proceed while the project team is still in place, yet ensuring the project is close enough to completion for the evaluation team to reach conclusions on key aspects such as project sustainability. The Project Manager will remain on contract until the TE report and management response have been finalized. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center. As noted in this guidance, the evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. The GEF Operational Focal Point and other stakeholders will be involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate. The final TE report will be cleared by the UNDP Country Office and the UNDP-GEF Regional Technical Adviser, and will be approved by the Project Board. The TE report will be publically available in English on the UNDP ERC.

143. The UNDP Country Office will include the planned project terminal evaluation in the UNDP Country Office evaluation plan, and will upload the final terminal evaluation report in English and the corresponding management response to the UNDP ERC. Once uploaded to the ERC, the UNDP IEO will undertake a quality assessment and validate the findings and ratings in the TE report, and rate the quality of the TE report. The UNDP IEO assessment report will be sent to the GEF IEO along with the project terminal evaluation report.

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144. Final Report: The project's terminal PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

145. Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information**:** To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[35] and the GEF policy on public involvement[36].

Mandatory GEF M&E Requirements and M&E Budget:

GEF M&E requirements	Primary responsibility	Indicative costs to be charged to the Project Budget[37] (US$)		Time frame
		GEF grant	Co-financing	
Inception Workshop	UNDP Country Office	USD 5,000	USD 5,000	Within two months of project document signature
Inception Report	Project Manager	None	None	Within two weeks of inception workshop
Standard UNDP monitoring and reporting requirements as outlined in the UNDP POPP	UNDP Country Office	None	None	Quarterly, annually
Monitoring all risks (UNDP risk register)	Project Manager Country Office	None	None	Quarterly, annually
Monitoring of indicators in project results framework	M&E and Safeguards Expert Project Manager	Paid through Component 3	Budgeted as part of the cofinancing associated with Component 3	Annually before PIR
GEF Project Implementation Report (PIR)	Project Manager and UNDP Country Office and UNDP-GEF team	None	None	Annually
Monitoring of environmental and social risks, and corresponding management plans as relevant	M&E and Safeguards Expert Project Manager UNDP Country Office	Paid through Component 3	Budgeted as part of the cofinancing associated with Component 3	Quarterly, annually

[35] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/

[36] See https://www.thegef.org/gef/policies_guidelines

[37] Excluding project team staff time and UNDP staff time and travel expenses.

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Addressing environmental and social grievances	Project Manager UNDP Country Office	Paid through Project Manager salary	None	Inception Workshop (development of a grievances mechanism) and Quarterly thereafter
Supervision missions	UNDP Country Office	None[38]	USD 5,000	Annually
Oversight/ troubleshooting missions	UNDP-GEF team	None[38]	None	Troubleshooting as needed
GEF Secretariat learning missions/site visits	UNDP Country Office and Project Manager and UNDP-GEF team	None	None	To be determined.
Update Mid-term GEF Core indicators	Programme Analyst Project Manager	Paid through Component 3	Budgeted as part of the cofinancing associated with Component 3	Before mid-term review mission takes place.
Independent Mid-term Review (MTR) and management response	UNDP Country Office and Project team, RTA and UNDP-GEF team	USD 25,000	USD 10,000	Between 2nd and 3rd PIR.
Update Terminal GEF Core indicators	Programme Analyst Project Manager	Paid through Component 3	Budgeted as part of the cofinancing associated with Component 3	Before terminal evaluation mission takes place
Independent Terminal Evaluation (TE) included in UNDP evaluation plan, and management response	UNDP Country Office and Project team, RTA and UNDP-GEF team	USD 40,000	USD 15,000	At least three months before operational closure
TOTAL indicative COST Excluding project team staff time, and UNDP staff and travel expenses		**USD 70,000**	**USD 35,000**	

IX. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

146. Roles and responsibilities of the project's governance mechanism: The project will be implemented following UNDP's support to national implementation modality, according to the Standard Basic Assistance Agreement between UNDP and the Government of Belize, and the Country Programme.

147. The **Implementing Partner** for this project is: Ministry of Sustainable Development, Climate Change and Disaster Risk Management (MSDCCDRM). The Ministry of Natural Resources (MNR) and the Friends of Conservation and Development (FCD) serve as project responsible parties. The Implementing Partner is responsible and accountable for managing this project, including the monitoring and evaluation of project interventions, achieving project outcomes, and for the effective use of UNDP resources.

148. The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.

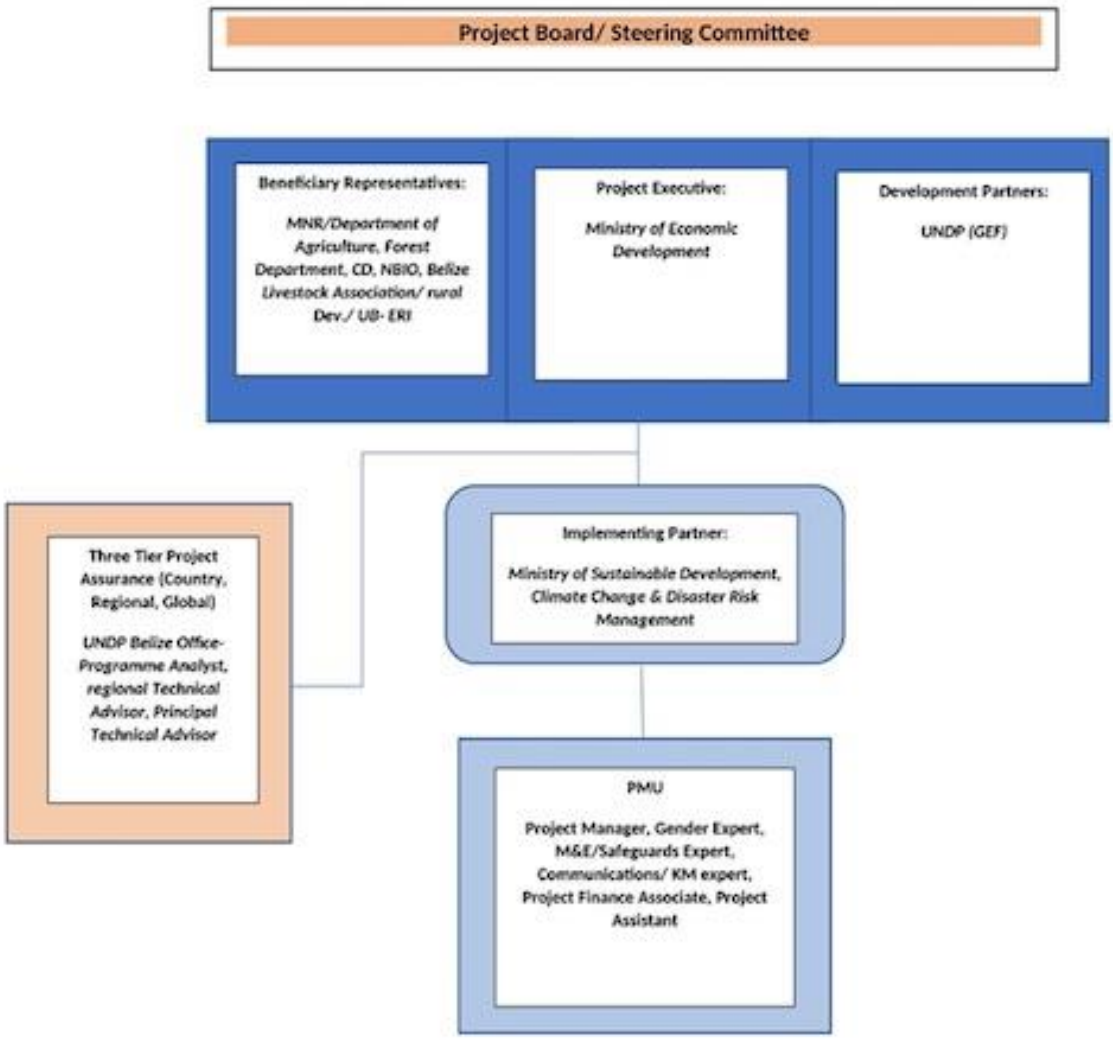
[38] The costs of UNDP Country Office and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

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- Risk management as outlined in this Project Document;
- Procurement of goods and services, including human resources;
- Financial management, including overseeing financial expenditures against project budgets;
- Approving and signing the multiyear workplan;
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

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149. The project organisation structure is as follows:



150. Project Board**:** The Project Board (also called Project Steering Committee) is responsible for taking corrective action as needed to ensure the project achieves the desired results. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case consensus cannot be reached within the Board, the UNDP Resident Representative (or their designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

151. Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;

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- Provide guidance on new project risks, and agree on possible mitigation and management actions to address specific risks;
- Agree on project manager's tolerances as required, within the parameters set by UNDP-GEF, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded;
- Advise on major and minor amendments to the project within the parameters set by UNDP-GEF;
- Ensure coordination between various donor and government-funded projects and programmes;
- Ensure coordination with various government agencies and their participation in project activities;
- Track and monitor co-financing for this project;
- Review the project progress, assess performance, and appraise the Annual Work Plan for the following year;
- Appraise the annual project implementation report, including the quality assessment rating report;
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;
- Review combined delivery reports prior to certification by the implementing partner;
- Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Address project-level grievances;
- Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses;
- Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.
- Ensure highest levels of transparency and take all measures to avoid any real or perceived conflicts of interest.

152. The Project Board will be composed of UNDP, Ministry of Economic Development, Ministry of Natural Resources (MNR) and the Ministry of Sustainable Development, Climate Change and Disaster Risk Management(MSDCCDRM), Ministry of Rural Development, the University of Belize, Galen University, Forest Department, Department of Agriculture, Hydrology Unit, Friends of Conservation and Development, the Protected Areas Conservation Trust (PACT) and representative of private sector. The Board can be expanded, upon mutual agreement between the Parties. The Ministry of Economic Development/ Ministry of Sustainable Development will represent the project ownership, chairing the Project Board and organizing its meetings at least once a year or upon request of either of the Parties. The Ministry of Natural Resources (MNR) and the Departments of Agriculture and Forestry, are also the institutions responsible, within the government, for following up on the activities for this Project. The Ministry of Natural Resources (MNR) and the Ministry of Sustainable Development, Climate Change and Disaster Risk Management (MSDCCDRM) will appoint a National Project Director (NPD) who will be a senior staff member and will be responsible at the highest level for providing guidance on the technical feasibility of the project and ensuring its implementation leads to the achievement of project's results. He/she will represent the Ministry of Natural Resources (MNR) and the Ministry of Sustainable Development, Climate Change and Disaster Risk Management (MSDCCDRM) on the Project Board.

153. The composition of the Project Board must include the following roles.

154. The Project Executive represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implemented projects. The Project Executive positioned is co-shared by the Ministry of Economic Development and the Ministry of Sustainable development of the Government of Belize.

155. The Beneficiary Representatives represent the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often civil society representative(s) can fulfil this role. The Beneficiary representatives are the Ministry of Natural resources, Departments of Forestry and Agriculture, Friends for Conservation and Development, Belize Livestock Producers Association (BLPA), National Biodiversity Office (NBIO), University of Belize ERI and Santander Enterprises.

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156. The Development Partner represents the interests of the parties concerned that provide funding and/or technical expertise to the project. The Development Partner in this case is the United Nations Development Programme.

157. The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Project Board within the constraints laid down by the Board. The Project Manager is responsible for day-to-day management and decision-making for the project. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost.

158. The Implementing Partner appoints the Project Manager, who should be different from the Implementing Partner's representative in the Project Board.

159. Specific responsibilities include:

- Provide direction and guidance to project team(s)/ responsible party (ies);
- Liaise with the Project Board to assure the overall direction and integrity of the project;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Responsible for project administration;
- Plan the activities of the project and monitor progress against the project results framework and the approved annual workplan;
- Mobilize personnel, goods and services, training and micro-capital grants to initiative activities, including drafting terms of reference and work specifications, and overseeing all contractors' work;
- Monitor events as determined in the project monitoring schedule plan/timetable, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments or reimbursement using the fund authorization and certificate of expenditures;
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports;
- Be responsible for preparing and submitting financial reports to UNDP on a quarterly basis;
- Manage and monitor the project risks initially identified and submit new risks to the project board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log;
- Capture lessons learned during project implementation;
- Prepare the annual workplan for the following year; and update the Atlas Project Management module if external access is made available.
- Prepare the GEF PIR and submit the final report to the Project Board;
- Based on the GEF PIR and the Project Board review, prepare the AWP for the following year.
- Ensure the mid-term review process is undertaken as per the UNDP guidance, and submit the final MTR report to the Project Board.
- Identify follow-on actions and submit them for consideration to the Project Board;
- Ensure the terminal evaluation process is undertaken as per the UNDP guidance, and submit the final TE report to the Project Board.

160. Project Assurance: UNDP provides a three – tier supervision, oversight and quality assurance role – funded by the GEF agency fee – involving UNDP staff in Country Offices and at regional and headquarters levels. Project Assurance must be totally independent of the Project Management function. The quality assurance role supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. This project oversight and quality assurance role is covered by the GEF Agency.

161. Governance role for project target groups: Project target groups will be represented at the Project Board as well as be engaged through Technical Advisory Groups (TAG). TAG members bring unique knowledge and skills, which complement the knowledge, and skills of the formal board in order to more effectively direct

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interventions within the project. The advisory groups serve to make recommendations and/or provide key information and materials to the project manager and the board.

162. UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. UNDP is also responsible for the Project Assurance role of the Project Board/Steering Committee.

163. **Project extensions:** The UNDP Resident Representative and the UNDP-GEF Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GEF project budget cannot be increased. A single extension may be granted on an exceptional basis and only if the following conditions are met: one extension only for a project for a maximum of six months; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GEF resources; the UNDP Country Office oversight costs in excess of the CO's Agency fee specified in the DOA during the extension period must be covered by non-GEF resources.

X. FINANCIAL PLANNING AND MANAGEMENT

164. The total cost of the project is USD 24,828,507. This is financed through a GEF grant of USD 5,108,933 and UNDP TRAC resources of USD $75,000 and USD 19,644,574 in parallel co-financing. UNDP, as the GEF Implementing Agency, is responsible for the execution of the GEF resources and the cash co-financing transferred to UNDP bank account only.

165. Parallel co-financing The actual realization of project co-financing will be monitored during the mid-term review and terminal evaluation process and will be reported to the GEF. The planned parallel co-financing will be used as follows:

Co-financing source	Co-financing type	Co-financing amount (USD)	Planned Activities/Outputs	Risks	Risk Mitigation Measures
UNDP	Grant	500,000	Biodiversity finance incentive system (Output 2.3). Support to female empowerment and promotion of vulnerable population ins sustainable production systems (Component 2 and Output 3.1)	Low	The UNDP Country Office will monitor the co-financing contributions to the project
UNDP TRAC	Cash	75,000	Support to Project management	Low	The UNDP Country Office to monitor and assign associated TRAC resources on an annual basis.

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Ministry of Natural Resources	Cash & In-kind	548,000	Review and amendment of existing regulations related to IWRM /Component 1. Installation of hydrological monitoring stations in the BRW, operation and maintenance of equipment/ Component 2. Project management an implementation /All components.	Low	The UNDP Country Office will monitor the co-financing contributions to the project
Ministry of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development	In-kind	1,955,000	Project management and implementation, including piloting biodiversity financing initiatives. All components/outputs	Low	The UNDP Country Office will monitor the co-financing contributions to the project
University of Belize Environment Research Institute	In-kind & Grants	1,296,574	Consolidation of biological corridors with landowners. Protection of critical forests in the BRW/Component 2.	Medium - Dependent on effective allocation of funds to the institution	The UNDP Country Office will monitor the co-financing contributions to the project
Friends for Conservation and Development	Grants (to be confirmed)	345,000	Will engage participating communities in environmental education as well as support community participation in sustainable production, riparian reforestation, community monitoring and research of watershed resources/Component 2.	Low	The UNDP Country Office will monitor the co-financing contributions to the project
Santander Sugar Group	Grants	15,000,000	Outcome 2.2: Increased area of agriculture and forest production under sustainable practices, within Santander managed areas in the Belize River Watershed	Low	The UNDP Country Office will monitor the co-financing contributions to the project

166. Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board. Should the following deviations occur, the Project Manager and UNDP Country Office will seek the approval of the UNDP-GEF team to ensure accurate reporting to the GEF: a) Budget re-allocations among components in the project with amounts involving 10% of the total project grant or more; b) Introduction of new budget items/or components that exceed 5% of original GEF allocation.

167. Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

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168. Audit: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop.

169. Refund to GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/GEF Directorate in New York. No action is required by the UNDP Country Office on the actual refund from UNDP project to the GEF Trustee.

170. Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

171. The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. **Operational closure must happen at the end date calculated by the approved duration after the Project Document signature or at the revised operational closure date as approved in the project extension. Any expected activity after the operational date requires project extension approval.** The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the project should have completed the transfer or disposal of any equipment that is still the property of UNDP.

172. Transfer or disposal of assets: In consultation with the NIM Implementing Partner and other parties of the project, UNDP programme manager (UNDP Resident Representative) is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be prepared and kept on file[39]. The transfer should be done before Project Management Unit complete their assignments.

173. The project will be financially closed when the following conditions have been met: a) the project is operationally completed or has been cancelled; b) the Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

174. The project will be financially completed **within 6 months of operational closure or after the date of cancellation**. If Operational Closure is delayed for any justified and approved reason, the Country Office should do all efforts to Financially Close the project within 9 months after TE is completed. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the BPPS/NCE-VF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

[39] See https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

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XI. TOTAL BUDGET AND WORK PLAN

Atlas Proposal or Award ID:	00126230	Atlas Primary Output Project ID:	00120353
Atlas Proposal or Award Title:	Integrated management of production landscapes to delive		
Atlas Business Unit	BLZ10		
Atlas Primary Output Project Title	Management of Prod Landscapes		
UNDP-GEF PIMS No.	6015		
Implementing Partner	Ministry of Sustainable Development, Climate Change and Disaster Risk Management(MSDCCDRM)		

GEF Component/Atlas Activity	Responsible Party/ (Atlas Implementing Agent)	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD	Total (USD)	See Budget Note
COMPONENT/ OUTCOME 1: Enabling environment (policies, financial mechanisms, and institutional capacities) for delivering multiple GEBs through the sustainable management of production landscapes	**MSDCCDRM MNR FCD**	**62000**	**GEF**	71300	Local Consultants	203,750	188,125	155,625	58,125	38,125	**643,750**	*1*
				72100	Contractual Services-Companies	10,000	15,000	25,000	15,000	25,000	**90,000**	*2*
				72800	Information Technology Equipment	33,750	38,750	12,500	0	0	**85,000**	*3*
				75700	Training, Workshops and Confer	38,500	86,150	51,650	46,650	30,000	**252,950**	*4*
					Total Outcome 1	**286,000**	**328,025**	**244,775**	**119,775**	**93,125**	**1,071,700**	
COMPONENT/ OUTCOME 2: Delivering multiple GEBs through sustainable production and	**MSDCCDRM MNR FCD**	**62000**	**GEF**	71300	Local Consultants	0	245,000	50,000	42,500	41,500	**379,000**	*5*
				71800	Contractual Services-Imp Partn	56,720	100,720	130,720	130,720	100,720	**519,600**	*6*
				72100	Contractual Services-Companies	0	460,000	175,000	127,500	90,000	**852,500**	*7*

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improved value chains for key agricultural and forest products from the BRW				72200	Equipment and Furniture	329,000	32,500	5,000	5,000	5,000	**376,500**	*8*
				72300	Materials & Goods	5,000	80,000	50,000	50,000	45,000	**230,000**	*9*
				72600	Grants	0	28,750	178,750	353,750	353,750	**915,000**	*10*
				75700	Training, Workshops and Confer	9,000	29,000	51,450	41,450	41,450	**172,350**	*11*
					Total Outcome 2	**399,720**	**975,970**	**640,920**	**750,920**	**677,420**	**3,444,950**	
COMPONENT/ OUTCOME 3: Knowledge Management and Learning	**MSDCCDRM MNR FCD**	**62000**	**GEF**	71200	International Consultants			15,000		25,000	**40,000**	*12*
				71300	Local Consultants			28,750	7,500	33,750	**70,000**	*13*
				71800	Contractual Services-Imp Partn	12,800	12,800	12,800	12,800	12,800	**64,000**	*14*
				71600	Travel		10,000	10,000	10,000	10,000	**40,000**	*15*
				74100	Professional Services	5,000	5,000	5,000	5,000	5,000	**25,000**	*16*
				74200	Audio Visual & Print Prod Costs		10,000	10,000	10,000	10,000	**40,000**	*17*
				75700	Training, Workshops and Confer	8,000	10,500	10,500	10,500	10,500	**50,000**	*18*
					Total Outcome 3	**25,800**	**48,300**	**92,050**	**55,800**	**107,050**	**329,000**	
PROJECT MANAGEMENT UNIT	**MSDCCDRM MNR FCD**	**62000**	**GEF**	71800	Contractual Services-Imp Partn	42,000	42,000	42,000	42,000	42,000	**210,000**	*19*
				72100	Contractual Services-Companies	6,656	6,656	6,656	6,656	6,659	**33,283**	*20*
				74100	Professional Services	0	0	10,000	0	10,000	**20,000**	*21*
		04000	**UNDP**	71800	Contractual Services – Implementing Partner	15,000	15,000	15,000	15,000	15,000	**75,000**	*22*
					Total Management GEF	**48,656**	**48,656**	**58,657**	**48,657**	**58,657**	**263,283**	
					Total Management UNDP TRAC	**15,000**	**15,000**	**15,000**	**15,000**	**15,000**	**75,000**	
					PROJECT TOTAL (GEF Resources)	**760,176**	**1,400,951**	**1,036,402**	**975,152**	**936,252**	**5,108,933**	
					PROJECT TOTAL (GEF + UNDP Trac)	**775,176**	**1,415,951**	**1,051,402**	**990,152**	**951,252**	**5,183,933**	

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Summary of Funds:

	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Amount Year 5	Total
GEF	760,176	1,400,951	1,036,402	975,152	936,252	5,108,933
UNDP Grants	100,000	100,000	100,000	100,000	100,000	500,000
UNDP TRAC	15,000	15,000	15,000	15,000	15,000	75,000
Ministry of Natural Resources	109,600	109,600	109,600	109,600	109,600	548,000
Ministry of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development	391,000	391,000	391,000	391,000	391,000	1,955,000
University of Belize Environment Research Institute	648,287	648,287				1,296,574
Friends for Conservation and Development	69,000	69,000	69,000	69,000	69,000	345,000
Santander Sugar Group	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	15,000,000
TOTAL	**5,093,063**	**5,733,838**	**4,721,002**	**4,659,752**	**4,620,852**	**24,828,507**

Budget note	**Comments**
Component/Outcome 1: Enabling environment (policies, financial mechanisms, and institutional capacities) for delivering multiple GEBs through the sustainable management of production landscapes.	
1	a) Legal/policy Expert to conduct a comprehensive assessment of policies and legislation that allow for an enabling IWM institutional environment and harmonized jurisdictions/roles. Total cost: $20,000 during year 1 (40 days @ $500/day) (Output 1.1). b) Legal/Policy Expert to conduct a governance and institutional analysis of IWM related agencies with recommendations for harmonized, inclusive, and tiered IWM governance. Total cost: $20,000 during year 1 (40 days @ $500/day) (Output 1.1). c) Institutional Development Expert to define the operational framework for the interagency entity for IWM with clear guidelines following from the institutional review. Total cost: $30,000 during years 1 and 2 (60 days @ $500/day) (Output 1.1). d) Legal/Policy Expert to assess the existing framework for rule-breaking to identify gaps and duplications and make recommendations for improvements. Total cost: $15,000 during year 1 and 2 (30 days @ $500/day) (Output 1.1). e) Legal/Policy Expert to review existing protocols in practice for enforcement within MSDCCDRM and MNR, identify gaps, and make recommendations. Total cost: $7,500 during years 1 and 2 (15 days @ $500/day) (Output 1.1).

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	f) Legal/Policy Expert to develop enhanced protocols for the coordinated application of fees and penalties. Total cost: $22,500 during years 1 and 2 (45 days @ $500/day) (Output 1.1). g) Watershed Management Expert to develop an Integrated Watershed Management Strategy and plan for the BRW. Total cost: $30,000 during year 1 (60 days @ $500/day) (Output 1.1). h) Institutional Development Specialist to review the proposed water resources management structures within the NIWRA. Total cost: $22,500 during year 2 (45 days @500/day) (Output 1.1) i) Legal/Policy Expert to review NIWRA legislation and enabling regulations to reflect review findings ensuring alignment with national direction for integrated water resource management. Total cost: $22,500 during year 2 (45 days @ $500/day) (Output 1.1). j) Communications Expert to develop an enforcement awareness strategy aimed at the halting of illegal and unsustainable practices within the BRW. Total cost: $25,000 during year 2 (50 days @ $500/day) (Output 1.2). k) Workshop Facilitator: comprehensive overview of the major air, water, and chemical legislations and regulations (Protection of Environment through Criminal Law). Total cost: $5,000 during year 1 (5 days @ $1,000/day) (Output 1.2). l) Workshop Presenters: comprehensive overview of the major air, water, and chemical legislations and regulations (Protection of Environment through Criminal Law). Total cost: $3,750 during year 1 (honorarium: 1 day/ 5 persons @ $750/person) (Output 1.2). m) Environmental Monitoring Expert to identify relevant KPIs and metrics with gender targets and develop clear protocols for the monitoring of various levels/ tiers in the project region (watershed, regions, communities). Total cost: $30,000 during year 2 (40 days @ $750/day) (Output 1.2). n) Environmental Monitoring Expert to design a community-based program for the consistent tracking and public reporting of water resource, biodiversity, and land use in the project region. Total cost: $12,500 during years 2 to 5 (25 days @ $500/day) (Output 1.2). o) Finance Strategist/Natural Resources Economics Expert to provide oversight of the financial incentive programme as well as to provide direction/ technical guidance to resource managers for the implementation of market-based financial policies. Total cost: $60,000 during years 2 to 4 (24 moths @ $2,500/month) (Output 1.3). p) Natural Resources Economics Expert to design incentive program to support landowners (private sector, community, etc.) in undertaking works to enhance the biodiversity values and sustainable land and water management of their lands. Total cost: $75,000 during year 3 (100 days @ $750/day) (Output 1.3). q) Legal/Policy Expert to review of existing strategy, policy and legislation for the sustainable/unsustainable use of natural resources, and draft amendments supporting incentive based biodiversity/ SLM mainstreaming. Total cost: $22,500 during year 3 (30 days @ $750/day) (Output 1.3). r) Environmental Monitoring Expert to develop an environmental/sustainable development indicator (KPI) white paper for cabinet approval. Total cost: $5,000 during year 1 (10 days @ $500/day) (Output 1.4). s) Environmental Monitoring Expert to establish protocols for collecting, storing, and validating data, including development of mechanisms and guidelines for data and information sharing/access. Total cost: $30,000 during years 1 and 2 (40 days @ $750/day) (Output 1.4). t) Capacity Development Expert to assess capacity needs of public, communities, and private agencies to improve monitoring and enforcement and in addressing land-use conflicts. Total cost: $10,000 during year 1 (20 days @ $500/day) (Output 1.5). u) Short Term Technical Assistance appointed to the responsible party supporting the enabling environment for delivering multiple GEBs through the sustainable management of production landscapes. Total cost: $88,000; $4,000/month during 22 months over 5 years (all outputs in component) v) Driver support to M&E process. Total cost: $15,000; $500/month during 30 months over 5 years (all output in component). w) Field personnel (2) for hydrological monitoring. Total cost: $72,000; $750/month during 48 months over 5 years for 2 persons (all output in component).

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2	a) Capacity building and resource support to the IWM interagency committee meetings. Total cost: $60,000 during years 2 to 5 ($15,000/year) (Output 1.1). b) Conduct routine surveys of environmental law enforcement and compliance and document results. Total cost: $30,000 during years 1, 3, and 5 ($10,000/survey) (Output 1.2).
3	a) Hardware and software to support the building of capacities of resource managers (government staff, non-governmental and private sector partners) in spatial data analysis. Total cost: $25,000 during year 2 and 3. (Output 1.2). b) Computer (12). Total cost: $36,000 during years 1 and 2 (12 units @ $3,000/unit) (Output 1.4). c) Server/databases (3). Total cost: $16,500 during years 1 and 2 (3 units @ $5,500/unit) (Output 1.4). d) Data gathering software and multi user application license. Total cost: $7,500 during years 1 (Output 1.4).
4	a) Workshop for the development and signing of an enforcement agreement between MSDCCDRM and MNR. Total cost: $4,500 during year 2. (Output 1.1). b) Sensitization sessions for communities/ stakeholders on existing legislations and penalties related to IWM (MNR and MSDCCDRM). Total cost: $50,000 during years 2 to 5 (100 visits @ $500/visit) (Output 1.2). c) Workshop on comprehensive overview of the major air, water, and chemical legislations and regulations (Protection of Environment through Criminal Law). Total cost: $11,000 during year 1. (2 days @ $5,500/day) (Output 1.2). d) Scholarships to male and female scholars and practitioners- spatial data analysis. Total cost: $49,950 during years 2 to 4 (5 scholarships @ $9,990/scholarships) (Output 1.2). e) Extended workshop training sessions to build capacities of resource managers (government staff, non-governmental and private sector partners) in spatial data analysis. Total cost: $30,000 during year 2 (2 sessions @ $15,000/session) (Output 1.2). f) Workshop for the socialization of environmental KPI. Total cost: $5,000 during year 1 (Output 1.4). g) Workshop for SDG/GSDS/KPI alignment exercise. Total cost: $5,000 during year 1 (Output 1.4). h) Training workshops on data collection, input, storage, and transaction management. Total cost: $10,000 during years 2 and 3 (2 workshops @ $5,000/workshop) (Output 1.4). i) Training events for information sharing, stakeholder engagement and building core capacities, including community stakeholders, for sustainability of initiatives set in place by the project. Total cost: $87,500 during years 1 to 5 ($17,500/year) (Output 1.5).
Component/Outcome 2: Delivering multiple GEBs through sustainable production and improved value chains for key agricultural and forest products from the BRW.	
5	a) Legal Expert to design model voluntary conservation agreement for establishing LMTs by participating producers/farmers. Total cost: $15,000 during year 2. (20 days @ $750/day) (Output 2.1). b) Legal Expert to support community consultation and negotiations to update landowner agreements within the Community Baboon Sanctuary. Total cost: $10,000 during year 2 (Output 2.1). c) Socioeconomic/Biodiversity Expert to define baselines and a monitoring system for voluntary conservation agreements with participating producers/farmers. Total cost: $15,000 during year 2 (30 days @ $500/day) (Output 2.1). d) Local labor to establish nurseries to provide seedlings for the implementation of LMTs. Total cost: $50,000 during year 2 (4 nurseries @ $12,500/nursery) (Output 2.1). e) Riparian Engineer to develop and implement of a riparian forest restoration strategy for the project target area. Total cost: $45,000 during year 2 (60 days @ $750/day) (Output 2.1). f) Forestry Expert to conduct an assessment of forestry resources in the BRW. Total cost: $60,000 during year 2 (120 days @ $500/day) (Output 2.1).

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	g) Forestry Expert to developed a forest protection strategy for the BRW. Total cost: $30,000 during years 2 and 3 (60 days @ $500/day) (Output 2.1). h) Social Marketing Specialist for the socialization of the financial incentive programme. Total cost: $15,000 during years 4 and 5 (30 days @ $500/day) (Output 2.3). i) Training Expert to support extension work program/ business incubation for selected commodities. Total cost: $3,000 during years 2 to 4 ($1,000/year) (Output 2.4). j) a) Short Term Technical Expertise appointed to the responsible party guiding actions associated with the delivery of multiple GEBs through sustainable production and improved value chains for key agricultural and forest products. Total cost: $136,000; $4,000/month during 34 months over 5 years (all outputs in component)
6	a) Legal Advisor for MSDCCDRM to establish conservation agreements with participating producers/farmers used for establishing LMTs. Total cost: $90,000 during years 2 to 4 ($30,000/year) (Output 2.1) b) Agronomist (30% of time) to support establishing and maintaining nurseries that will provide seedlings for the implementation of LMTs. Total cost: $48,000 during years 2 to 5. (48 months @ $1,000/month) (Output 2.1) c) Field officers (50% of time: 2 foresters and 2 extension staff) to support establishing and maintaining nurseries, sustainable production and livelihood practices within the watershed. Total cost: $144,000 during years 2 to 5. (48 months/officer @ $750/month) (Output 2.1) d) Geospatial Monitoring Team (50% of time; 2 officers): expansion of national use of Earth Observation Platform as a tool for improved land use change monitoring and the directing and tracking of the effectiveness of introduced biodiversity conservation, rehabilitation and SLM/water management programmes within the BRW. Total cost: $75,000 during years 1 to 5 (50 months/officer @ $750/month) (Output 2.1). e) Community outreach/training officer (2). Total cost: $57,600 during years 1 to 5 (48 months/officer @ $600/month) (Output 2.6) f) Coordinator of micro-grants program to provide direct incentives/ investments to local communities participating in voluntary conservation agreements to implement LMTs and for the implementation of sustainable production practices. Total cost: $90,000 during years 3 to 5 ($30,000/year) (Output 2.8). g) Driver supporting on farm monitoring and output verification Total cost: $15,000; $500/month during 30 months over 5 years (all output in component).
7	a) Institutional Contract/TA for the development of watershed grazing reform and pasture management, including training of extension personnel and participating farms. Total cost: $50,000 during years 2 and 3. (Output 2.1). b) Institutional Contract/ TA supporting the establishment of an emergency seed bank. Total cost: $150,000 during year 2 (Output 2.1). c) Firm/ team to develop the BRW water balance. Total cost: $90,000 during year 2 (120 days @ $750/day) (Output 2.2). d) Firm/ Team to map critical groundwater recharge areas in the BRW. Total cost: $67,500 during year 2 (90 days @ $750/day) (Output 2.2). e) Firm/ Team to develop the BRW Water Master Plan. Total cost: $90,000 during years 2 and 3 (120 days @ $750/day) (Output 2.2). f) Firm/ Team to develop a pricing strategy for IWRM for equitable distribution of benefits and costs to households in the BRW. Total cost: $30,000 during year 3 (60 days @ $500/day) (Output 2.2). g) Institutional Contract/ TA supporting the transformation of 2 commodity sectors through their development and application of green value chains. Total cost: $45,000 during years 2 and 3 (Output 2.4) h) Institutional Contract/ TA to update field school curriculum and farmer training material. Total cost: $45,000 during year 2 (60 days @ $750/day) (Output 2.4). i) Support to community outreach. Total cost: $60,000 during years 2 to 5 ($15,000/year) (Output 2.4). j) Company supporting the entry of 2 BRW products within UNDP's Global Green Commodity Programme. Total cost: $75,000 during years 3 and 4 (Output 2.5).

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	k) Company/Firm to support the development of 6 Business/Strategic Plan(s) for BRW groups. Total cost: $150,000 during years 4 and 5 (200 days @ $750/day) (Output 2.5).
8	a) 4x4 vehicle (2). Total cost: $70,000 during year 1 ($35,000/vehicle) (Output 2.1/ 2.2). The vehicles serve different core initiatives within the project. Vehicle 1 supports forest management, forest and riparian restoration processes and is assigned to the Forest Department/ MSDCCDRM. The FD will coordinate with the Hydrology Department in the use of this resource to facilitate water resource monitoring across the watershed. Vehicle 2 will support Agriculture extension services and agriculture support under Component 2 as well as the engagement of communities involved in the low value grant mechanism- (micro project monitoring) which supports adoption of sustainable agroecosystems and sustainable production landscapes. This vehicle is vested in the Department of Agriculture. It is acknowledged that this is an extended watershed with some areas that not easily accessible. b) Global Navigation Satellite System (GNSS) handheld data collectors supporting field based surveys. Total cost: $40,000 during year 1 (20 units @ $2,000/unit) (Output 2.1). c) Field gear. Total cost: $25,000; $5,000 per year during years 1 to 5. (Output 2.1). d) Geospatial applications for HP Z workstations. Total cost: $12,500 during year 1 (5 units @ $2,500/unit) (Output 2.1). e) Sutron ground water-monitoring station. Total cost: $40,000 during year 1. (8 stations @ $5,000/station) (Output 2.2). f) Acoustic Doppler profiler Total Cost: $40,000 during year 1 (Output 2.2). g) Flow gauges. Total cost: $18,000 during year 1. (6 units @ $3,000/unit) (Output 2.2). h) Remote/ automated hydrological stations. Total cost: $36,000 during year 1 (9 stations @ $4,000/station) (Output 2.2). i) Basic equipment for community-based monitoring. Total cost: $55,000 during years 1 and 2 (11 communities @ $5,000/community) (Output 2.7). j) 4 All Terrain Vehicles (ATV) Total Cost: $40,000 during year 1 ($10,000/ ATV) Considering expansiveness of watershed and access restrictions in some areas, ATV's will support field based surveys, project area monitoring and equipment monitoring.
9	a) Materials and goods to establish nurseries to provide seedlings for the implementation of LMTs. Total cost: $50,000 during year 2 (4 nurseries @ $12,500/nursery) (Output 2.1). b) Materials and goods to support nursery operations. Total cost: $40,000 during years 2 to 5 ($10,000/year) (Output 2.1). c) Materials and goods to establish a small agro-processing facility in a central location in the BRW to support sustainable agricultural production. Total cost: $60,000 during years 3 to 5 (Output 2.5). d) Support to community outreach. Total cost: $60,000 during years 2 to 5 ($15,000/year) (Output 2.7) e) Training materials related to participatory monitoring program assesses the delivery of GEBs. Total cost: $20,000 during years 1 to 4 ($5,000/year) (Output 2.7)
10	a) Fellowships in support of competitive university research fellowships within the watershed facilitating documentation of case studies, watershed health and community best practices. Total cost: $80,000 during years 2 to 5 (8 fellowships @$10,000/fellowship) (Output 2.2). b) Pilot incentive program within the BRW to promote sustainable agriculture and forest production. Total cost: 350,000 during years 4 and 5 (Output 2.3) c) Micro/ low value grants for community monitoring including equipment and supplies. Total cost: $35,000 during years 2 to 5 ($8,750/year) (Output 2.7). d) Micro/ low value grants to provide direct incentives/ investments to local communities participating in voluntary conservation agreements to implement LMTs and sustainable production. Total cost: $450,000 during years 3 to 5 ($150,000/year) (Output 2.8). The selection and implementation of all grants above will be done in compliance with UNDP's Policy and Operational Guidance on Low-Value Grants. All grants will be granted in accordance to UNDP Rules and Regulations on Low-Value Grants.

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11	a) Consultation workshop aimed at securing at least 2 voluntary agreements with private sector entities/ landowner within the area of interest as part of the Pilot Forest Trust Initiative. Total cost: $10,000 during year 2 (Output 2.1). b) Biannual review sessions for monitoring of voluntary conservation agreements. Total cost: $6,000 during years 3 to 5 (4 sessions @ $1,500/session) (Output 2.1). c) South-South Exchange Program. Total cost: $60,000 during years 3 to 5 (Output 2.1, 2.3, 2.5) d) Workshops for knowledge exchange/ capacity development of value chain actors. Total cost: $20,000 during years 2 and 3 (2 workshops @ $10,000/workshop) (Output 2.4). e) Training and development/ small farmer engagement within field school. Total cost: $31,350 during years 3 to 5 ($10,450/year) (Output 2.4). f) South-South Exchange Program supporting capacity development/knowledge exchange among extension personnel. Total cost: $45,000 during years 1 to 5 ($9,000/year) (Output 2.4).
Component/Outcome 3: Knowledge Management and Learning	
12	a) Mid-term project review. Total cost: $15,000 during year 3 (all outputs in component). b) Terminal project evaluation. Total cost: $25,000 during year 5 (all outputs in component).
13	a) Mid-term project review. Total cost: $10,000 during year 3 (all outputs in component). b) Terminal evaluation. Total cost: $15,000 during year 5 (all outputs in component). c) Gender Expert/ Advisor review/ update of implementation of the Gender Action Plan. Total cost: $22,500 during years 3 to 5 (45 days @ $500/day) (Output 3.1). d) Knowledge Management Consultant to undertake a systematization of the project's experience at mid-point and at the end of the project. Total cost: $22,500 during years 3 and 5 (45 days @ $500/day) (Output 3.2).
14	M&E and Safeguards Expert to support with the monitoring, administering of survey, and the periodic update of GEF core indicators. Total cost: $64,000 during 5 years (@ 12,800 per year) (all outputs in component).
15	Participation in global/ regional forums with an aim for information exchange. Total cost: $40,000 during year 2 to 5 ($10,000/year) (Output 3.2).
16	Third Party monitoring spot-checks. Total cost: $25,000 during 5 years (10 spot-checks @ $2,500/spot-check) (all outputs in component).
17	Publications and media products related to case study capture, visibility and knowledge management and communication. Total cost: $40,000 during years 2 to 5 ($10,000/year) (Outputs 3.2).
18	a) Project Inception Workshop. Total cost $5,000 during year 1 (all outputs in component). b) Conferences to share experiences, best practices, and lessons learned about biodiversity conservation and SLM/water management in production landscapes. Total cost: $30,000 during years 2 to 5 (3 events @$10,000/event) (Output 3.2). c) Project Board meetings. Total cost: $15,000 during years 1 to 5 (4 meetings/year $750/meeting) (all outputs in component).
Project Management	
19	a) Project Manager: overall management of the Project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. Total cost: ($3,500/month over 5 years). Positioned Co-financed by UNDP TRAC resources (64,29% GEF/ 35,71% TRAC, see BN.22) b) Project Finance Associate (100% GEF): financial management of the project, accounting, purchasing, and reporting, etc. Total cost: $75,000 ($1,250/month during 60 months over 5 years).

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20	Estimated cost for the procurement services support provided by PACT (e.g., identification and/or recruitment of project and programme personnel; identification and facilitation of training activities; procurement of goods; procurement of International consultancy services valued above USD$30,000, and logistical support). Total cost: $33,283 during 5 years.
21	External NIM audit (2). Total cost: $20,000 during years 3 and 5 (2 audits @$10,000/audit) (all outputs in component).
22	UNDP TRAC co-financing of project management unit

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XII. LEGAL CONTEXT

175. This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement (SBAA) between the Government of Belize and UNDP, signed on seventh of June in 1982. All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by the Ministry of Sustainable Development, Climate Change and Disaster Risk Management(MSDCCDRM) with the Ministry of Natural Resources (MNR) and the Friends of Conservation and Development (FCD) as responsible parties to the project in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

176. The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

XIII. RISK MANAGEMENT

1. Consistent with the Article III of the SBAA, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

   a) Put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
   b) Assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

4. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

   (a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").

   (b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be

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expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment.

5. (a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:

I. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;

II. Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;

III. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof;

IV. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and

V. Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

6. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

7. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

8. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

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9. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.
10. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.
11. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.
12. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

13. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.

Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

14. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

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15. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.
16. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled “Risk Management” are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled “Risk Management Standard Clauses” are included, mutatis mutandis, in all sub-contracts or sub-agreements entered into further to this Project Document.

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XIV. MANDATORY ANNEXES

A. Multi year Workplan (see template below)
B. GEF-7 Core Indicators at baseline
C. Overview of technical consultancies/subcontracts (see example template below)
D. Terms of Reference for Project Board, Project Manager, and other positions
E. UNDP Social and Environmental and Social Screening Template (SESP)
F. Stakeholder Engagement Plan
G. Gender Analysis and Action Plan
H. UNDP Risk Log (to be completed by UNDP Country Office, see template below)
I. Results of the capacity assessment of the project implementing partner and HACT micro assessment
J. Additional agreements
K. UNDP Project Quality Assurance Report
L. List of people consulted during project development
M. Legal/institutional assessment
N. Target landscape profile

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Annex A: Multi Year Work Plan

Task	Year 1				Year 2				Year 3				Year 4				Year 5				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q
Component/Outcome 1: Enabling environment (policies, financial mechanisms, and institutional capacities) for delivering multiple GEBs through the sustainable management landscapes																					
Output 1.1: Revised and harmonized policies and legislation for riparian forest protection and management (National Lands Act and National Lands Utilization Act), water mana irrigation (National Integrated Water Resources Act), environmental management, river discharges, and water quality (Environmental Impact Assessment Regulations under th Protection Act, NIWR Act and Fiscal Incentives Act) and integrated management of watersheds (Integrated Watershed Management Policy).																					
a. Clarification of agencies jurisdictions/ mandates regarding integrated watershed management																					
Comprehensive assessment of policies and legislation that allow for an enabling IWM institutional environment and harmonized jurisdictions/roles																					
Recommendations for harmonization and avoidance of duplications and to for the drafting of guidelines addressing all needs identified																					
b. National coordinating framework for integrated watershed management defined and enabled.																					
Governance and institutional analysis of IWRM related agencies with recommendations for harmonized, inclusive, and tiered IWRM governance																					
Draft ToRs, SOP, and guidelines for Inter-Agency Coordinating entity and define the operational framework																					
Establishment of an Inter-Agency Coordinating entity for IWRM and support.																					
c. Protocols for inter-institutional coordination to enforce norms and establish penalties related to the clearing of riparian forests, discharges to water bodies, illegal wa mining in rivers.																					
Assess existing framework for rule breaking to identify gaps and duplications, and identify areas for improvements																					

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Review existing protocols in practice for enforcement within MSDCCDRM and MNR, identify gaps and make recommendations																					
Update protocols for the coordinated application of fees and penalties																					
Develop an Integrated Watershed Management Strategy and plan for the BRW																					
Establish a joint enforcement agreement between MSDCCDRM, and MNR																					
Output 1.2: Improved monitoring and enforcement of legislation.																					
Develop a participatory enforcement awareness strategy aimed at the halting of illegal and unsustainable practices within the BRW																					
Conduct sensitization sessions for communities/stakeholders on existing legislations and penalties related to IWRM																					
Workshop for the comprehensive overview of the major air, water, and chemical legislations and regulations																					
Provide equipment and infrastructure support to the National Forest Monitoring System to improve land-use change monitoring																					
Training program to enhance the GoB and resource managers capabilities in GIS analysis, LU/LC monitoring, etc.																					
Optimization of the hydrological monitoring network and support the provision of related data for sustainable water management and forecasting within the BRW.																					
Identification of relevant KPIs and metrics with gender targets and development of protocols for collaborative monitoring and enforcement																					

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Design and implemented of a community-based monitoring program, including training and monitoring tools																					
Routine surveys of environmental law enforcement and compliance																					
Output 1.3: Diversified financial incentives developed and established through a participatory process (including women, indigenous peoples, and other vulnerable groups) to im																					
biodiversity-friendly production practices and sustainable water management and use strategies.																					
Support the MSDCCDRM with requisite technical assistance in the form of a financial advisor/ financial strategist for optimal management performance of the incentives program.																					
Design an incentive program to promote biodiversity conservation, and sustainable land and water management in production lands.																					
Review of the existing strategies, programs, policies, and legislation that may lead the sustainable/unsustainable use of natural resources and propose amendments.																					
Socialization of the financial incentives program.																					
Output 1.4: Expanded information management systems includes mechanisms and protocols such as databases and online map viewer for data gathering, access and informat																					
between institutions to strengthen biodiversity conservation, land/water resource management, and sustainable agricultural management.																					
Adoption of an "environmental" KPI to support the provision of gender-disaggregated, environmental data																					
Establish protocols for collecting, storing and validating data.																					
Expand capabilities of the EMIS, LIC and AMIS to function as nodes of the National Statistics System.																					
Training of staff to perform activities related to information collection, management and sharing.																					

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Output 1.5: Multi tiered training program to build (public, communities, and private) in biodiversity conservation, integrated watershed management, SLM, and building resilien change.																					
Needs assessment for improved community-based capacities (planning, monitoring and enforcement) for improved land use management in the BRW.																					
Participation of national staff and BRW stakeholders in capacity building for multi tiered systems of support for natural resources management																					
Component/Outcome 2: Delivering multiple GEBs through sustainable production and improved value chains for key agricultural and forest products from the BRW.																					
Output 2.1: Landscape management tools used in priority areas for biodiversity conservation.																					
a. Conservation agreements with participating producers/farmers used for establishing landscape management tools (i.e., biological micro-corridors, agroforestry, fores fences, windbreaks, and hedges).																					
Signing of voluntary conservation agreements between the GoB with ministries and agencies, producers and communities.																					
Implementation and monitoring of voluntary conservation agreements																					
b. Rehabilitation and management strategies for riparian forests implemented alongside programme for participatory soil management to reduce erosion and improve																					
Establish and maintain nurseries within key ministries and support community managed nurseries																					
Design and implement a riparian forest restoration strategy																					
Design a forest protection strategy for the BRW																					
Establish and equip field-based centers for innovation within the BRW, and provide technical assistance to producers																					
Develop a grazing reform/pasture management program within the BRW, including training																					
Establish of an emergency seed bank.																					
c. Improved Forest Monitoring system for enhanced land-use change monitoring within the BRW.																					

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Expand and equip the National use of Earth Observation Platform as a tool for improved land use change monitoring																					
Output 2.2. Water Master Plan for the BRW developed through a participatory process allows integrated management for sustainable land and water resources use.																					
a. Critical groundwater recharge areas identified and mapped and delineated based on extent, quantity, and quality, recharge rate, etc.																					
Map critical groundwater recharge areas in the BRW																					
b. Baseline study of supply and demand and the quality of hydrological resources supports decision making to allocate water for sustainable production and irrigation.																					
Develop the BRW water balance																					
c. Optimized hydrological monitoring network (meteorological stations, wells, flow and stage gauges, etc.) provides data for sustainable water management and design measures including flood and drought forecasting.																					
Establish ground water-monitoring stations																					
Establish surface water-monitoring stations																					
d. Operationalization of funding strategy developed and mechanisms for implementation defined, including collection of fees for water use, for the development and im Water Resource Master Plans and Water Quality Control Plans jointly between the NIWRA/MNR, DOE, and water users, following a water use data analysis.																					
Develop the BRW Water Master Plan																					
Develop a pricing strategy for IWRM for equitable distribution of benefits and costs to households in the BRW																					
Fellowships for documentation of case studies, watershed health and community best practices																					
Output 2.3: At least two incentives (e.g., annual per-hectare payments in return for maintaining forest cover, state-funded results-based payments designed with environmenta socioeconomic targets, carbon sequestration certification) to promote sustainable agriculture and forest production piloted.																					
Socialization of the financial incentive programme																					
Implement pilot incentive program within the BRW to promote sustainable agriculture and forest production																					
Output 2.4: Gender responsive extension work program; to include training for small and large producers, including women and vulnerable groups, to implement sustainable pr production and livelihood practices; delivered through a capable Extension Service of the Department of Agriculture, the University of Belize, Galen University, and UNDP's Gree Programme improves production, enhances value chains for key products, and builds awareness among small-scale and large-scale producers about markets for sustainable pro																					

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Support extension work program/ business incubation for selected commodities																					
Support the transformation of 2 commodity sectors through their development and application of green value chains																					
Update field school curriculum and farmer training material																					
Support to community outreach																					
Knowledge exchange/ capacity development of value chain actors																					
Training and development/ small farmer engagement within field school																					
South-South Exchange Program supporting capacity development/knowledge exchange among extension personnel																					
Output 2.5: Business management capacity of producers (including women) to implement sustainable practices improved through targeted training and technical support for ag development and private and cooperative support services.																					
Support the entry of 2 BRW products within UNDP's Global Green Commodity Programme																					
Establish a small agro-processing facility in a central location in the BRW to support sustainable agricultural production																					
Participation in South-South Exchange Program																					
Support the development of 6 business/strategic plan(s) for BRW groups																					
Output 2.6: Awareness program for producers, technicians, and government officials in the production sector (agriculture, tourism, forestry, and urban development and indust builds capacity to sustain and maintain the environmental and socioeconomic benefits of sustainable production practices and the availability of financial incentives and on-goi facilitate implementation.																					
Implementation of community awareness/ outreach program																					
Output 2.7: Participatory monitoring program assesses the delivery of GEBs: biodiversity conservation and integrated watershed management to improve hydrological function agro-ecosystem productivity.																					
Provide basic equipment to communities for monitoring activities																					

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Training for participatory monitoring program to assess the delivery of GEBs																					
Micro/ low value grants for community monitoring																					
Provide support to community outreach																					
Output 2.8: Micro-granting scheme with provides direct incentives/ investments to local communities participating in riparian restoration, conservation agreements and sustain																					
Micro/ low value grants to local communities to support implementation of LMTs and sustainable production																					
Component/Outcome 3. Knowledge Management and Learning.																					
Output 3.1: Gender sensitive/ gender responsive programmes/ activities promoted through project frameworks.																					
Update of implementation of the Gender Mainstreaming Plan																					
Output 3.2: Experiences, best practices, and lessons learned about biodiversity conservation and SLM/water management in production landscapes captured, systematized and through various platforms for public and private stakeholders for use in other production landscapes and watersheds in the country, informing future projects and strategies.																					
Participation in global/ regional forums with an aim for information exchange																					
Conferences to share experiences, best practices, and lessons learned about biodiversity conservation and SLM/water management in production landscapes																					
Undertake a systematization of the project's experience at mid-point and at the end of the project																					
Conduct M&E of the project's implementation following GEF and UNDP guidelines and according to the M&E plan																					

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Annex B: GEF-7 Core Indicators

Core Indicator 3: Area of land restored (hectares)

Ha (expected at PIF)	Ha (expected at CEO Endorsement)	Ha (achieved at MTR)	Ha (achieved at TE)
500	1,050		

Figure at a given stage must be the sum of all figures reported under the four sub-indicators (3.1, 3.2, 3.3 and 3.4) for that stage.

3.1 Area of degraded agricultural lands restored

Ha (expected at PIF)	Ha (expected at CEO Endorsement)	Ha (achieved at MTR)	Ha (achieved at TE)
n/a	n/a		

3.2 Area of forest and forest land restored

Ha (expected at PIF)	Ha (expected at CEO Endorsement)	Ha (achieved at MTR)	Ha (achieved at TE)
500	750		

3.3 Area of natural grass and shrublands restored

Ha (expected at PIF)	Ha (expected at CEO Endorsement)	Ha (achieved at MTR)	Ha (achieved at TE)
n/a			

3.4 Area of wetlands (including estuaries and mangroves) restored

Ha (expected at PIF)	Ha (expected at CEO Endorsement)	Ha (achieved at MTR)	Ha (achieved at TE)
n/a	300		

Core Indicator 4: Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (expected at PIF)	Ha (expected at CEO Endorsement)	Ha (achieved at MTR)	Ha (achieved at TE)
n/a	50,000		

Figure at a given stage must be the sum of all figures reported under the four sub-indicators (4.1, 4.2, 4.3 and 4.4) for that stage.

4.1 Area of landscapes under improved management to benefit biodiversity (qualitative assessment, noncertified)

Ha (expected at PIF)	Qualitative description at PIF	Ha (expected at CEO Endorsement)	Qualitative description at CEO ER	Ha (achieved at MTR)	Qualitative description at MTR	Ha (achieved at TE)	Qualitative description at TE
606,684	Area of the BRW, which	35,000	Area of agriculture and forest				

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	includes protected areas		production under sustainable practices in the BRW (does not include protected areas); and area of landscape management tools that promote connectivity and biodiversity conservation.				

Add rows as needed.

4.2 Area of landscapes that meet national or international third-party certification and that incorporates biodiversity considerations

Ha (expected at PIF)	Type of Certification at PIF	Ha (expected at CEO Endorsement)	Type of Certification at CEO ER	Ha (achieved at MTR)	Type of Certification at MTR	Ha (achieved at TE)	Type of Certification at TE
n/a	n/a	n/a	n/a				

Add rows as needed.

4.3 Area of landscapes under sustainable land management in production systems

Ha (expected at PIF)	Description of Management Practices at PIF	Ha (expected at CEO Endorsement)	Description of Management Practices at CEO ER	Ha (achieved at MTR)	Description of Management Practices at MTR	Ha (achieved at TE)	Description of Management Practices at TE
15,000	Sustainable land management in agriculture and forest production systems	15,000	Sustainable land management in agriculture and forest production systems				

Add rows as needed.

4.4 Area of High Conservation Value forest loss avoided

Total Ha (expected at PIF)	Total Ha (expected at CEO Endorsement)	Total Ha (achieved at MTR)	Total Ha (achieved at TE)

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n/a			

Figure at a given stage must be the sum of all individual PAs reported in the next table, for that stage.

Name of HCVF	Ha (expected at PIF)	Counterfactual at PIF	Ha (expected at CEO Endorsement)	Counterfactual at CEO ER	Ha (achieved at MTR)	Ha (achieved at TE)
n/a						

Add rows as needed.

Core Indicator 11. Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Total number (expected at PIF)	Total number (expected at CEO Endorsement)	Total number (achieved at MTR)	Total number (achieved at TE)
Women	n/a	450		
Men	n/a	1,250		
Total	n/a	1,700		

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Annex C: Overview of Technical Consultancies

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management / Monitoring & Evaluation		
Local / National contracting		
Project Manager *Rate: $4,000/month*	*60 months / over 5 years*	*Tasks: overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. Lead the PMU and responsible for the day-to-day management of project activities and the delivery of its outputs. Support the Project Board and coordinate the activities of all partners, staff, and consultants as they relate to the implementation of the project. See the full TOR in Annex D for details.* *Key Deliverables: annual work plans and budget; ToR and action plan of the staff and monitoring reports; quarterly reports and financial reports on the consultant's activities, all stakeholders' work, and progress; yearly PIRs/AWP; adaptive management of project.*
Project Finance Associate *Rate: 1,500/month*	*60 months / over 5 years*	*Tasks: financial and administrative management of the project activities and assist in the preparation of quarterly and annual work plans and progress reports for review and monitoring by UNDP. See the full TOR in Annex D for details.* *Key Deliverables: Planning, preparation, revisions, and budget execution documents; contracts of national / local consultants and all project staff, in accordance with the instructions of the UNDP Contract Office; quarterly and yearly project progress reports concerning financial issues.*
Gender Expert (part time). *Rate: $500/day*	*45 days during years 3 to 5*	*Tasks: monitoring of gender mainstreaming, including the implementation of the Gender Action Plan. See the full TOR in Annex D for details.* *Key Deliverables: documentation of gender mainstreaming and assessment of indicators as established in the Gender Action Plan.*
M&E and Safeguards Expert *Rate: $12,800/year*	*5 years*	*Tasks: project M&E, including PRF and GEF Core Indicators updates and other activities as per the M&E plan. Monitoring of environmental and social risks. See the full TOR in Annex D for details.* *Key Deliverables: periodic documents with Project M&E results, including follow-up and updates relate to the PRF; update UNDP SESP and safeguard reports.*
M&E Expert *Rate: $10,000*	*3 weeks / over 2 months (year 3)*	*Tasks: conduct the mid-term project review jointly with the International M&E Expert and following UNDP and GEF guidelines.* *Key Deliverables: mid-term project review report.*
M&E Expert *Rate: $15,000*	*4 weeks / over 3 months (year 5)*	*Tasks: conduct the terminal project evaluation jointly with the International M&E Expert and following UNDP and GEF guidelines.* *Key Deliverables: terminal project evaluation report.*
International contracting		

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M&E Expert *Rate: $15,000*	*4 weeks / over 2 months (year 3)*	*Tasks: conduct the mid-term project review jointly with the national M&E Expert and following UNDP and GEF guidelines.* *Key Deliverables: mid-term project review report; management responses document.*
M&E Expert *Rate: $25,000*	*5 weeks / over 3 months (year 5)*	*Tasks: conduct the terminal project evaluation jointly with the national M&E Expert and following UNDP and GEF guidelines.* *Key Deliverables: terminal project evaluation report; management responses document.*
For Technical Assistance		
Component 1		
Local / National contracting		
Legal/policy Expert *Rate: $500/day*	*40 days during year 1*	*Tasks: conduct a comprehensive assessment of policies and legislation that allow for an enabling IWM institutional environment and harmonized jurisdictions/role (Output 1.1).* *Key Deliverables: consultations and assessment report; recommendations for harmonization of policies and legislation related to IWM.*
Legal/Policy Expert *Rate: $500/day*	*40 days during year 1*	*Tasks: conduct a governance and institutional analysis of IWM related agencies with recommendations for harmonized, inclusive, and tiered IWM governance (Output 1.1).* *Key Deliverables: consultations and assessment report; recommendations for harmonization of role s and jurisdictions of IWM related agencies*
Institutional Development Expert *Rate: $500/day*	*60 days during years 1 and 2*	*Tasks: define the operational framework for the interagency entity for IWM with clear guidelines following from the institutional review (Output 1.1).* *Key Deliverables: proposal for an operational framework for the interagency entity for IWM.*
Legal/Policy Expert *Rate: $500/day*	*30 days during years 1 and 2*	*Tasks: assess the existing framework for rule-breaking to identify gaps and duplications and make recommendations for improvements (Output 1.1).* *Key Deliverables: assessment report of gaps and duplications with recommendation for improvement.*
Legal/Policy Expert *Rate: $500/day*	*15 days during years 1 and 2*	*Tasks: review existing protocols in practice for enforcement within MSDCCDRM and MNR, identify gaps, and make recommendations (Output 1.1).* *Key Deliverables: assessment report of gaps and recommendation for improved protocols.*
Legal/Policy Expert *Rate: $500/day*	*45 days during years 1 and 2*	*Tasks: develop enhanced protocols for the coordinated application of fees and penalties (Output 1.1).* *Key Deliverables: drafts of enhanced protocols for the coordinated application of fees and penalties*
Watershed Management Expert *Rate: $500/day*	*60 days during year 1*	*Tasks: develop an Integrated Watershed Management Strategy and plan for the BRW. (Output 1.1).* *Key Deliverables: draft of the Integrated Watershed Management Strategy and plan for the BRW; report summarizing consultations with key stakeholders.*
Institutional Development Specialist *Rate: $500/day*	*45 days during year 2*	*Tasks: review the proposed water resources management structures within the NIWRA (Output 1.1).* *Key Deliverables: proposal for enhance resources management structures within the NIWRA.*

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Legal/Policy Expert *Rate: $500/day*	*45 days during year 2*	*Tasks: Review NIWRA legislation and enabling regulations to reflect review findings ensuring alignment with national direction for integrated water resource management (Output 1.1).* *Key Deliverables: report with findings and recommendations for aligning NIWRA legislation and enabling regulations with national direction for integrated water resource management.*
Communications Expert *Rate: $500/day*	*50 days during year 2*	*Tasks: develop an enforcement awareness strategy aimed at the halting of illegal and unsustainable practices within the BRW (Output 1.2).* *Key Deliverables: draft of an enforcement awareness strategy for reducing illegal and unsustainable practices within the BRW; report summarizing consultations with key stakeholders.*
Workshop Facilitator *Rate: $1,000/day*	*5 days during year 1*	*Tasks: comprehensive overview of the major air, water, and chemical legislations and regulations (Protection of Environment through Criminal Law) (Output 1.2).* *Key Deliverables: report with comprehensive overview of the major air, water, and chemical legislations and regulations; minutes and conclusions; minutes of workshop including list of participants.*
Workshop Presenters (5) *Rate: $1,000/day*	*1 day/person during year 1*	*Tasks: comprehensive overview of the major air, water, and chemical legislations and regulations (Protection of Environment through Criminal Law) (Output 1.2).* *Key Deliverables: copy of papers presented; summary of discussions.*
Environmental Monitoring Expert *Rate: $750/day*	*40 days during year 2*	*Tasks: identify relevant KPIs and metrics with gender targets and develop clear protocols for the monitoring of various levels/ tiers in the project region (watershed, regions, communities) (Output 1.2).* *Key Deliverables: report wit KPIs and metrics with gender baseline and targets; draft of monitoring protocols; report summarizing consultations with key stakeholders.*
Environmental Monitoring Expert *Rate: $500/day*	*25 days during years 2 to 5*	*Tasks: design a community-based program for the consistent tracking and public reporting of water resource, biodiversity, and land use in the project region (Output 1.2).* *Key Deliverables: draft of community-based monitoring program; report summarizing consultations with key community-level stakeholders.*
Finance Strategist/Natural Resources Economics Expert *Rate: $2,500/month*	*24 moths during years 2 to 4*	*Tasks: provide oversight of the financial incentive programme as well as to provide direction/ technical guidance to resource managers for the implementation of market-based financial policies (Output 1.3).* *Key Deliverables: report with feasibility assessments and recommendations of incentives to be included in the financial incentive programme; periodic reports with technical guidance for the implementation of market-based financial policies*
Natural Resources Economics Expert *Rate: $750/day*	*100 days during year 3*	*Tasks: design incentive program to support landowners (private sector, community, etc.) in undertaking works to enhance the biodiversity values and sustainable land and water management of their lands (Output 1.3).* *Key Deliverables: draft of incentive program to promote biodiversity conservation and sustainable land and water management in private lands; report summarizing consultations with key stakeholders.*
Legal/Policy Expert *Rate: $750/day*	*30 days during year 3*	*Tasks: review of existing strategy, policy and legislation for the sustainable/unsustainable use of natural resources, and draft amendments supporting incentive based biodiversity/ SLM mainstreaming (Output 1.3).*

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		Key Deliverables: assessment report of existing strategy, policy and legislation for the sustainable/unsustainable use of natural resources, and recommendations for amendment; draft of amendments based on recommendations an consultation with stakeholders and decision-makers.
Environmental Monitoring Expert *Rate: $500/day*	*10 days during year 1*	*Tasks: develop a KPI white paper for cabinet approval (Output 1.4).* *Key Deliverables: draft of KPI white paper for cabinet approval developed in consultation with key stakeholders related to information management systems (hydrology, agriculture, biodiversity conservation, SLM, etc.).*
Environmental Monitoring Expert Rate: $750/day	*40 days during years 1 and 2*	*Tasks: establish protocols for collecting, storing, and validating data, including development of mechanisms and guidelines for data and information sharing/access (Output 1.4).* *Key Deliverables: draft of protocols developed in consultation with key stakeholders related to information management systems (hydrology, agriculture, biodiversity conservation, SLM, etc.).*
Capacity Development Expert *Rate: $500/day*	*20 days during year 1*	*Tasks: assess capacity needs of public, communities, and private agencies to improve monitoring and enforcement and in addressing land-use conflicts (Output 1.5).* *Key Deliverables: assessment report of capacity needs by type of stakeholder consulted.*
Component 2		
Local / National contracting		
Legal Expert *Rate: $750/day*	*20 days during year 2*	*Tasks: design model voluntary conservation agreement for establishing LMTs by participating producers/farmers (Output 2.1).* *Key Deliverables: draft model voluntary conservation agreement.*
Legal Expert *Rate: $10,000/year*	*Year 2*	*Tasks: support community consultation and negotiations to update landowner agreements within the Community Baboon Sanctuary (Output 2.1).* *Key Deliverables update landowner agreements within the Community Baboon Sanctuary; report summarizing consultations with key stakeholders, including producers/farmers*
Socioeconomic/Biodiversity Expert *Rate: $500/day*	*30 days during year 2*	*Tasks: define baselines and a monitoring system for voluntary conservation agreements with participating producers/farmers. (Output 2.1).* *Key Deliverables: report with baselines and protocols for monitoring voluntary conservation agreements; report summarizing consultations with key producers/farmers*
Riparian Engineer *Rate: $750/day*	*60 days during year 2*	*Tasks: develop and implement of a riparian forest restoration strategy for the project target area (Output 2.1).* *Key Deliverables: report riparian forest restoration strategy, including criteria for prioritizing/selecting restoration sites.*
Forestry Expert *Rate: $500/day*	*120 days during year 2*	*Tasks: conduct an assessment of forestry resources in the BRW (Output 2.1).* *Key Deliverables: assessment report indicating methods used and main findings.*
Forestry Expert *Rate: $500/day*	*60 days during years 2 and 3*	*Tasks: developed a forest protection strategy for the BRW (Output 2.1).* *Key Deliverables: draft of forest protection strategy for the BRW; report summarizing consultations with key stakeholders.*
Training Expert	*Years 2, 3, and 4*	*Tasks: provide support to extension work program/ business incubation for selected commodities (Output 2.4).*

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Rate: $1,000/day		*Key Deliverables: periodic reports summarizing services provides to cohune oil, livestock, and sugar cane producers, including recommendations and follow-up.*
Social Marketing Specialist *Rate: $500/day*	*30 days during years 4 and 5*	*Tasks: socialization of the financial incentive programme (Output 2.1).* *Key Deliverables: socialization activities reports, including description of stakeholders involved.*
Legal Advisor *Rate: $30,000/year*	*Years 2, 3, and 4*	*Tasks: advise MSDCCDRM to establish conservation agreements with participating producers/farmers used for establishing LMTs (Output 2.1).* *Key Deliverables: periodic reports summarizing services provides, including recommendations for drafting agreements and follow-up.*
Agronomist *Rate: $1,000/month*	*48 months during years 2, 3, 4, and 5*	*Tasks: provide support establishing and maintaining nurseries, sustainable production and livelihood practices within the watershed (Output 2.1).* *Key Deliverables: periodic reports summarizing services provides, including recommendations and follow-up.*
Field officer (4) *Rate: $750/month*	*48 months/officer during years 2, 3, 4, and 5*	*Tasks: support to establishing and maintaining nurseries that will provide seedlings for the implementation of LMTs (Output 2.1).* *Key Deliverables: periodic reports summarizing services provides, including recommendations and follow-up.*
Geospatial Monitoring Officer (2) *Rate: $750/month*	*50 months/officer during 4 and 5*	*Tasks: provide the support to the expansion of national use of Earth Observation Platform as a tool for improved land use change monitoring and the directing and tracking of the effectiveness of introduced biodiversity conservation, rehabilitation and SLM/water management programmes within the watershed. (Output 2.1).* *Key Deliverables: periodic reports summarizing services provides, including recommendations and follow-up.*
Community outreach/training officer (2) *Rate: $600/month*	*48 months/officer during years 1, 2, 3, 4, and 5*	*Tasks: support to awareness program and training for producers, technicians, and government officials in the production sector (Output 2.6).* *Key Deliverables: periodic reports summarizing services provides, including recommendations and follow-up.*
Coordinator of micro-grants program *Rate: $30,000/year*	*Years 3, 4 and 5*	*Tasks: Coordinate the micro-grants program to provide direct incentives/ investments to local communities participating in voluntary conservation agreements to implement LMTs and for the implementation of sustainable production practices (Output 2.8).* *Key Deliverables: guidelines for application and selection process; periodic reports of grants awarded, financial management, and monitoring and evaluation; summary reports of lessons learned and best practices.*
Component 3		
Local / National contracting		
Knowledge Management Consultant *Rate: $500/day*	*45 days during years 3 and 5*	*Tasks: undertake a systematization of the project's experience at mid-point and at the end of the project (Output 3.2).* *Key Deliverables: report with project's experiences and best practices*

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Annex D: Terms of Reference

1. Terms of Reference for the Project Board

The Project Board (PB) will serve as the project's decision-making body. It will meet according to necessity, at least four times each year, to review project progress, approve project work plans and approve major project deliverables. The PB is responsible for providing the strategic guidance and oversight to project implementation to ensure that it meets the requirements of the approved Project Document and achieves the stated outcomes. The PB's role will include:

- Provide strategic guidance to project implementation;
- Ensure coordination between various donor funded and government funded projects and programmes;
- Ensure coordination with various government agencies and their participation in project activities;
- Approve annual project work plans and budgets, at the proposal of the Project Manager;
- Approve any major changes in project plans or programmes;
- Oversee monitoring, evaluation and reporting in line with GEF requirements;
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;
- Negotiate solutions between the project and any parties beyond the scope of the project;
- Ensure that UNDP Social and Environmental Safeguards Policy is applied throughout project implementation; and, address related grievances as necessary.

These terms of reference will be finalized during the Project Inception Workshop.

2. Terms of Reference for Key Project Staff

Project Director

The Project Director (PD) is the appointed representative of the Ministry of Sustainable Development, Climate Change and Disaster Risk Management(MSDCCDRM), who will be accountable to the Ministry of Economic Development and UNDP for the achievement of objectives and results in the assigned Project. The PD will be part of the Project Board and answer to it. The PD will be financed through national government funds (co-financing), whose appointment will be made by the CEO of the MSDCCDRM, in consultation with the UNDP CO.

Duties and Responsibilities

- Serve as a member of the Project Board.
- Supervise compliance with objectives, activities, results, and all fundamental aspects of project execution as specified in the project document.
- Supervise compliance of project implementation with GoB policies, procedures and ensure consistency with national plans and strategies.
- Facilitate coordination with other organizations and institutions that will conduct related environmental activities for the conservation of biodiversity, SLM, and IWRM in the BRW.
- Participate in project evaluation, testing, and monitoring missions.
- Coordinate with national governmental representatives on legal and financial aspects of project activities.
- Coordinate and supervise government staff inputs to project implementation.
- Coordinate, oversee and report on government cofinancing inputs to project implementation.

Project Manager

The Project Manager will be locally recruited following UNDP procedure, with input to the selection process from the Project partners. The position will be appointed by the Project Implementing Agency and funded entirely from the Project. The PM will be responsible for the overall management of the Project, including the mobilization of all

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project inputs, supervision over project staff, consultants and sub-contractors. The PM will report to the PD in close consultation with the assigned UNDP Programme Manager for all of the Project's substantive and administrative issues. From the strategic point of view of the Project, the PM will report on a periodic basis to the Project Board, based on the PD's instruction. Generally, the PM will support the PD who will be responsible for meeting government obligations under the Project, under the NIM execution modality. The PM will perform a liaison role with the government, UNDP and other UN agencies, CSOs and project partners, and maintain close collaboration with other donor agencies providing co-financing.

Duties and Responsibilities

- Plan the activities of the project and monitor progress against the approved work-plan.
- Supervise and coordinate the production of project outputs, as per the project document in a timely and high quality fashion.
- Coordinate all project inputs and ensure that they are adhere to UNDP procedures for nationally executed projects.
- Supervise and coordinate the work of all project staff, consultants and sub-contractors ensuring timing and quality of outputs.
- Coordinate the recruitment and selection of project personnel, consultants and sub-contracts, including drafting terms of reference and work specifications and overseeing all contractors' work.
- Manage requests for the provision of financial resources by UNDP, through advance of funds, direct payments, or reimbursement using the UNDP provided format.
- Prepare, revise and submit project work and financial plans, as required by Project Board and UNDP.
- Monitor financial resources and accounting to ensure accuracy and reliability of financial reports, submitted on a quarterly basis.
- Manage and monitor the project risks initially identified and submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the project risks log.
- Liaise with UNDP, Project Board, relevant government agencies, and all project partners, including donor organizations and CSOs for effective coordination of all project activities.
- Facilitate administrative support to subcontractors and training activities supported by the Project.
- Oversee and ensure timely submission of the Inception Report, Project Implementation Report, technical reports, quarterly financial reports, and other reports as may be required by UNDP, GEF and other oversight agencies.
- Disseminate project reports and respond to queries from concerned stakeholders.
- Oversee the exchange and sharing of experiences and lessons learned with relevant community based integrated conservation and development projects nationally and internationally.
- Assist community groups, municipalities, CSOs, staff, students and others with development of essential skills through training workshops and on the job training thereby increasing their institutional capabilities.
- Encourage staff, partners and consultants such that strategic, intentional and demonstrable efforts are made to actively include women in the project, including activity design and planning, budgeting, staff and consultant hiring, subcontracting, purchasing, formal community governance and advocacy, outreach to social organizations, training, participation in meetings; and access to program benefits.
- Assists and advises the project staff and consultants responsible for activity implementation in the target sites.
- Carry regular, announced and unannounced inspections of all sites and the activities of the project staff and consultants.

Required skills and expertise

- A university degree (MSc or PhD) in a subject related to biodiversity conservation, natural resource management, SLM, or environmental sciences.
- At least 10 years of experience in natural resource management (preferably in the context of watershed management and biodiversity conservation).

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- At least 5 years of demonstrable project/programme management experience.
- At least 5 years of experience working with ministries, national or provincial institutions that are concerned with natural resource and/or environmental management.

Competencies

- Strong leadership, managerial and coordination skills, with a demonstrated ability to effectively coordinate the implementation of large multi-stakeholder projects, including financial and technical aspects.
- Ability to effectively manage technical and administrative teams, work with a wide range of stakeholders across various sectors and at all levels, to develop durable partnerships with collaborating agencies.
- Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project.
- Ability to coordinate and supervise multiple Project staff and consultants in their implementation of technical activities in partnership with a variety of subnational stakeholder groups, including community and government.
- Strong drafting, presentation and reporting skills.
- Strong communication skills, especially in timely and accurate responses to emails.
- Strong computer skills, in particular mastery of all applications of the MS Office package and Internet search.
- Strong knowledge about the political and socio-economic context related to biodiversity conservation, watershed management, SLM, and law enforcement at national and subnational levels.
- Excellent command of English.

Project M&E and Safeguards Expert

Under the overall supervision and guidance of the Project Manager, the M&E and Safeguards Expert will have the responsibility for project monitoring and evaluation. The M&E and Safeguards Expert will work closely with the Communications Expert on knowledge management aspects of the project. Specific responsibilities will include:

- Monitor project progress and participate in the production of progress reports ensuring that they meet the necessary reporting requirements and standards;
- Ensure project's M&E meets the requirements of the Government, the UNDP Country Office, and UNDP-GEF; develop project-specific M&E tools as necessary;
- Oversee and ensure the implementation of the project's M&E plan, including periodic appraisal of the Project's Theory of Change and Results Framework with reference to actual and potential project progress and results;
- Monitoring of environmental and social risks;
- Evaluate social risks that may emerge and/are triggered by project activities and provide recommendations on mitigation strategies;
- Periodically update the UNDP SESP;
- Prepare safeguard reports as needed;
- Support the Project Manager in documenting and addressing environmental and social grievances;
- Oversee/develop/coordinate the implementation of the stakeholder engagement plan;
- Oversee and guide the design of surveys/ assessments commissioned for monitoring and evaluating project results;
- Facilitate mid-term and terminal evaluations of the project, including management responses;
- Facilitate annual reviews of the project and produce analytical reports from these annual reviews, including learning and other knowledge management products;
- Support project site M&E and learning missions;
- Visit project sites as and when required to appraise project progress on the ground and validate written progress reports.

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The Project M&E and Safeguards Expert will be recruited based on the following qualifications

- Masters degree, preferably in the field of environmental or natural resources management;
- At least five years of relevant work experience preferably in a project management setting involving multi-lateral/ international funding agency. Previous experience with UN project will be a definite asset;
- Significant experience in collating, analyzing and writing up results for reporting purposes;
- Very good knowledge of results-based management and project cycle management, particularly with regards to M&E approach and methods. Formal training in SLM and biodiversity conservation will be a definite asset;
- Knowledge and working experience of the application of gender mainstreaming in international projects;
- Understanding of biodiversity conservation, SLM, and associated issues;
- Very good inter-personal skills;
- Proficiency in computer application and information technology;
- Excellent language skills in English (writing, speaking and reading).
- Inter-personal skills;
- Proficiency in computer application and information technology.
- Excellent language skills in English (writing, speaking and reading).

Project Gender Expert

Under the overall supervision and guidance of the Project Manager, the Gender Expert will have the responsibility for the implementation of the Gender Action Plan. The Gender Officer will work closely with the M&E and Safeguards Expert, and Communications/KM Expert on related aspects of project implementation, reporting, monitoring, evaluation and communication. Specific responsibilities will include:

- Monitor progress in implementation of the project Gender Action Plan ensuring that targets are fully met and the reporting requirements are fulfilled;
- Oversee/develop/coordinate implementation of all gender-related work;
- Review the Gender Action Plan annually, and update and revise corresponding management plans as necessary;
- Work with the M&E and Safeguards Expert to ensure reporting, monitoring and evaluation fully address the gender issues of the project.

The Project Gender Officer will be recruited based on the following qualifications:

- Master's degree in gender studies, gender and development, environment, sustainable development or closely related area;
- Demonstrated understanding of issues related to gender and sustainable development; at least 5 years of practical working experience in gender mainstreaming, women's empowerment and sustainable development in Belize, Central America, and/or the Caribbean region;
- Proven experience in gender issues in Belize, Central America, and/or the Caribbean region;
- Previous experience with UN projects will be a definite asset;
- Demonstrated understanding of the links between sustainable development, social and gender issues;
- Experience in gender responsive capacity building;
- Experience with project development and results-based management methodologies is highly desired/required;
- Excellent analytical, writing, advocacy, presentation, and communications skills;
- Excellent language skills in English (writing, speaking and reading).

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Project Finance Associate

Under the guidance and supervision of the Project Manager, the Project Finance Associate will have the following specific responsibilities:

- Keep records of project funds and expenditures, and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager;
- Review project expenditures and ensure that project funds are used in compliance with the Project Document and Government of Belize financial rules and procedures;
- Validate and certify FACE forms before submission to UNDP;
- Provide necessary financial information as and when required for project management decisions;
- Provide necessary financial information during project audit(s);
- Review annual budgets and project expenditure reports, and notify the Project Manager if there are any discrepancies or issues;
- Consolidate financial progress reports submitted by the responsible parties for implementation of project activities;
- Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports;
- Assist the Project Manager in day-to-day management and oversight of project activities;
- Assist the M&E and Safeguards Officer in matters related to M&E and knowledge resources management;
- Assist in the preparation of progress reports;
- Ensure all project documentation (progress reports, consulting and other technical reports, minutes of meetings, etc.) are properly maintained in hard and electronic copies in an efficient and readily accessible filing system, for when required by the Project Board, UNDP, project consultants and other PMU staff;
- Provide PMU-related administrative and logistical assistance.

The Project Finance Associate will be recruited based on the following qualifications:

- A Bachelors degree or an advanced diploma in accounting/ financial management;
- At least five years of relevant work experience preferably in a project management setting involving multi-lateral/ international funding agency. Previous experience with UN project will be a definite asset;
- Proficiency in the use of computer software applications particularly MS Excel;
- Excellent language skills in English (writing, speaking and reading).

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Consultant: Technical Advisor: National Specialist Integrated Watershed/ Water Resource Management

Background: The outlined terms of reference describes the main tasks under the knowledge and technical assistance (TA) aimed at supporting the application of sustainable, integrated water resources management in The Belize River Valley. The Technical Advisor will be responsible for the overall coordination and supervision of TA activities and outputs, and day-to-day liaison with the executing agency as well as with other relevant agencies supporting the project defined work programmes.

Education/ Qualification: The specialist will have:

- o A postgraduate degree in environment or water resources management or engineering;
- o Sound understanding and experience in ecological protection, environmental improvement (Riparian Zone and Forest Regeneration) and integrated water resources management principles and processes;
- o Demonstrated experience in working in multidisciplinary teams;
- o Experience in environmental modeling and strategic planning
- o Demonstrated knowledge with at least 5 years of working experience in Belize in areas of environment protection and/ or water resources management issues.

Tasks: The specialist will have the following specific responsibilities:

(i) Draft and guide the implementation of detailed technical project work programmes; providing inputs to the reports in terms of the scope, schedule, assessments, activities, progress, recommendations, and plans to achieve the intended TA outputs and outcome

(ii) Guided by the Project's Stakeholder engagement plan, support the Project Manager with the coordination of stakeholder associated with work programme delivery

(iii) Function as the leading national expert on the review of technical project deliveries/ outputs, including the review of Watershed Management Policy and Strategy, Forest stock take and development of riparian regeneration strategy for the BRW, review of IWM governance and institutional environment, Ground water assessments and the development of the Water master plan for the BRW and other related technical input processes as is prescribed under Components 1 &2 of the Project Document.

(iv) Support the executing agencies in preparing and implementing an effective communication and participation strategy to ensure appropriate participation from key stakeholders and agencies concerned, ensure comprehensive feedback into national processes.

(v) Support Project Manager in the supervision of national and international consultancies, and support project knowledge management processes

(vi) Organize and give presentations during workshops and seminars as a part of knowledge dissemination and advocacy for national endorsement of newly introduced policies and strategies.

Consultant: Technical Advisor: National Specialist in Sustainable Production & Farmer Support

Background: The outlined terms of reference describes the main tasks under the knowledge and technical assistance (TA) aimed at supporting the application of sustainable production systems within the Belize River Valley. The Technical Advisor will be responsible for the overall coordination and supervision of TA activities and outputs, and day-to-day liaison with the executing agency as well as with other relevant agencies supporting the project defined work programmes.

Education/ Qualification: The specialist will have:

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- Masters or higher degree in relevant field such as agriculture, environmental studies, development studies, economics or related field.
- A minimum of 5 years of professional experience in agricultural/development section in Belize.
- Excellent knowledge and understanding of agricultural and commodity sector.
- Have a sound understanding of local laws, regulations and issues on environmental and labour
- Awareness of NDPE requirements (no deforestation, no peat, no exploitation)
- Experience in working with growers in agricultural sector (Small Holder and large private enterprise) will be an added advantage.

Tasks: The specialist will have the following specific responsibilities:

(i) Draft and guide the implementation of detailed technical project work programmes; providing inputs to the reports in terms of the scope, schedule, assessments, activities, progress, recommendations, and plans to achieve the intended TA outputs and outcome.

(ii) Conduct sample survey of small-scale farming communities in targeted BRW intervention sites, providing guidance for the establishment of re-granting beneficiary criteria for the project supported microgrants programme supporting sustainable farming & agroforestry – current practices, value chains and extension services.

(iii) Provide technical guidance and support the negotiations for the development of conservation agreements and other selected landscape management tools participating producers/farmers and conservation groups.

(iv) Guided by the Project's Stakeholder engagement plan, support the Project Manager with the coordination of stakeholder associated with work programme delivery.

(v) Function as the leading national expert on the review of technical project deliveries/ outputs, including the review of analytical reports on commodity and green value chain analysis for piloted commodities associated with the BRW, outputs related to sustainable pasture management, and community participation in sustainable resource management.

(vi) Support the executing agencies, including participating NGO and community groups in preparing and implementing an effective communication strategy securing optimal participation of project beneficiaries and other key project stakeholders and management entities.

(vii) Support Project Manager in the supervision of national and international consultancies.

(viii) Support the production of project knowledge products

(ix) Organize and give presentations during workshops and seminars as a part of knowledge dissemination and advocacy for national endorsement of newly introduced policies and strategies.

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Annex E: UNDP Social and Environmental Screening Procedure

Project Information

Project Information	
1. Project Title	Integrated management of production landscapes to deliver multiple global environmental benefits
2. Project Number (i.e. Atlas project ID, PIMS+)	PIMS 6015; ATLAS Project ID: 00126230; ATLAS Output ID: 00120353
3. Location (Global/Region/Country)	Belize
4. Project stage (Design or Implementation)	Design
5. Date	October 24, 2022

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles to Strengthen Social and Environmental Sustainability?
Briefly describe in the space below how the Project mainstreams the human rights-based approach
The Project supports the Government of Belize in facilitating the direct, free, and equal participation of national and local stakeholders (including farmers, producers, and local communities) in the planning and implementation of measures for mainstreaming biodiversity conservation and sustainable land/water management in production landscapes in Belize. The Project aims to ensure that women and vulnerable populations including but not limited to smallholders and indigenous peoples dependent on the resources within the Belize River Watershed (BRW), have equal opportunities to participate in the Project at all levels of implementation. It aims to formalise national mechanisms and platforms to enable their meaningful participation in the governance architecture associated with the extended watershed. Planned state and community-led measures are expected to contribute to the delivery of multiple global environmental benefits and reflect framework principles on human rights and the environment. The Project is designed to be inclusive and features local peoples prominently in ensuring a safe, clean, healthy and sustainable environment. It offers communities protection from environmental harm and supports that they fairly and equitably share the benefits realised from the resources. The Project directly empowers rightsholders and resource users to be the principal facilitators and decision makers for mainstreaming biodiversity conservation and sustainable land management (SLM) in the production landscapes they inhabit BRW. In addition, the Project provides for the equal allocation and disbursement of monetary and non-monetary benefits to all stakeholders. These benefits will result from: a) financial incentives for the implementation of biodiversity-friendly production practices and sustainable water management and use strategies; b) increased agro-ecosystem productivity that sustains food production; c) extension services that improve production capacities and enhance value chains for key products (sugar cane, cohune oil, and livestock); d) improved access to markets for sustainable products; and e) trained small- and large-scale producers so that they implement sustainable production practices and improve their business management capabilities. Through the landscape and integrated watershed management approach to biodiversity conservation, SLM and ecosystem services, the Project offers significant positive impacts on the well-being of the communities in the BRW. It also delivers on the state's obligation to establish and maintain substantive environmental standards that are non-discriminatory and non-retrogressive. The Project creates and strengthens multiple opportunities such as governance mechanisms, gender mainstreaming, integration of vulnerable stakeholders and technical assistance to increase stakeholder participation in decision-making throughout implementation.
Briefly describe in the space below how the Project is likely to improve gender equality and women's empowerment
The Project incorporated gender considerations in the design to ensure equal opportunity for female participation and the realisation of benefits. Formalised structures, policies and strategies developed within the project framework will explicitly reflect the role of women in all tiers of biodiversity/resource management addressing specifically existing disparities faced by women and girls in terms of (amongst other things) access to economic participation and participation in decision making. The Project integrated gender-based analysis into its designed and targeted the involvement of women, male and female youth within consultation processes meant to inform the final project design. The Stakeholder Engagement Plan (SEP) assures their continued participation throughout the Project's implementation phase. Within the national context, women generally share the responsibility for resource management, which is particularly visible at the household level. Owing to their active resource management roles, the Project targets women's participation in processes associated with the conservation, sustainable use of water and forest

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resources and the delivery of ecosystem services. In this regard, water and soil resource management, the conservation and sustainable use of biodiversity, and sustainable production technologies and practices are expected to be achieved with their equal participation.

In further consideration of the roles and priorities of both men and women, the Project has granted women enhanced opportunities to actively participate in governance bodies, including those led by various government institutions, the private sector, and social organisations. The Project promotes activities that close gaps resulting from gender equity issues since women in Belize, specifically in rural communities, are more constrained by traditional gender roles and the lack of access to financial resources and capacity-building to improve their livelihood. The expected project provision of gender-disaggregated data, specifically, the distribution of project benefits based on sex, will assist in monitoring the effectiveness of addressing equality gaps through project programming.

Safeguards to ensure that gender considerations continue to be a part of the project delivery approach include hiring gender and participation specialists, continued targeting and engagement with women through the SEP, and the mandatory utilisation of gender assessments to guide all significant project deliverables. The Project aims to achieve the categorisation of "Gender Responsive" according to UNDP's gender results effectiveness scale, which means that results address differential needs of men or women and distribute equitable benefits, resources, status and rights without necessarily addressing the root causes of inequalities in their lives.

Briefly describe in the space below how the Project mainstreams sustainability and resilience

The proposed initiative works within national structures and programmes, a vital feature of the sustainability of actions. The Project's direct alignment with priority national work programmes ensures greater buy-in and political will for activity implementation. The project design enables resilience features in the project structure/ environment. These features allow for increased accountability and heightened oversight and monitoring, enabling early detection of project issues and triggering early corrective actions.

As it relates to environmental sustainability mainstreaming, the Project, by design, supports the mainstreaming of biodiversity conservation and SLM/watershed management objectives into production landscapes in Belize, contributing to the delivery of global environmental benefits and the well-being of local communities. By implementing key actions which address threats to biodiversity, forests, and land and water resources degradation that results primarily from conventional production practices, the Project transforms the national architecture which supports sustainable resource management. Including components localising sustainability actions at the local/ community level supports behavioural changes within local populations, facilitating increased awareness and support for national conservation efforts. The Project's use of "Integrated Landscape and water Management Approaches" allows for balancing competing demands and integrating resource management policies within the watershed. These approaches enable functionaries to manage the watershed's resources more effectively by addressing inter-connected social, environmental, economic and political challenges.

The sustainability of environmental actions is realised through the localisation of conservation goals, that is, the vesting to resource users, particularly those at the community level, the knowledge and capabilities to actively participate in conservation and management features introduced into the watershed by the Project. Capacity development of resource managing institutions and the formalisation of processes through legislation and regulations sustain and allow for upscaling of the Project's success story and lessons learned. More specifically, the Project will mainstream environmental sustainability by employing the following:

1) Promoting inter-agency cooperation and programming will increase public and private investment to support sustainable production practices.
2) Rehabilitating degraded riparian forests and wetlands enhances ecosystem connectivity and improves water quality.
3) The adoption of landscape management tools, including the introduction of financial incentives for improved biodiversity management and corridor connectivity
4) The promotion of public/ private sector partnership in support of integrated watershed management
5) Establishing 15,000 ha under sustainable production (agriculture and forestry).

The use of integrated approaches to resource management allows the Project to address multidimensional threats within the project environment, including anthropogenic threats and threats associated with climate change. Structures for adaptive management increase the Project's agility, enabling delivery-based planning capable of adjusting to the dynamic project environment. Adaptive management also considers emerging and evolving threats, increasing the Project's ability to provide factual support for resilience building.

Briefly describe in the space below how the Project strengthens accountability to stakeholders

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The Project has established a comprehensive SEP that supports the project implementation framework and improves project stakeholders' accountability. The SEP identifies critical stakeholder groups' roles and interests and recommends means to ensure their continued engagement in the project process. It is also recommended that the Project establishes a grievance redress mechanism (GRM) which allows project teams to manage potentially conflicting interests of stakeholder groups. This mechanism and others, such as the Project Board, and UNDP's Accountability Mechanism (as described in the ESMF), enable the Project to respond in an accountable manner to project stakeholders. Stakeholder engagement is a crucial feature of project management and is fully funded within the project structure. The Project is responsible for its impact on people's lives and livelihoods and has designed its SEP to foster cooperation and the empowerment of beneficiaries and stakeholders. The ESMF, which will be disclosed for public comment, outlines which activities the SEP needs to be updated and tailored around the people affected by the action. It also outlines specific requirements for the engagement with physically or economically displaced people and indigenous peoples.

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Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks?	QUESTION 3: What is the significance level of the potential social & environmental risks?			QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High
Risk Description (broken down by event, cause, impact)	***Impact & Likelihood (1-5)***	***Significance***	***Comments (optional)***	***Description of assessment and management measures for risks rated as Moderate, Substantial or High***
Risk 1: Elite capture: Unmitigated, the Project might perpetuate or even enhance societal inequalities and exclude smaller producers and vulnerable people from decision-making processes. Questions: P2, P3, P8, P9, P13 & P14 Standard 6 : S6.1	I = 3 L = 4	**Moderate**	The Project employs an inclusive approach that provides everybody equal access to benefits. Further, it aims to ensure that women and other vulnerable populations dependent on the resources within BRW have equal opportunities to participate in the Project at all levels of implementation. However, the Project will work mainly through existing organisations. Studies suggest that they tend to favour larger producers, who have easier access to decision-making on key issues such as access to water, capacity enhancement, training, and incentives designed and provided under the Project. Unmitigated, this might perpetuate or even enhance societal inequalities and exclude smallholders from decision-making processes.	The SEP outlines how the Project will ensure that all stakeholders participate in decision-making, including providing affirmative actions for vulnerable populations. Inherent risks will be identified through the site-specific screening process outlined in the ESMF and trigger the development of targeted gender-sensitive mitigation measures for sub-projects. The ESMF outlines which activities the SEP needs to be updated for and tailored around the people affected by the action (See Table in Section 6 of the ESMF). It also outlines specific requirements for the engagement with physically or economically displaced people and indigenous peoples (including adherence to the principles of Free, Prior and Informed Consent, if relevant). In addition, the project Grievance-Redress Mechanism (as described in the ESMF) provides everybody with the option to voice their concerns. It serves as the "last line of defence" to ensure that nobody is left behind.
Risk 2: Child Labor and insufficient labour standards: The Project will work with smallholders and enterprises in the production landscapes. While this enhances the pro-poor outcomes of the Project, it is known that family businesses sometimes involve child labour and that small and medium enterprises do not always meet core labour standards. Principle 1 and Standard 7 : Questions: P3 & P13, S7.3	I = 3 L=3	**Moderate**	Child labour is a general challenge in agriculture and cannot be solved through the Project.	The ESMF entails specific measures to increase awareness, and its screening of subprojects (especially under Outputs 2.4 to 2.7) will assess the magnitude of risks related to particular activities. . Depending on the findings of the screenings, more detailed assessments and mitigation measures in line with UNDP's SES (Principle 1 and Standard 7) will be developed to manage labour procedures, as outlined in the ESMF.

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Risk 3: Adverse impacts on critical and/or sensitive habitats, incl. key biodiversity areas (KBAs). The Project zone of influence includes the Maya/Chiquibul Forest, rich in biodiversity, riparian forest, and critical water recharge areas providing water and other ecosystem services. The Project's support for reforestation, forest recovery, agroforestry and sustainable sugar cane production, livestock rearing etc., in the production landscapes entails the risk that pollutants, pesticides etc., are released if its use is not adequately managed. Standard 1 :Questions: S1.2, S1.3, S1.6, S1.7, S1.8 & S1.9	I = 4 L = 2	**Moderate**	The Project aims to connect Belize's two largest forest blocks: the privately managed northern forest block (Rio Bravo Conservation and Management Area, Yalbac, Laguna Seca and Gallon Jug) and the Maya Mountain Massif in the south. In addition, the Project will restore 750 ha of riparian forest and 350 ha of groundwater recharge areas. It promotes reforestation, forest recovery, agroforestry and sustainable sugar cane production, livestock rearing etc., in the production landscapes. While necessary for the Project's sustainable natural resource management objectives, these activities can also have adverse biodiversity impacts, including releasing pollutants, pesticides etc., if not properly managed.	This risk has been reduced during design by selecting sites for implementing activities through a rigorous technical process in consultation with national environmental experts. In addition, the Project has been designed to include activities with minimal or no risks of impacting critical or sensitive habitats and environmentally sensitive areas, including KBAs. Any inherent risks and impacts that cannot be avoided through design will be identified through the screening process in the ESMF and addressed, if needed, through targeted ESIAs/ ESMPs during subproject preparation based on the provisions in the ESMF. To avoid, reduce and mitigate the unintended release of pollutants, the ESMF includes a generic pest management plan that will be tailored in the subproject ESMPs to the locational specifics.
Risk 4: Pollution: While the Project will enhance awareness of the health implications of overuse of pollutants in agriculture and reforestation, there is a risk that new products and better availability will increase pollution etc. Standard 8 :Questions: S8.1, S8.2, S8.3 & S8.5	I=3 L=2	**Moderate**	Sugar cane production, agriculture and the regeneration of forests require enhanced use of fertiliser on soils that have become poor and use of phytosanitary products to control insect pests and diseases. While the awareness of the health implications of overuse etc., is growing and will be supported by the Project, there is a risk that new products and better availability will increase pollution etc. However, these impacts are expected to be limited to productive landscapes.	The Project only promotes and supports sustainable production practices that reduce pesticide and fertiliser use in the participating farms. Farmers will be trained to use Good Agricultural Practices (GAP) as part of the project strategy to promote sustainable production. The screening under the ESMF will identify areas and activities with higher-than-average risks. The ESMF further provides general provisions and guidance on when more detailed pest management plans need to be established.
Risk 5: Increased sensitivity to climate change: Some project activities might increase the sensitivity to climate change. Standard 2: Question: S2.2	I=2 L=4	**Moderate**	The BRW has recorded progressive increases in various climate hazards. This increased exposure can disrupt project processes and undermine planned interventions' sustainability. Belize is highly vulnerable and already experiencing increases in the frequency and intensity of natural disasters such as cyclonic systems, droughts, floods, variability and unpredictability of rainfall patterns, and temperature and sea level rise. This impacts Belize's natural heritage and the	The Project design has been informed by a comprehensive Climate Risk Analysis and Mitigation Plan. The Mid-Term Review will revisit these data to verify whether any parameters have changed and therefore require an adjustment of design to accommodate these changes.

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			country's productive sectors. The Project aims to reduce this risk, but this requires the finetuning of interventions and exposure to climate change risk. For example, promoting intensification of production instead of clearing new lands might be an adequate measure in some areas but might increase the vulnerability in other places if reforestation /agroforestry is not progressed at the same speed. The overall Project is expected to positively contribute to climate change mitigation through reforestation/ agroforestry activities. Still, it is unlikely to increase greenhouse gas emissions unless excessive fertiliser is used in productive landscapes.	
Risk 6: Displacement arising from land use restrictions in the enhanced legislation/policies and their enforcement. The elaboration and implementation of new legislation and policies, which the Project supports, could include provisions restricting farmers' access to land and resources Standard 5; Question: S5.1, 5.2	I = 3 L = 4	**Moderate**	While the Project does not envisage triggering displacements (either economic or physical, direct or indirect), the legislation and policies to be developed will be established by the GoB and, therefore, are not entirely within the control of the Project.	During design, the Project engaged livestock farmers, sugar plantations, cohune oil producers etc. and an assessment of their livelihoods was undertaken. As the legislation/policies and strategies will be established in close consultation with all stakeholders, the Project reduces the risk of economic displacement by facilitating dedicated consultations with those potentially adversely affected by the draft legislation in line with the SEP. The ESMF outlines a screening process along the requirements in UNDP's SES to identify any displacement risks at sub-project level. The ESMF further outlines in a dedicated chapter a) how to use incentives to accelerate adaptation (grace period to align production with sustainable land management principles, i.e. pest management through subsidised and readily available biological alternatives to pesticides, herbicides etc.) and therefore reduce the risk of economic displacement, and b) plan and implement risk mitigation measures and/or establish resettlement action and/or livelihood restoration plans in line with UNDP's SES 5, if needed.
Risk 7: Adverse impacts on indigenous peoples: In the BRW, around 4% of the	I = 4 L = 2	**Moderate**	Belize is part of Maya ancestral territory and emerged as a modern nation-state in the	The SEP highlights the need to engage with the indigenous peoples and outlines how this will be

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16,931 potentially affected people identified themselves as Maya. Without additional efforts to engage with them, there is a risk that their rights, desires and preferences are not fully captured during project implementation. Standard 6: Questions: S4.1, S6.1, S6.3 & S6.4			colonial crucible where British and Spanish imperial forces and functionaries dispossessed, displaced, and deterritorialised Maya communities, as well as violently deracinated and imported enslaved African people and indentured South Asian groups, amongst others. ….Today, Belize is a multi-ethnic society and home to a diversity of people, including three Maya linguistic groups: the Q'eqchi, Mopan, and Yucatec. The Q'eqchi' and Mopan live primarily in the Toledo District, the southernmost district of Belize where 39 Maya communities reside" (Penados et al. 2022). Yucatec Maya primarily live in northern Belize. These are both outside the project area of influence. In the BRW, around 4% of the 16,931 potentially affected people identified themselves as Maya. These Maya belong to different language groups and live within the multi-ethnic setting of the target communities. Their rights to land and ancestral domains are not well documented, and their involvement in decision-making processes is limited.	done. An IPPF has not been prepared at this stage given that risks associated with IPs have yet to be confirmed at site/sub-project level. The ESMF provides a dedicated chapter on indigenous peoples, which includes a) procedure to screen activities that might affect them, b) guidelines and procedures for the engagement with them to ensure their free, prior and informed participation in relevant decision-making processes, and c) provisions to establish an indigenous peoples plan (incorporating FPIC, as relevant) in case the Project for whatever reasons is at risk of affecting their fundamental rights and d) a particular avenue to voice grievances. The chapter also stipulates that activities at risk of having adverse impacts on the fundamental rights of the indigenous peoples will not start until the risk is addressed in line with the requirement of UNDP SES 6. .
Risk 8: Environmental and Social Impacts from Project-related small-scale constructions etc.: The Project will also work with larger producers and enterprises along the supply chain, which might modernise existing and construct new production facilities. Like all construction activities, these entail environmental and social risks and impacts. Standard 3: Questions: S3.1 & S3.2;	I = 3 L = 2	**Moderate**	The Project will also work with larger producers and enterprises along the supply chain, which might modernise existing and construct new production facilities. Like all construction activities, these entail environmental and social risks and impacts. However, construction/ renovation activities triggered by the Project are expected to be limited in number, localised, and manageable.	The Project addresses this risk through the ESMF and by having an Environmental Monitoring Expert within the PMU. The ESMF outlines a screening process that informs about the scope of the assessments and management plans that may be required in line with UNDP's SES 1, 3, 4, 7 and 8, ToR for consultants and the review and supervision requirements for the PMU. Civil works that might trigger these risks cannot start until the ESMP for the specific activities has been approved by the GoB and UNDP.

QUESTION 4: What is the overall project risk categorisation?	***Low Risk***	☐	
	Moderate Risk	**X**	The assessment above indicates that the Project risks are relatively few in number, limited in scale, largely reversible and could be identified with a reasonable degree of certainty and readily addressed through the application of the ESMF and SEP during project implementation

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	Substantial Risk	☐	
	High Risk	☐	

QUESTION 5: Based on the identified risks and risk categorisation, what requirements of the SES are triggered? (check all that apply)			
Question only required for Moderate, Substantial and High-Risk projects			
Is assessment required?	X		***Status? (completed, planned)***
If yes, indicate the overall type and status	X	Targeted assessments	**Completed:** During Project design, the Project conducted detailed environmental and socioeconomic baseline assessments, a climate risk analysis, gender analysis and stakeholder analysis. **Planned:** The ESMF entails provision for targeted assessments (for example on Pollution/Pest Management, economic/physical displacement, impacts on critical habitats) based on the screening that aims to identify the specific environmental and social risks and impacts of subprojects.
	☐	ESIA (Environmental and Social Impact Assessment)	If the screening outlined in the ESMF identifies risks that require this form of assessment, subproject-specific ESIAs shall be established along with a detailed design before implementation based on the provisions in the ESMF.
	☐	SESA (Strategic Environmental & Social Assessment)	
Are management plans required?	X		***Status? (completed, planned)***
If yes, indicate the overall type:	X	Targeted management plans:	• **Completed:** A Gender Action Plan and Stakeholder Engagement Plan • **Planned:** The ESMF entails special chapters on economic/physical displacement and indigenous peoples.. Livelihoods Action Plans/RAPs and Indigenous Peoples Plans will be developed for subprojects where impacts are confirmed, as detailed in the ESMF.
	X	ESMP (Environmental & Social Management Plan)	To be established based on the subproject ESIAs mentioned above and following the provisions in the ESMF
	X	ESMF (Environmental and Social Management Framework)	Completed: The ESMF ensures the implementation of the provisions in this SESP and guides the identification and management of risks and impacts during implementation

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Based on identified risks, which Principles /Project-level Standards triggered?		
Overarching Principle: Leave No One Behind		***Comments***
Human Rights	X	The key risks (elite capture and child labour in agriculture) are known to all stakeholders. While the Project cannot solve them, it entails three levels of safeguards to ensure that the Project, at the very least, does not aggravate the situation and, in turn, contributes to an enhancement over time.
Gender Equality & Women's Empowerment	X	The Project is gender-sensitive with dedicated women's empowerment outcomes. The gender-sensitive SEP and the Gender Action Plan will ensure compliance and deliver tangible benefits to women.
Accountability	X	The SEP provides specific avenues to ensure the participation of vulnerable stakeholders. The ESMF further guides how to engage with people facing economic displacement and indigenous peoples. The grievance management process provides an additional level of assurance.
1. Biodiversity Conservation and Sustainable Natural Resource Management	X	While the Project aims to strengthen biodiversity conservation and sustainable natural resource management, some activities entail minor biodiversity risks localised at the boundary between conservation and productive landscapes. The risk is known and will be closely monitored with the help of the ESMF.
2. Climate Change and Disaster Risks	x	The Project area is already experiencing adverse impacts associated with climate change. While it is unlikely that these impacts will affect the underlying premises of the Project, these will be reassessed in Mid-Term.
3. Community Health, Safety and Security	☐	
4. Cultural Heritage	☐	
5. Displacement and Resettlement	x	The Project supports the elaboration and implementation of new legislation for productive landscapes. While it is envisaged that the incentives for abandoning unsustainable land use patterns are sufficient to result in voluntary land use changes, there is a residual risk that this will lead to economic displacements. The ESMF entails procedures aligned with UNDP's ESS 5 to identify and address these risks.
6. Indigenous Peoples	X	Around 4% of the Project Area of Influence population is indigenous but belongs to different language groups and live within the multi-ethnic setting of the target communities. The ESMF entails procedures to screen for potential impacts and, if needed, manage these in line with UNDP ESS 6.
7. Labour and Working Conditions	☐	
8. Pollution Prevention & Resource Efficiency	X	As the Project works in productive landscapes, there is a residual risk that project partners will misuse pesticides. The ESMF entails a pest management plan.

Final Sign Off

Signature	***Date***	***Description***
QA Assessor		UNDP staff member responsible for the Project, typically a UNDP Programme Officer. The final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. The final signature confirms they have "cleared" the SESP before submission to the PAC.

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PAC Chair		UNDP chair of the PAC. In some cases, PAC Chair may also be the QA Approver. The final signature confirms that the SESP was considered part of the project appraisal and considered in the recommendations of the PAC.

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SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks		
Overarching Principle: Leave No One Behind		**Answer (Yes/No)**
Human Rights		
P.1	Have local communities or individuals raised human rights concerns regarding the Project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	*No*
P.2	Is there a risk that duty-bearers (e.g. government agencies) do not have the capacity to meet their obligations in the Project?	*Yes*
P.3	Is there a risk that rightsholders (e.g. project-affected persons) do not have the capacity to claim their rights?	*Yes*
Would the Project potentially involve or lead to:		
P.4	adverse impacts on the enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalised groups?	*No*
P.5	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalised or excluded individuals or groups, including persons with disabilities? [40]	*No*
P.6	restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalised individuals or groups, including persons with disabilities?	*No*
P.7	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	*No*
Gender Equality and Women's Empowerment		
P.8	Have women's groups/leaders raised gender equality concerns regarding the Project, (e.g. during the stakeholder engagement process, grievance processes, public statements)?	*Yes*
Would the Project potentially involve or lead to:		
P.9	adverse impacts on gender equality and/or the situation of women and girls?	*Yes*
P.10	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	*No*
P.11	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services?	*No*
P.12	exacerbation of risks of gender-based violence?	*No*
Sustainability, Resilience & Accountability		
Would the Project potentially involve or lead to:		
P.13	exclusion of any potentially affected stakeholders, in particular, marginalised groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them?	*Yes*
P.14	grievances or objections from potentially affected stakeholders?	*Yes*
P.15	risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the Project?	*No*
Project-Level Standards		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
Would the Project potentially involve or lead to:		

[40] Prohibited grounds of discrimination include race, ethnicity, sex, age, language, disability, sexual orientation, gender identity, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender and transsexual people.

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1.1	adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services?	No
1.2	activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognised as such by authoritative sources and/or indigenous peoples or local communities?	*Yes*
1.3	changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	*Yes*
1.4	risks to endangered species (e.g. reduction, encroachment on habitat)?	*No*
1.5	exacerbation of illegal wildlife trade?	*No*
1.6	introduction of invasive alien species?	*Yes*
1.7	adverse impacts on soils?	*Yes*
1.8	harvesting of natural forests, plantation development, or reforestation?	*Yes*
1.9	significant agricultural production?	*Yes*
1.10	animal husbandry or harvesting of fish populations or other aquatic species?	*No*
1.11	significant extraction, diversion or containment of surface or groundwater?	*No*
1.12	handling or utilisation of genetically modified organisms/living modified organisms?[41]	*No*
1.13	utilisation of genetic resources? (e.g. collection and/or harvesting, commercial development)[42]	*No*
1.14	adverse transboundary or global environmental concerns?	*No*
Standard 2: Climate Change and Disaster Risks		
Would the Project potentially involve or lead to:		
2.1	areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunami or volcanic eruptions?	*No*
2.2	outputs and outcomes sensitive or vulnerable to potential impacts of climate change or disasters?	*Yes*
2.3	increases in vulnerability to climate change impacts or disaster risks now or in the future (also known as maladaptive or negative coping practices)?	*No*
2.4	increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	*No*
Standard 3: Community Health, Safety and Security		
Would the Project potentially involve or lead to:		
3.1	construction and/or infrastructure development (e.g. roads, buildings, dams)?	*Yes*
3.2	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	*Yes*
3.3	harm or losses due to failure of structural elements of the Project (e.g. collapse of buildings or infrastructure)?	*No*
3.4	risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and non-communicable diseases, nutritional disorders, mental health?	*No*
3.5	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	*No*
3.6	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)?	*No*
3.7	influx of project workers to project areas?	*No*
3.8	engagement of security personnel to protect facilities and property or to support project activities?	*No*

[41] See the Convention on Biological Diversity and its Cartagena Protocol on Biosafety.

[42] See the Convention on Biological Diversity & its Nagoya Protocol on access and benefit sharing from use of genetic resources.

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Standard 4: Cultural Heritage		
Would the Project potentially involve or lead to:		
4.1	activities adjacent to or within a Cultural Heritage site?	*Yes*
4.2	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	*No*
4.3	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	*No*
4.4	alterations to landscapes and natural features with cultural significance?	*No*
4.5	utilisation of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	*No*
Standard 5: Displacement and Resettlement		
Would the Project potentially involve or lead to:		
5.1	temporary or permanent and full or partial physical displacement (including people without legally recognisable claims to land)?	*No*
5.2	economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	*Yes*
5.3	risk of forced evictions?[43]	*No*
5.4	impacts on or changes to land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	*No*
Standard 6: Indigenous Peoples		
Would the Project potentially involve or lead to:		
6.1	areas where indigenous peoples are present (including project area of influence)?	*Yes*
6.2	activities located on lands and territories claimed by indigenous peoples?	*No*
6.3	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the Project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognised as indigenous peoples by the country in question)?	*Yes*
6.4	the absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	*Yes*
6.5	the utilisation and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	*No*
6.6	forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources?	*No*
6.7	adverse impacts on the development priorities of indigenous peoples as defined by them?	*No*
6.8	risks to the physical and cultural survival of indigenous peoples?	*No*
6.9	impacts on the Cultural Heritage of indigenous peoples, including through the commercialisation or use of their traditional knowledge and practices?	*No*
Standard 7: Labour and Working Conditions		
Would the Project potentially involve or lead to: (note: applies to project and contractor workers)		
7.1	working conditions that do not meet national labour laws and international commitments?	*No*

[43] Forced eviction is defined here as the permanent or temporary removal against their will of individuals, families or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection. Forced evictions constitute gross violations of a range of internationally recognized human rights.

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7.2	working conditions that may deny freedom of association and collective bargaining?	*No*
7.3	use of child labour?	*No*
7.4	use of forced labour?	*No*
7.5	discriminatory working conditions and/or lack of equal opportunity?	*No*
7.6	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	*No*
Standard 8: Pollution Prevention and Resource Efficiency		
Would the Project potentially involve or lead to:		
8.1	the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	Yes
8.2	the generation of waste (both hazardous and non-hazardous)?	Yes
8.3	the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	Yes
8.4	the use of chemicals or materials subject to international bans or phase-outs?	No
8.5	the application of pesticides that may have a negative effect on the environment or human health?	Yes
8.6	significant consumption of raw materials, energy, and/or water?	No

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Annex F: Stakeholder Engagement Plan

Introduction

The "Area of Intervention" of the Belize River Watershed accounts for 5.25% of the total population or 16,931 residents. Over seventy per cent (70%) of the residents within the Area of Intervention identified themselves to be predominantly of Creole or Mestizo/Hispanic descent. It is interesting to note that over 19% of residents identified themselves as "Other", suggesting they did not fit within the ethnic categorization listed. Morrison et al. used the national statistics to determine the economic welfare of the watershed. Considering that the BRW is the largest watershed in Belize, draining 25% of the nation's total land area and represents 44% of the population of Belize provides a reasonable proxy of the economic importance of the watershed (Morrison et al. 2007). Using 44% as a proxy for the economic significance of the BRW, at the end of 2017 the watershed contributed US$0.6BN to national income.

The project recognizes that a traditional focus on the protection of natural resources within formal protected areas does not ensure biodiversity protection nor the realization of global environmental benefits. The management of socio-ecological production landscapes is key to the maintenance of biodiversity levels and attributes and overall sustainable development. Socio-ecological production landscapes, when applied locally, provides a strong basis for sustainable societies.

Regulations and Requirements

UNDP is committed to ensuring meaningful, effective and informed participation of stakeholders in the formulation and implementation of UNDP Programmes and Projects. Principally UNDP requires that its projects are designed with meaningful and effective participation of all stakeholders. This foundation for sustainable development assures that local peoples and other stakeholders are play a key role in advancing achievement of the sustainable development goals (SDGs). UNDP recognizes that keeping stakeholders "engaged" is not the only function of stakeholder engagement. UNDP literature refers to an ongoing process involving stakeholder analysis and planning, disclosure and dissemination of information, consultation and meaningful participation, dispute resolution and grievance redress, ongoing reporting to affected communities and stakeholders, and inclusion of stakeholders in monitoring and evaluation.

UNDP's commitment to stakeholder engagement arises from internal policies, procedures and strategy documents as well as key international human rights instruments, principles and numerous decisions of international bodies, particularly as they relate to the protection of citizens' rights related to freedom of expression and participation. See, for example: Article 19 of the Universal Declaration on Human Rights (guaranteeing freedom of expression and the right to seek, receive and impart information and ideas) 4 ; Article 25 of the International Convention on Civil and Political Rights (guaranteeing the right of all citizens to participate in the conduct of public affairs); Article 5(c) of the International Convention on the Elimination of All Forms of Racism (guaranteeing all the right to participate in public life without discrimination) 5 ; Articles 3 and 29 of the Convention on the Rights of Persons with Disabilities (affirming rights of persons with disabilities to full and effective participation in the conduct of public affairs). The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) further affirms the right of indigenous peoples to participate in decision-making in matters which would affect their rights, as well as to be consulted and to give their free, prior and informed consent to a variety of matters.

UNDP also follows the UN Statement of Common Understanding on Human Rights-Based Approaches to Development Cooperation which provides for "Participation and Inclusion: Every person and all peoples are entitled to active, free and meaningful participation in, contribution to, and enjoyment of civil, economic, Any company, at any given point has to deal with suppliers, distributors, customers and employees - these are the stakeholders that they engage with on a daily basis and are therefore the first tier and most important (always giving allowances for the type of business). [44]

While there is no singular prevailing policy on stakeholder engagement within the Belizean context, stakeholder consultations are commonly associated with project development processes. Most processes involve second tier stakeholders from within the wider community, NGOs, labour organizations, governmental institutions, industry organizations and financial bodies; as various legislation and regulations loosely define stakeholders as "any individuals or groups in a region that has a vested interest in a project".

Summary of any previous stakeholder engagement activities

[44] Guidance Note UNDP Social and Environmental Standards (SES) Stakeholder Engagement

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The project preparation process employed included a number of direct information sharing and consultation activities, with efforts made to engage communities and non-state actors in activities meant to map the project context. Interface with stakeholders are summarized in Annex L of this Project Document. Apart from direct engagement, the project also a development committee with representation from key government institutions to steer the development process.

Stakeholder Analysis and Planning

The stakeholder analysis identified the key stakeholders for the project based on their respective interests and power positions vis-a vis their communities, production capacities, governance structure, academic focus, public mandates or national policy directives.[45] This analysis establishes that the stakeholder's power/importance, is defined as the participants degree of influence as well as the actions that they can undertake with directly or indirect influence the outcomes of the project. Consistent with the UNDP Draft Guidance Note[46] stakeholders are considered as the following:

> Persons. groups, or institutions with an *interest* in the project or the ability to *influence* the project outcomes, either positively or negatively. Stakeholders may be directly or indirectly affected by the project. The range of potential stakeholders is diverse and may include target beneficiary groups, locally affected communities or individuals, national and local government authorities, civil society organizations (CSOs) and non- governmental organizations (NGOs) (both domestic and at times international), politicians, religious leaders, the academic community, private sector entities, other special interest groups, UN agencies and donors.

A stakeholder analysis was conducted prior to the development of the stakeholder engagement plan (SEP). The stakeholder analysis thus serves as the basis for this SEP and it also provides the foundation for engagement with persons, groups or entities such as the communities, farmers groups, professional bodies, academia and other agricultural producers in the BRW. To aid in the identification of project beneficiaries, in the private sector, and those at the non-governmental and community organization levels, the analysis prioritized farmers, and ranchers in the BRW. These are prominent stakeholders since they are both interested and influential entities in this region, given the extent of their agricultural footprint and the importance of these products to the national economy. Further categorization of the stakeholders in the analysis, allowed for both collective and individual categorization. Notably, the interests and power positions of some stakeholder can be amplified owing to their collective structure and in this case both the extent and the method of engagement with them will vary. At the same time, individual stakeholders can be overlooked when lumped into groups. The stakeholder analysis subsequently provides a detailed list of both types of stakeholders - collective stakeholders as well as individual stakeholders.

Collective Stakeholders	
High Power/ Low Interest[47] • Community farmers (collectively >50 acres) • Government departments engaged with water /watershed management/ SLM and biodiversity management • Water-based and water dependent industries • Agriculture programs • Environmental and related sciences teaching institutions • International and local organizations funding watershed initiatives	**High Power / High Interest** [48] • Small-scale farmers (<50 acres) • Rural communities in the BRW • Women concerned about water • Tourist facility owners/operators • Environmental lab managers and technicians • Biodiversity Monitors • Mining and Quarrying • Local Protected Areas Management NGOs supported by and in partnership with BRW • Information Management and Archiving • Poverty Alleviation and Livelihood Enhancement organizations
Individual Stakeholders	

[45] See PPF (2018) Stakeholder Analysis, Integrated Management of Production Landscapes to deliver Global Environment Benefits.

[46] UNDP Draft Guidance Note, UNDP Social and Environmental Standards (SES) **Stakeholder Engagement**

[47] Ibid.

[48] See PPF -PPG (2018) Stakeholder analysis for the ranking of the group stakeholder interests and power.

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Low Power/High Interest	High Power/High Interest
• Pesticide Control Board • Agriculture Department • Mining Unit • Department of Environment • Protected Areas Conservation Trust • Lands Department • Forest Department • BIOFIN Project • Belize Natural Energy • World Wildlife Fund • University of Belize • Galen University • Sacred Heart Junior College • Belize Water Services • Santander • Hydrology Unit • Belize Agricultural Health Authority • Bowen and Bowen Limited • Zeta Water • Fisheries Department	• Rural Development Department • Belize Tourism Industry Association • Belize Institute of Environmental Law and Policy • Communities between Calla Creek and Burrell Boom

Identified stakeholders have community roles directly associated with project objectives and are expected to either serve the project either as members of an Expert Group, meant to advise project implementation, or as implementing partners directly involved in the delivery of project objectives. A third group of stakeholders represent direct beneficiaries of the project. It should be notes that some stakeholders are represented across multiple roles.

Stakeholder Engagement Program

The goal of this Stakeholder Engagement Plan is to involve all stakeholders of the project, including project-affected groups, indigenous peoples and local CSOs and NGOs, participating public and private sector entities, as early as possible in the implementation process and throughout project duration, and to facilitate a feedback mechanism which ensures that stakeholders views and concerns informs project direction and adaptive management. Project stakeholders have been identified firstly, as broadly defined groups possessing convergent sectoral interests, and secondly, as individual entities with specific interests and roles in the project region.

The grouped stakeholders aid the project to outline more broadly, the type of information that needs to be disseminated to them, the requisite levels of discussions that should be conducted, and the key roles they will play in the execution, management and monitoring of the project. These are the same expectations anticipated from individual stakeholders but, at this level, the respective contributions of these organizations are more closely aligned with their own specific mandates.

The main information for disclosure to the stakeholders include project objectives and approaches to the delivery of said objectives to this end the plan considers the multi-stakeholder nature of the landscape management; and while the forms and compositions of stakeholders will vary by region, a collaborative approach to management is pursued. The SEP is also expected to disclose opportunities for participation in project delivery, particularly as it relates to watershed management and monitoring, sustainable production systems, reforestation and rehabilitation and the mainstreaming of conservation and sustainable use of biodiversity into production landscapes. Critically, this program will address the economic and gendered limitations faced by stakeholders as a means of reducing any breach to the cultural or traditional practices that govern gendered interactions, collective responsibilities and decision-making that are practiced in the stakeholder organizations, communities and government partners.

Beyond informing stakeholders, the SEP provides the basis for the establishment of effective communication channels and the building of working relationships necessary for successful project implementation. It seeks to define a technically and culturally appropriate approach to consultation and disclosure. The plan ensures that all key stakeholders are fully familiar with the components of this project and that they remain committed to and

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supportive of the related activities in the project. To secure their participation in related disclosure activities and knowledge dissemination, the relevant stakeholders will be contacted and engaged with using different strategies and methods that best suit their contributions and interests in the engagement program.

Given the duration and complexity of the project (60 months), it is important that stakeholders understand and endorse the extent to which they will continue to support the advancement of each of the project components. As such, this plan provides a detailed outline of the various mechanisms that will enable timely disclosure, sound communication, and regular consultations and decision-making processes throughout the course of the project.

This plan is subject to completion following stakeholders' validation exercise, and the results of monitoring meetings, LPAC and Project Board decisions. The Stakeholder Engagement Plan will be implemented in conjunction with the Gender Mainstreaming Strategy and Action Plan that provides more detailed guidance on helping to ensuring gender equity in the project.

The Stakeholder Engagement Plan Outline

Stakeholders	Engagement Methods/Means	Engagement Activities	Responsible Party(ies)	Required Resources
Component 1: Enabling environment (policies, financial mechanisms, and institutional capacities) for delivering multiple global environmental benefits (GEBs) through the sustainable management of production landscapes				
Relevant Ministries and Departments of Government	Through regular communication and reporting, in-person communication and emails; task groups; project workshops; meetings	Share project progress summaries; participate in technical advisory groups, provide peer/ technical review of associated deliveries, validation of key deliverables, capacity building	Project Management Unit, Project Executing Group, Project Implementing partner	Venue, travel, staff time
Non- state actors (Participating local NGO/ CSO/ Academia)	Through regular communication and reporting, in-person communication and emails; task groups; project workshops; meetings; Public meetings; Focus group meetings	Documenting and sharing experiences; Data collection and monitoring, awareness raising, capacity building, community engagement, securing participation	Project Management Unit, Community Liaison Officer, Project Implementing partner	Venue, travel, staff time, communication materials (brochures, case studies, PowerPoint presentations, posters, models, videos and pamphlets or project information documents)
iNGOs, Regional and International Entities	Through regular communication and reporting, in-person communication and emails; task groups; project workshops; meetings	Sharing results, soliciting technical input, coordination of ongoing watershed interventions	Project Management Unit, Project Implementing Partner, Project Execution Group	Venue, travel, staff time, communication materials (brochures, case studies, etc.)
Academia/	Through regular communication and reporting, in-person communication and emails; task groups;	Sharing results, soliciting technical input, coordination of ongoing watershed interventions	Project Management Unit, Project Implementing Partner, Project Execution Group	Venue, travel, staff time

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	project workshops; meetings			
Watershed Communities	Through community outreach programmes, participating in training workshops; Public meetings; Focus group meetings	Sharing results, socialize project deliverables, develop capacity for participation in watershed management; managing stakeholder expectation; securing stakeholder participation	Project Management Unit, Community Liaison Officers	Venue, travel, staff time, communication materials (brochures, case studies, PowerPoint presentations, posters, models, videos and pamphlets or project information documents), Information centres, information boards
Component 2: Delivering multiple GEBs through sustainable production and improved value chains for key agricultural and forest products from the Belize River watershed				
Relevant Ministries and Departments of Government; Government Officials	Through regular communication and reporting (Phone / email / text messaging), One-on-one interviews, Formal meetings; participation in Project Execution Group and Technical Advisory Groups	Sharing results, socialize project deliverables, capacity building, participation in project activity planning and implementation	Project Management Unit, Project Execution Group, Project Implementing partner	Venue, travel, staff time, project communication materials
Private Sector	Build personal relations with stakeholders, meetings/ negotiations, in person communication, regular communication (Phone, email/ text etc.)	Distribute project information, solicit views and opinions, engage stakeholder in project implementation	Project Management Unit, Project Execution Group; Project Finance Advisor, Legal Advisor	Venue, travel, staff time, technical briefs/ business plans
Watershed Communities	Print media and radio announcements, Establish Information Boards in each Project area community, Build personal relations with stakeholders through community outreach (community meetings, participatory exercises to	Distribute non-technical project information, Solicit views and opinions, stakeholder involvement in activity planning and implementation, stakeholder capacity development, manage stakeholder expectation	Project Management Unit, Community Liaison/ Education Officer, Extension officers	Venue, travel, staff time, communication materials (brochures, case studies, PowerPoint presentations, posters, models, videos and pamphlets or project information documents), Information centres, information boards,

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	facilitate group discussions), surveys			print media and radio announcement, training supplies
Academia	Regular communication focus group discussions, project technical advisory groups, planning meetings	Engage in the planning and implementation of project actions, solicit information/ data, distribute project information	Project Management Unit, Project Execution Group	Venue, travel, staff time, project resource materials
NGOs, Regional and Institutional Entities	Regular communication focus group discussions, participation in project execution group, meetings, workshops	Present project information, Gather opinions and views from stakeholders, engage stakeholder in project planning and implementation, coordinate watershed initiatives, engage stakeholders in project monitoring and quality assurance processes	Project Management Unit, Project Execution Group, project implementation partner	Venue, travel, staff time, project resource materials
Participating NGO/ CSO Groups	Regular communication focus group discussions, participation in project execution group, meetings, workshops	Engage stakeholder in project activity development and implementation, Gather opinion and views for the shaping of intervention, engage stakeholders in project monitoring and quality assurance processes	Project Management Unit, Project Execution Group, project implementation partner	Venue, travel, staff time, project resource materials
Component 3: Knowledge Management and Learning				
Watershed Communities	Focus group meetings, Surveys, public meetings, workshops, forums, Print media, text messaging and radio announcements, information centres	Distribute project information, Engage stakeholder group in project results monitoring, documentation of case studies,	Project Management Unit, Friends for Conservation and Development, University of Belize, Galen University	Venue, travel, staff time, project resource materials
Academia	Regular Communication (Phone / fax / email / text messaging) Focus Group meetings, forums,	Engage stakeholders in research and case study documentation,	Project Management Unit, Project Execution Group	Venue, travel, staff time, project resource materials

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		disseminate project information		
General Public	Print and electronic media, radio announcements, social media, workshop, forums, public meetings	Distribute project information and project lessons,	Project Management Unit, Support communication advisor	Venue, travel, staff time, project resource materials, facilitation, print and electronic media, project videos, social media

Disclosure and Dissemination of Information

Information, data and knowledge materials will be disclosed to the stakeholders through multiple avenues including training workshops, project board meeting, cross-sector exchanges, joint planning and report development exercises. Along with appropriate and timely disclosure, stakeholders will be fully aware of all progress on the principal foundations of the GEF focal strategies and their application in the BRW as articulated in Aichi Targets 1, 4, 5, 7, 8, and 15 for achievement by 2020. These will be communicated to the stakeholders, specifically:

- Project information, implementation/ delivery approaches and opportunities for participation
- Awareness of the values of biodiversity and the steps that can be taken to conserve and use this sustainably;
- Identification and knowledge of steps to be taken and plans to be implemented for sustainable production and consumption that keep natural resources well within safe ecological limits
- Awareness of the rate of loss of natural habitats, including forests, and efforts necessary to reduce degradation and fragmentation
- Efforts needed to sustainably manage areas under agriculture, aquaculture and forestry.
- Knowledge of pollution levels, including from excess nutrients and its detrimental impact on ecosystem function and biodiversity;
- The ecosystems and action to safeguard these since they provide essential services, including services related to water, and contribute to health, livelihoods ad well-being, to women, indigenous and local communities, and the poor and vulnerable; and,
- Maintenance of ecosystem resilience and the contribution of biodiversity to carbon stocks in order to restore at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

In addition, stakeholders will be fully informed of the proposed alternative scenarios to which the project aims to contribute. Specifically, these scenarios are those framed within the GEF Land Degradation focal area strategy, such as: Objective 1 (LD-1), Program 1 and Objective 3 (LD-3), Program 4.

In communicating these focus strategies and the relation of each component to the targets above, the guiding principles for the free, open and timely dissemination of information will be consistently applied. There will be a formal stakeholder validation process, which is prior to the final validation of the project, and during this time, stakeholders will have full access to the processes, and knowledge of the periodicity of their engagement throughout the project cycle.

Consultation and Meaningful Participation

All stakeholders will benefit from timely provision of information and data that enable them to willingly participate in all aspects of the project. This means that the stakeholders will be engaged with full consideration of their need for adequate time and information to make decisions in a free and open manner. As this project is also committed to women's empowerment and gender equality, the distinctive roles of males and females in the BRW will be taken into account at all stages of the project. Further considerations for the disclosure of information will also reflect cultural norms and mores for participation and representation as are typical to the Creole communities in the upper region of the watershed as well as the Maya, Mestizo and Mennonite communities in the middle and lower watersheds of the Belize River. Additionally, the project will use appropriate language, both oral and written to increase the accessibility of all communication, information, and data to all stakeholders at all stages of engagement.

Engaging All Stakeholders in the BRW

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Throughout the duration of this project, multiple methods will be designed and adopted for communication and awareness creation among all the stakeholders. The project will use media and public communications such as radio, newspapers, television programs, posters, social media and a project specific online space such as a website, to reach a broad-based audience. In more technical engagements, the project will utilise training programs and extension to provide farmers, and groups in the public and private sector with targeted, gender-sensitive information that is directly linked to their interests as well as the project interventions. In such instances, technical information will be developed to aid male and female agricultural producers to improve their production practices, use of inputs and enhance their adoption of value chain mechanisms and market approaches. Academic materials, visual displays, bespoke curricula based on specific regions and products of the BRW will also be developed and deployed to reach stakeholders participating in field-schools, community monitoring and data collection. Research findings from the BRW will be presented and disseminated to all stakeholders to enhance opportunities for wider conceptualisation of community-based approaches, enterprise development and efforts to strengthen policy decisions that improve harmonisation and coherence. In all forms of engagement, the contributions of men and women in participating communities will be intently sought and incorporated in adaptive management initiatives. This is expected to increase reach, improve gender sensibilities and the uptake of actions among stakeholders. As this is a low-risk project, all stakeholders will be presented with the draft Project Document prior to the LPAC/PAC and asked to comment on the social and environmental as outlined in the documentation.

Engaging Government and Partner Agencies

Partner agencies including government ministries and departments, academia and nongovernment organisations will be engaged to support their efforts to deliver their respective outputs, capacity building and training programming, use of project procedures and reporting tools, budgeting, procurement processes, and knowledge management. These stakeholders will also be critical in major decision-making and oversight especially as these relate to the roles of the project board. Critically, partner agencies will play a significant role in report documentation and the compilation, interpretation and dissemination of research findings, results of data collection and monitoring. This will aid them in the convening of various policy discussion and formulation exercises, annual conferences, coordination of communities of practice and the conduct of related publicity on project achievements.

Engaging Beneficiary and Impacted Communities in the BRW

At the community level for instance, extension officers, researchers and project staff will have direct contact with stakeholders through the utilisation of field training tools, best practice models, surveys and interview techniques, and adopting tools and templates that are gender- sensitive and gendered. Stakeholders will benefit from consultation sessions, focus group discussions, key informant interviews and participatory methods which will take into consideration their literacy levels and cultural sensitivities. All engagement efforts will be organised, planned and executed with adequate representation and participation by males and females. Language considerations, group meeting protocols, scheduling, household duties, and transaction costs will be taken into consideration to enable meaningful and equitable gender representation. This level of engagement will also enrich the quality, frequency and depth of information that will be developed and disseminated amongst the various stakeholders.

Engaging Farmers, Ranchers and Agri-producers in the BRW

Stakeholder engagement in this project will facilitate a duality in the flow of information that enables the existence of a robust feedback loop. This means for instance, that farmers and producers will at the same time, be recipients as well as generators of information and data. Hence, the formats and forums for exchange that the project will deploy will build on stakeholders' knowledge and initiatives such as model creation, demonstration pilots, and peer-to-peer training among producers, ranchers and farmers. To bridge the information, resource knowledge and income gap between male and female producers, a strong emphasis will be placed on integrated production so that female contributions to production are not isolated or diminished but will be considered as directly contributing to the productivity in the household. Critically, for biodiversity, water resource management forest protection and soil enhancement, the inclusion of women and youth will lend for greater knowledge of sustainable actions in the wider community. The feedback mechanisms from these stakeholders will include, use of end of sessions evaluation, surveys, focus group discussions, interviews, field-visits documentation, community meetings, participatory appraisal approaches, testimonials, and project reporting templates.

Dispute Resolution and Grievance Redress

UNDP espouses the use of a Stakeholder Response Mechanism (SRM) that ensures individuals, peoples, and communities affected by projects have access to appropriate grievance resolution procedures for hearing and

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addressing project-related complaints and disputes.[49] In compliance with the SRM, this project will also ensure that there are the processes and associated policies and procedures are implemented with high standards and that the communities in the region of influence simultaneously benefit from the policies have a voice in their implementation. It is necessary to note that this project is categorized as a low risk project (see SES) and as such the SRM is meant to ameliorate the potential for any conflicts and ensure that there are opportunities to immediately resolve issues so that they do not escalate. An SRM is developed to reduce any loss of trust, unnecessary increases and a halt to the project activities.

Apart from directly addressing conflicts especially associated with moderate and high-risk projects, the SRM also has the added value that can:

- Improve environmental and social outcomes for local communities and other stakeholders affected by UNDP projects;
- Enhance UNDP's ability to manage risks related to its Social and Environmental Standards, in order to avoid or mitigate social and environmental impacts.
- Ensure that UNDP responds to the concerns of project stakeholders (particularly vulnerable groups that are central to UNDP's programmatic work) with regard to social and environmental risks and impact.
- Ensure feedback and operational learning from the SRM, by integrating SRM requests, responses and [50]results into UNDP's results-based management, quality assurance processes; and
- Reflect and advance best practices among development institutions, whose stakeholders (including governments, civil society, indigenous peoples, and international partner agencies) increasingly expect social and environmental grievance resolution processes to be a regular, integrated part of project management.

Eligibility

This project is categorized as moderate-risk, hence implementation of an SRM is not anticipated. However, the grievance mechanism (see below) is intended for use by all individuals, groups, communities or agencies who may inadvertently be affected by the implementation of this Project. Priority beneficiaries and users of the grievance mechanism are: farm owners, ranchers, non-government organizations, academia, and private individuals in the Belize River Valley who are considered to have had adverse experiences caused by or exacerbated by the project.

Conflict and Grievance Mechanism

The process to settle conflicts and grievances will be presented in several of the consultations with stakeholders and as part of the ongoing commitment to information sharing processes that will be instituted in the project cycle. Stakeholders will be informed that the implementation of a project specific mechanism will not incur any costs and that the same mechanism remains in place for the duration of the project. Stakeholders will be informed of the following process as outlined below. During the project validation exercise, they will provide feedback and endorsement for the project specific conflict resolution mechanism. It is worth noting, however, that the Social and Environmental Screening Procedure assesses this project as low risk, however, should grievances and conflicts arise, they should be submitted to UNDP Belize directly at: diane.wade@undp.org. Registered grievances will be reviewed and managed by the Project Execution Group/ Project Board. To do so, the project will at inception:

- Identify appropriate staff who will aid with responses to conflicts and grievance that may arise from stakeholder;
- Develop and install specific guidelines for use by staff and other personnel who will be assigned to enact various roles for the resolution of any conflict or grievance; and
- Provide formal training to staff and other personnel who have assigned roles to perform in the implementation of the conflict and grievance mechanism.

A grievance mechanism will be incorporated within the re-granting process established within Component 2 with responsibility to monitor for early detection of grievances. SoP's for recording and addressing community and other stakeholder grievances at the subgrantee project level. SoP's will describe further specifics of the grievance mechanism, as necessary, to suit whatever local-specific circumstances.

[49]See UNDP Draft Guidance Note, UNDP Social and Environmental Standards (SES) **Stakeholder Engagement, p. 17.** The Stakeholder Response Mechanism helps project-affected stakeholders, UNDP's partners (governments, NGOs, businesses) and others jointly address grievances or disputes related to the social and/or environmental impacts of UNDP-supported projects.

[50]UNDP, Stakeholder Response Mechanism: Overview and Guidance, p.5

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Operationalizing the Project Approach to Conflict and Grievance in the NIM Context

- *The Concern or Grievance* - Where a grievance or concern is experienced or identified as resulting from the project interventions, it is expected that this matter will be immediately conveyed to a representative from the National Implementation (or NIM) Partner. The format in which a matter is raised can be in writing, verbally or via text. At this level, the aim of this first step is to bring awareness to the issue before and to prevent any further escalation of the issue.
- *Immediate attention to the concern or grievance* - The matter raised will be acknowledged and addressed by the project manager or a designate to prevent any adverse effects on individuals engaged in the project, a specific region or on the pace of project interventions.
- *Resolution of the concern or grievance* - The project official who receives this information will inform the project manager and the project specific oversight mechanism will be enacted.[51] It is expected, however, that such concerns and grievances can be appropriately and effectively settled through the use of discussion, correspondence, meetings and management decisions. This approach will likely not require formal logging or tracking.
- *The conclusion of the grievance or concern* - At its conclusion, the decision to conclude the grievance will be documented to the complainant in written form.

Monitoring

Despite that the project has a medium-risk assessment based on its SES, stakeholders will remain engaged in monitoring during project implementation. This will allow them to continue to assess whether any measures previously instituted continue to be responsive to any or potential conflicts or grievances. If these were to become unresponsive or cease to be functional, stakeholders can immediately inform the process to develop and implement improved measures. Updated and revised measures will be presented at project board meetings and at the broader stakeholder group meetings.

All subgrant projects will report on Indicators of resilience, sustainable production, and conservation effectiveness at the beginning and at the end of the implementation of the subgrant projects. The findings of the application of the Indicators will be shared at various meetings and conferences as well as through the project network and digital media.

Outputs and indicators from the Project Results Framework will serve to assess stakeholder engagement and intervention effectiveness. These indicators will be disaggregated further by stakeholder type, gender, etc., as needed and appropriate.

[51] During project implementation a specific approach outlining specific roles and responsibilities consistent with the policies and procedures of the NIM partner will be developed and presented to the stakeholders. They will also use this opportunity to provide additional information and feedback to strengthen the project specific response mechanism.

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List of Stakeholders

Sector	Stakeholders	Reason for Participating	Key Contributions	Strategy and Methods
Private Sector	Small scale Farmers (<50 acres	Most tend to plant very close to the river's banks; tend also to be nomadic A priority intervention group for restoration, addressing bank failures.	Co-development, endorsement and agreement of conservation agreements Co-implementers of sustainable agriculture and forest production	Meetings LPAC Participation Individual meetings, field visits, extension services, special financial incentives.
	Community farmers > 50 acres	Some tend to farm close to the river's banks Permanent farmers who are heavily invested in the land Noticeably transforming the environment fastest. They are also permanently located on productive landscapes and might be more open to changing cultivation behaviors and practices	Co-development, endorsement of conservation agreements Co-implementers of sustainable agriculture and forest production Potential beneficiaries of financial incentives.	Individual Meetings, field visits, special financial incentives.
	Tourist facilities	Dependent on and promote environmentally-based tourism as a valued economic opportunity	Livelihood diversification and expansion, Contribute to the development of pathways for green certification	Focus Group Meetings
	Belize Natural Energy	Massive water harvesters, High risk of spillage	Emergency response and preparedness in the event of oil spillage Active water monitoring	Meetings with staff and Boards Monitoring and Data collection
	Zeta Water	Dependent on high water quality Production of cost- effective potable water	Active water monitoring Promotion of responsible water sourcing	Meetings with technical staff and Board Monitoring and data collection
	Bowen and Bowen Limited	Dependent on high water quality Production of cost- effective potable water	Active water monitoring Promotion of responsible water sourcing	Meetings with technical staff, and Board
	Santander Sugar Group	Major extractor of water for Belize river extractor, Contributes to storage of water with some pesticide content Subcontractor of farmers who are subsequently expanding farming activities to include cane as a cash crop	Active water monitoring Land restoration Communication on sustainable, environmentally friendly production. Project co-financier.	Meetings with technical staff, and Board
Public Sector	Rural Development Department	Responsible for the drilling of boreholes and have data on location and water source Oversight of rural development programming Increased well drilling activities impact river-flow and potential depletion of aquifers Need to secure buy-in on environmental incentive from user-base	Revise and harmonize policies and legislation. Clarify guidelines, jurisdiction and competencies. Consolidation of Information Management System	Technical Meetings, Field visits Focus Group discussions Rural water planning and reporting

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	Agriculture Department	Can delineate riparian zones that should be taken into productivity Need buy -in and endorsement for project actions – not currently an environmental incentive but an economic one	Revise and harmonize policies and legislation. Clarify guidelines and jurisdiction and competencies. Development of co-programming, investments, and protocols for Country Programming. Consolidation of Information Management System.	Technical Meetings, Field visits Focus Group discussions with representatives from focus communities Reporting
	Mining Unit	Lead entity to ensure specifically that, gravel mining does not undermine riverbanks which causes, head-cutting (upstream erosion) and change in the course of the rivers	Mineral mining has the potential for heavy pollution – sediments and arsenic River mining policy Consolidation of Information Management System.	Information sessions, Technical Meetings Reporting
	Department of the Environment	Primary mandate is pollution control Mandate for implementation of environmental protection act Have testing capacity and lead on enabling individuals to do requisite testing Monitoring of environmental plans	Revise and harmonize policies and legislation. Clarify guidelines and jurisdiction and competencies. Development of co-programming, investments, and protocols for Country Programming. Consolidation of Information Management System.	Information sessions, Technical Meetings and representation on PB Reporting
	Forest Department	Execute Mandate over Forest- riparian, Wetlands And steep-lands forests They are custodians of protected areas – Ramsar Wetlands of International Importance	Co-development of and endorsement for conservation agreements Lead implementer of sustainable forest production	Information sessions, Technical Meetings and representation on PAC Reporting
	Lands Department	Mandate for delineating and ensuring compliance with 66ft buffer zone for river banks Institutes enforcement of 66ft buffer	Co-development of and endorsement for conservation agreements Lead to revise and harmonize policies and legislation. Clarify guidelines and jurisdiction and competencies. Development of co-programming, investments, and protocols for Country Programming. Consolidation of Information Management System.	Information sessions, Technical Meetings and representation on PAC Reporting
	Fisheries Department	Mandated to manage, oversee of inland fisheries Limited enforcement capacity despite strong link between freshwater and marine fish that play a vital role in inland ecology Inland fish support health of other wildlife	Co-development of and endorsement for conservation agreements Promote Economic alternative for Non-timber forest products (NTFP)	Information sessions, Technical Meetings Reporting

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	Hydrology Unit	Key to the creation of a water master plan that is based on Hydrology Addressing minimum flow standards Will impact the business practices of many farmers, beverage companies and petroleum company	Revise and harmonize policies and legislation. Clarify guidelines for jurisdiction and competencies. Development of co-programming, investments, and protocols for Country Programming. Consolidation of Information Management System.	Technical Meetings Field-base activities Report development
Quasi Government	Pesticide Control Board	Monitoring of pesticides use and types in the BRW	Training and field support Capacity building Information dissemination Communication, education and awareness programming	Technical Meetings, Training Provision Reporting
	Protected Areas Conservation Trust	Funders of Protected areas management Funding of alternative livelihood projects to reduce massive dependence on natural resource base	Co-development of alternative livelihood programs	Meetings with technical staff, senior management, and Board
	National Association of Village Councils	Lead rural entity responsible for the implementation of the National Village Councils Act	Policy formulation support Field Monitoring and reporting	Meetings with technical staff, senior management, and Board
	Rural Water boards	Lead rural entity responsible for the delivery and management of rural water.	Policy formulation support Field Monitoring and reporting	Key Informant Interviews Data collection Participatory approaches Workshops and training Monitoring
	Belize Tourism Industry Association	Proponent of Environmentally friendly tourism products Direct opportunities to integrate environmental management Valuable community resource to inform and provide first-hand information on the status of the ecology	Livelihood diversification and expansion, Pathways for green certification Communication, awareness and knowledge dissemination	Meetings with technical staff, senior management, and Board
INGOs, NGOs and Projects	Belize Environmental Law and Policy	Environmental Law Expertise – domestic and international law	Interpretation, application and drafting of Environmental Policy and Law	Technical Meetings Workshops and Training Activities
	BIOFIN Project	Assessment of current and future funding streams for key areas of the project – value chain, and economic incentives Possession of baseline data that can inform policy and institutional and expenditure review	Co-development and Implementation of interventions for sustainable production and improved value chains for key agricultural and forest products from BRW	Meetings with technical staff, senior management, and Board
	World Wildlife Fund	Actively funding development of Watershed management Primary entity for baseline data repository, Developers and funders of the Hydrological Model for Belize River watershed	Policy formulation support Field Monitoring and reporting	Meetings with technical staff, senior management, and Board
	GIZ	Implementing Conservation of the Sustainable use Selva Maya Project Potential funding for the	Capacity Building Policy formulation support Field Monitoring and reporting	Meetings with technical staff, senior management, and Board

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		strengthening connectivity with the Selva Maya Project		Technical Assistance and funding support for community-based capacity building
	Belize Enterprise for Sustainable Technology	Micro-enterprise training and loan support to rural, mostly women entrepreneurs	Capacity Building Technical Assistance Business support	Meeting with senior and field staff
	Caribbean Community Climate Change Centre (CCCCC)	Promotes regional climate change adaptation, mitigation and resilience programming.	Access to Financial Resources Data modeling Technical Capacity Capacity Building Policy review and formulation support	Memorandum of Understanding Project Partnerships with national government
	Community Baboon Sanctuary		Monitoring Data Collection Information and awareness dissemination Training Alternative Livelihood Policy Formulation	Interviews Focus Group Discussions Participatory Methods Workshops and Training sessions
	Belize Rural Women's Association		Monitoring Data Collection Information and awareness dissemination Training Alternative Livelihood Policy Formulation	Interviews Focus Group Discussions Participatory Methods Workshops and Training sessions Co-implementers of sustainable agriculture and forest production
	Kriol Council		Information and awareness dissemination Training	Interviews Focus Group Discussions Participatory Methods Workshops and Training Sessions
	Cayo Rural Agricultural Producers Association (Women's Producers' Groups)		Co-implementers of sustainable agriculture, and managed chemical application for soil improvement Monitoring Data Collection Information and awareness dissemination Training Alternative Livelihood Policy Formulation Information and awareness dissemination Training	Interviews Focus Group Discussions Participatory Methods Workshops and Training sessions
Academia	Faculty of Science and Technology Program, (NRM, Chemistry, Biology, Agriculture and Engineering) University of Belize	Ability to provide high quality research capacity to research and monitor Ongoing relationship with Spanish Lookout Farming Community. Pesticides, heavy metals, Nutrients and oceans acidification (aquatic pollutants)	Data collection and analysis Systematization of Best Practices Coordinate and manage Communities of Practice (CoP) Monitoring Reports Development of Publications and launch of key findings Information dissemination Field schools	Curriculum development Technical Trainings and workshops development and implementation Data collection and analysis Curriculum development Technical Trainings and workshops development and implementation Data collection and analysis Research students

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	Environmental Resource Institute – University of Belize	A lead on involved in watershed management plan draft – ecological focus On Task force for National Watershed Taskforce – ad hoc Primary Institution for Education and Training on Natural Resources Management		
	Galen University	Rapid ecological assessment, Research activities and student engagement On Task force for National Watershed Taskforce – ad hoc Academic and technical support for establishments of rural innovation that integrates business and tourism product that builds on the cultural capital in Beneficiary communities	Data collection and analysis Systematization of Best Practices Coordinate and manage Communities of Practice (CoP) Monitoring Reports Development of Publications and launch of key findings Information dissemination	Meetings Trainings and workshops
	Sacred Heart Junior College	Provider of Environmental Course, Field activities in small-scale protected areas management Active Environmental Education	Monitoring Data Collection Information and awareness dissemination Training	Meetings Trainings and workshops Data collection and analysis
Villages and Communities (14) in the BRW	Active in land utilization for productive purposes Direct an ongoing interaction with rivers, forest, biodiversity and water sources for livelihood and ecosystem services	Substantive knowledge of rivers, forest, biodiversity and water sources Primary custodians of the BRW Crucial partners for securing and maintaining GEBs	Co-development and implementation of livelihood interventions Direct contribution and representation on policy formulation Field Monitoring and reporting Knowledge production, exchange and dissemination	Key Informant Interviews Data collection Participatory approaches Workshops and training Gender-sensitive representation on decision-making bodies, boards and committees

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Annex G: Gender Analysis and Action Plan

Gender Analysis

Summary

UNDP prioritizes gender mainstreaming as its main strategy to achieve gender equality and women's empowerment. Gender mainstreaming is the process of assessing any planned action in all areas and levels to determine the implication for women and men. It is a strategy for making women's, as well as men's, concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of projects so that women benefit equally. Gender mainstreaming aims to transform unequal social and institutional structures in order to make them profoundly responsive to gender, and, when realized, it ensures that both women and men benefit equally from the development process. It involves much more than simply adding women's participation to existing strategies and programmes. Special attention and action is often required to compensate for the existing gaps and inequalities that women currently face.

The UNDP Gender Equality Strategy 2018-2021 is aligned with the 2030 Development Agenda and UNDP's Strategic Plan. The strategy recognizes gender equality as a human right as well as instrumental to the achievement of sustainable development. It considers women and men as active agents of change and development, not simply beneficiaries and vulnerable groups and it recognizes how working with men and boys is of critical importance to change gender norms and attitudes and achieve gender equality.

The GEF Council approved a new GEF Policy on Gender Equality, in November 2017. The policy outlines the need to address gender equality and promote women's empowerment across GEF operations, and, in particular, in its projects and programs. The policy requires gender-responsive actions, from design to implementation, monitoring and evaluation to ensure that GEF programs and projects are not only designed with a good understanding of relevant gender differences, roles and needs, but also actively pursue activities that contribute to equal access to and control over resources, decision-making, and empowers women and girls.

Both UNDP and the GEF require a gender responsive approach, an approach in which the particular needs, priorities, power structures, status and relationships between men and women are recognized and adequately addressed in the design, implementation and evaluation of activities. The approach seeks to ensure that women and men are given equal opportunities to participate in and benefit from an intervention, and promotes targeted measures to address inequalities and promote the empowerment of women.

The definition of gender used in this analysis is "the socially constructed roles, responsibilities, and opportunities associated with men and women, as well as hidden power structures that govern the relationships between them."[52] This analysis aims to shed light on some of the key influences that affect how males and females carry out their lives and navigate social, cultural, and economic spaces in Belize and as is pertinent to the implementation of the GEF 6: *Integrated management of production landscapes to deliver multiple global environmental benefits* Project. This analysis looks at the general context of gendered interactions and existence in Belize, and then more closely, at how the project can be most effective in targeting and meeting equitable distribution of benefits to both men and women in the Belize River Watershed (BRW).

Following the UNDP-GEF Gender Mainstreaming Guide[53], this analysis has identified key considerations that can advance gender integration and which overall, can enhance the outcomes associated with each of the related components in the project.

- *Support the active inclusion and representation of female leaders from the communities along the Belize River Watershed in policy discussions and governance mechanisms, specific to the region's riparian forest protection, watershed integrity, and sustainable land management.* Women and youth lack adequate participation and representation in agricultural producers' decision-making and leadership structures in the BRW. By increasing the participation of women and youth in these structures, this will serve to increase the share of benefits from the project interventions to the men and women in the beneficiary and participating

[52] UNDP (2010) Gender, Climate Change and Community-based Adaptation Guidebook.
[53] UNDP -GEF (2016) Guide to Gender Mainstreaming in UNDP supported GEF Financed Project.

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communities in this region.

- *Build on the knowledge gains of women in the BRW who have pursued academic qualifications in natural resource management and related sciences.* There is a growing cadre of suitably qualified females and males in the Belize and Cayo districts who can support monitoring and reporting of sustainable land use and improved production and environmental practices in the Belize Rural Watershed. This will improve the sustained engagement of females in biodiversity protection, forest and water management, and proper land use. At the same time, the project can maximize on the increasing technical expertise of females who, in record numbers, are earning academic credentials in requisite disciplines (natural resource management, biology, agriculture, and engineering and chemistry. Given the high unemployment and underemployment rates among females in the Cayo District, this project offers excellent opportunities for employment among this population, especially in areas where they have comparative advantages and skills.

- *Strengthen market information and training for farmers and their households to reduce their vulnerability to price fluctuations in the domestic market.* For the rural male smallholding is a livelihood option that can be easiest accessed than other job opportunities, but it is not always profitable. Given the relatively low barrier to entry, many households switch between farming and other employment activities. However, there is insufficient understanding among this population of the dynamics of local supply and demand, especially for seasonal, agricultural products. This knowledge gap places additional pressures on the plots of land used by the smallholders who rely on producing more to offset losses or reduced incomes. Farming households - including men and women - need access to training, field, and customized technical support, that will help them to improve their management of agricultural production and reduce depletion of soils as they try to augment their income.

- *Develop and disseminate communication materials that incorporate gender perspectives* which informs all farming households and the wider public about the environmental and socioeconomic benefits of sustainable production practices and its impact at multiple levels - household, community, and societal levels.

- *Support communities of practice among all watershed stakeholders.* This will enable the creation of public spaces that produce, document and disseminate knowledge specific to management of forests, recharge areas, biodiversity, soils and water in the Belize River Watershed. It will additionally expand opportunities for women and youth to contribute to the formation of an inclusive mechanism that brings together public, private and community organizations to examine and propose actions that address threats to biodiversity, land and water resources, which are typical with conventional production practices.

- *Focus production incentives at the household, smallholder and large-scale producers level in order to meet the distinct production needs of males and females.* At the latter two levels, men predominate here, and their primary concerns are related to securing domestic and international markets. Traditionally, this view is to expand production, but they are also now open to exploring smart, sustainable and environmentally friendly options that can at the same time secure profitable returns on their efforts. Women are notably absent at this level and for them, market viability for their products as well as deeper knowledge on how they can maintain year-round production is critical.

Introduction

Belize's GEF 6 *Integrated management of production landscapes to deliver multiple global environmental benefits* Project aims to mainstream biodiversity conservation and sustainable land/water management in production landscapes in Belize which will build resilience to climate change, address threats to biodiversity and reduce land and freshwater resource degradation. It builds on the ongoing cooperation of the Government of Belize, private sector, academia, and natural resources managers who collaborate on the management of resources within the Belize River Watershed.

This project adds 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. It will invest in strengthened governance and financial structures for the conservation of biodiversity and ecosystem services through SLM/water management in production landscapes and improve the abilities of the Ministry of Natural Resources (MNR) and the Ministry of

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Agriculture, Fisheries, Forestry, the Environment, and Sustainable Development (MSDCCDRM) to implement strategies for conservation and sustainable land management (SLM)/water management in production landscapes.

It will further advance baseline investments for 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. These will be achieved through a robust and collaborative partnerships with farmers, producers, and government and other agencies, that will ensure the equitable distribution of project benefits among women and men.

The purpose of this gender analysis, therefore, is to locate and contextualize gender equality issues and institutional structures that bear on the perspectives and lived experiences of women and men, particularly in the priority region. The production regions are complex, economically diverse and predominantly male. Hence, this analysis directly supports gender mainstreaming and social inclusion efforts whilst being fully cognizant, that the gap in needs, roles, benefits, impacts, risks, differential access to and control over resources of women and men in the project region and communities are starkly different. However, there are some intrinsic benefits that women and men in the BRW can benefit from especially as their respective social, cultural, economic and political roles converge with safeguarding the global environmental benefits (GEBs) and those that are location specific.

This gender analysis follows the clear guidelines and considerations offered by the *UNDP Guide to Gender Mainstreaming in UNDP Supported GEF Financed Projects* and it identifies those gender concerns that can be meaningfully integrated in the project. Doing so allows for deep attention to the issues that women and men face in the production landscapes of the BRW; these are further assessed so that women can benefit equally and equitably from the project. To this end, this analysis aims to support the strategic design of outputs that give attention to gender issues, diverse livelihood options, healthy biodiversity presence, and the improved integrity of water and forest resources. In concert, these will aid to reduce gender inequality and promote equal benefits to women in the BRW. In keeping with the guidelines for gender analysis, this assessment focuses on the context, the roles, access and control over resources and knowledge generation and capacity.

Methodology

Guided by the *UNDP Guide to Gender Mainstreaming in UNDP Supported GEF Financed Projects,* this analysis has been undertaken with the use of several methodological tools. Principally, a **documentary review** of policy documents and existing gender reports was conducted to establish the general socio-economic conditions of women and men in Belize. In addition, **discussions with women and women's group** in the project regions have also provided context-specific experiences and perceptions of both men and women who live in the project communities. Disaggregated **data and statistics** were sourced from the Statistical Institute of Belize. Furthermore, **stakeholder meetings and discussions** were conducted with technical and professional staff from related government ministries and departments as well as with partner entities and members of non-government, community-based and private sector organizations who provided additional information and qualitative data which aided this analysis. Finally, **field** and community visits were undertaken in order to observe firsthand, the gendered interactions, and activities at the community level.

Limitations

This gender analysis was conducted over a compressed period and this limited the inclusion and views of some stakeholders. The PPG process necessitated the prioritization of some key communities spread over a vast area and many of these were not individually engaged. Some more time would be needed to ascertain who and how specific sub-populations could be identified and engaged with to more deeply engage on gender perspectives in relation to access and use of natural resources, biodiversity, and water. The Most important to note, however, is that the production landscapes are a mostly male domain, and this requires even greater attention and efforts to locate women who are substantially engaged in this sector and in the priority region. In order to get a reasonable sample of such groups, two umbrella organizations in the Cayo and Belize Districts were contacted to further discuss the gender dimensions for productive landscape engagement by females. The voices of the youth were critical but limited in this process. However, this does not take away from the oft-repeated message that they are vital for any

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positive changes in production practices. In one community, it was voiced that the youth are more open to environmentally friendly production.[54] These limitations serve to highlight additional efforts that may be pursued during project implementation which can further strengthen gender integration efforts.

THE CONTEXT

As of 2016, Belize's population stood at 377,968 of which 188,986 were male and 188,982 were female situating Belize's male and female population as almost even. Belizeans tend to live predominantly in rural areas, and in this same period, the total rural population was 208,370 compared to the urban population of 169,598. While more males and females live in rural areas as compared to urban locales, there are still more females in rural areas (102,130) than in urban centers (88,852).[55] The 2010 Census documents the population of the Belize River Watershed at 145,505 spread out across a total of 99 communities. The female population (73,406) outnumbered the male population (70,954).[56] Typically, Belize's rural populations live near the country's natural resource base and given that females are more likely to live in rural areas, they are also likely to live in close proximity to these resources. Yet, there are structural, cultural, societal and economic factors that constrain women and men benefitting equally from the natural resources that exist in their environment.

The government of Belize has taken several steps to improve the status of women in Belize. There have been legislative and policy changes to enable gender equality and female empowerment and they have yielded some significant progress for women in society. According to the 2004 report produced by the Women's Department in the Ministry of Human Development, several legislative changes were implemented to empower women in the eyes of the law. The Criminal Code was amended to include marital rape, mandatory life sentences for repetitive sex offenders, and penalty for carnal abuse against girls.[57] Other changes made to the law also disregarded the "private life" of mothers going through divorce or separation in deciding on the custody and care arrangement of children.[58] Minimum wage for domestic workers and shop assistants, which are occupations with a high percentage of women employees, was also raised to be commensurate with other workers in Belize. Notably, these legislative changes were primarily focused on encouraging the empowerment of women, improving their social status and enhancing their livelihood capacities.

The government also passed the Domestic Violence Act and the Protection Against Sexual Harassment Act. It established Family Violence Units in the districts and the Women's Department introduced training for greater awareness on the rights of women and promoted their empowerment.[59] In spite of these concerted efforts by the government to advance the legal empowerment of women and reaffirm their rights, females still represent the population that is disproportionately affected by domestic violence, sexual harassment and other types of violence. To address several concerns related to gender-based violence and inequality in Belize, the government developed and implemented a series of national policies.

It is recognized that there is need for specific attention to the needs of males and females from an early stage. The National Plan of Action for Children and Adolescents in Belize 2004-2015 establishes a series of priorities to support the empowerment of children over a period of 11 years. Areas of empowerment include enhanced and relevant education, health, child protection, HIV/AIDS, family, and culture.[60] This strategy further sought to highlight the heavy burden of care and support that females and women bear in the home. At the height of the HIV/AIDS epidemic in Belize, women bore the burden of care even as they were increasingly exposed to infection.[61] Essentially, the national plan of action highlighted the need to respond to the social, health and cultural vulnerabilities that girls face and by which they are increasingly marginalized as they become women.

[54] Representative of the Consumer Cooperative in Valley of Peace voiced that the youth in the village are interested in farming, but they want to pursue practices that do not threaten the environment, biodiversity, and water resources.
[55] Statistical Institute of Belize (2016) Abstract of Statistics 2016.
[56] See also the BRW Socio-economic Assessment – Belize River Watershed (PPG Documentation) in Annex 1.
[57] Women's Department, Ministry of Human Development, Government of Belize (2004) Belize's report on the implementation of the twenty-third special session of the general assembly (2000)
[58] ibid
[59] Ministry of Human Development (2007). National Plan of Action for Gender-Based Violence in Belize 2007-2009
[60] ibid
[61] ibid, 11

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Belize is a signatory to the Convention on the Elimination of all forms of Domestic Abuse against Women (CEDAW) and the Belize's National Gender Policy (2002) is built on the framework of this convention. This Policy prioritizes gender mainstreaming to improve human rights and development.[62] In the Belize context, the Policy identifies the persistence of *violence-producing conditions* which tend to preclude women from pursuing and enjoying social and economic liberties. It notes that, despite the concerted effort of the government to introduce several legislative changes to protect women from violence, many of these changes are yet to generate significant, positive impact on the lived experiences of Belizean women. Notably, the report establishes that the reported violent abuse cases (over 90%) against women occur in urban areas but many other cases of domestic violence are unreported.

The predominantly centralized and limited capacities of the Women's Department means that support to rural women who are in abusive relationships is largely inadequate.[63] In its documentation of *Access to Justice,* the National Gender Policy also notes the vulnerable position of women and children who are victims of crime even as they seek advice and representation in the criminal justice system. Women's death from domestic violence by an intimate partner is increasingly visible in Belize. Yet, even with the expanded application of domestic violence protection orders, structural barriers including women's low economic position impede their efforts to access legal support and services. Anecdotally there is a sense that the social and cultural attitudes of men toward women and girls, and a high sense of impunity drive domestic violence and crime against this population.

The lived experiences of Belizean women and girls should not be dissimilar from men and boys given that the Belize Constitution recognizes and guarantees gender equality. However, women and girls and men and boys, live by and carry out distinct cultural, economic, and social responsibilities and expectations. Compounding this is that the execution of national development priorities tends to reflect the interests of legislators and policymakers and in Belize, legislators are unlikely to be female. In their absence from public and political leadership, women are under-represented in political spaces for decision-making and thus hold limited power in legislative processes.

In an effort to address the under-representation of women in these spheres the Political Reform Commission (PRC) which was established in 1999 proposed a legal requirement that a minimum of 1/3 of all new appointments to public bodies be women but this was subsequently disregarded.[64] Whereas political participation should serve as the springboard for women to ascend to the highest level of decision-making, women have not had a critical mass at any levels of political leadership in Belize.

The Belize Growth and Sustainable Development Strategy(GSDS)[65] which is the primary national planning document for the government articulates under its *Necessary Condition 2.8: Social Inclusion and Equitable Growth* that, *"*Gender equality will receive special attention," and that "measures and targets with respect to desired development results will be reflected in the operational plans and budgetary proposals of all relevant ministries." This position complements *Necessary Condition 3.1 Sustainable Environmental Management* which acknowledges that Belize's terrestrial, marine ecosystems, and biodiversity are significant contributors the country's economic development. In the GSDS, national development is based on the strengthening the alignment of natural resources, sustainable livelihood development, and economic development so that growth is equitable and equally beneficial to male and female populations.

Successive governments in Belize have taken several steps to improve the status of women and girls in relation to men and boys. Yet, women and girls face distinct constraints, if and how they participate and engage in certain activities in their communities and in the wider society. The implication here is that public and decision-making must be created to be supportive and accessible to females, women, and youth at all levels and sectors of society. Doing so will lead to improved and equal participation of men and women in public leadership. At the same time, females must be equally engaged in existing governance mechanisms to ensure that inclusive and gendered perspectives are especially present in male-dominated sectors. This project can advance gender-sensitive community engagement

[62] Ibid, 11
[63] UNICEF/Belize (2011) The Situational Analysis of Women and Girls in Belize: An Ecological Review.
[64] National Women's Commission and the UNDP (2012). Towards Equality of Opportunity for Equality of Results: A situation analysis of gender and politics in Belize.
[65] Government of Belize, Ministry of Economic Development, Belize 2016-2019: Growth and Sustainable Development Strategy.

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and participation in the management of environmental resources and services with the establishment of clear, governance mechanisms and participation guidelines for all its interventions.

THE GENDERED ROLES

Men and women carry out distinct reproductive, productive, community managing, and political roles. In the home, women are primarily responsible to care for children, men, and other family members. Females are expected to provide family care, even as this is likely to constrains their own ability to attend school, find and secure a job and stay engaged in their communities. Males are expected to be the primary breadwinners and as such, they are more likely to work outside of the home. Male and female labor are valued and used differently. The work that women and men do at the household and community levels is differentiated and based on social and cultural expectations.

The pull to earn and contribute to the household income bear heavily on young males, especially those in poor households and this can force their early exit from school. At the same time, there is no monetary value for care work by males and this means that male labor is often valued more since men and boys can easier earn money away from the home. Indeed, males account for 60% of Belize's paid workforce. Tellingly, the female unemployment rate continues to be stubbornly high at 14.9%. This is almost three times the unemployment rate for males which currently stands at 5.6%.[66] The trend remains unchanged, however, since female unemployment rates have always been higher than that of males. Recently, the unemployment rate for women has gradually been decreasing from 20.2% in 2013 to 14.9 % in 2018. In the same period, the male unemployment rate decreased from 6.1% to 5.6%. It remains that women and females are over-represented in the provision of care and unpaid work in the home, but men are more likely to find paid employment outside of the home.

Outside of the home, women and men find themselves engaged in different roles in the informal and informal economies. The informal economy constitutes a multitude of economic activities that are not regulated by the state. The formal economy conversely, is highly regulated and workers' income is covered under national labor legislation, taxes, social protection or entitlement. Workers in the informal economy are unlikely to be subjected to any of these regulations. In Belize, the informal sector is characteristically gendered, and here again, men and women engage in this labor market differently. In the informal sector, women receive lower employment opportunities and rates of pay, they benefit differentially in periods of economic growth, and they are impacted differentially by economic downturns.[67] However, more women are likely to be active in this sector, and this means that more females are differently challenged because of their engagement in the informal economy. According to the Caribbean Gender Assessment (CGA) for Belize, even though financial institutions such as banks will aid micro and small enterprise owners, men are more likely to access these services because women have fewer financial assets and are less likely to produce official documentation that meet the requirements of these institutions. It is important, therefore, that entrepreneurship programs consider the gendered impact of their financing requirements and that they facilitate the small business needs of female entrepreneurs. This kind of support will help women to eventually operate in the formal sector and accrue the related benefits.

Though women experience higher rates of unemployment than men, in the last five years (2013 -2018) there has been an increase in female participation in the formal employment sector. This positive employment change may be attributed to the improved and advanced educational attainment of girls and women but there is no concrete evidence currently available to substantiate this. In the period mentioned above, more females secured employment in the 'Professionals' and 'Technicians and Associate Professionals' categories. Males also secured most of the jobs in the 'Plant and Machinery Operators and Assemblers' category but there was a net loss of jobs among males in the 'Skilled Agriculture and Forestry' and 'Elementary' occupations (LFS 2018). In the formal sector, the government is the main employer and here females are mostly employed in traditional jobs. Males in the formal sector are more likely to access and experience variable job roles in the private sector. It remains too, that men are still highly represented in leadership roles in the public sector.

Women's leadership is typically dismal in many public spaces, but there is an emergent change in the environmental and natural resource management sectors. These sectors are showing women as lead or as having substantive leadership and professional positions. Interviews with representatives of the Natural Resources Management

[66]Statistical Institute of Belize, Labour Force Survey, April 2018. Published June 2018.
[67] Caribbean Development Bank, Country Gender Assessment, 2016.

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program at the University of Belize provide some insight on female progression in this sector. They offer that the ongoing high levels of female enrolment in the undergraduate and postgraduate programs at the university, has created a healthy supply of trained female professionals who are soon employed in various levels in this sector. The demand for their skills is aided by the increasing policy, programming and investment foci, all of which aim to establish and strengthen a closer link between Belize's economic development and the sustainable management of its natural resources. Hence, as women gain more skills and professional competencies in this sector, they tend to advance to senior positions and they bring additional perspectives and diversity in decision-making processes. At the community level, the natural resource sector also boasts reasonable representation and participation by women but here, their influence is moderate and lack senior representation. At this level, women tend to have niche or localized environmental concerns, which may not be immediately apparent or impactful outside of their immediate communities. Still, the environmental and natural resource management sector can better harness the technical and managerial skills that females have gained in this sector.

In the home, females tend to be the primary caregivers to the most vulnerable including children, relatives living with chronic illnesses, older persons and the mentally ill, regardless of whether those needing care are male or female.[68] It is generally expected that both women and girls provide the caring needs for all members of their family. The rising demand for care in the family is also be attributable to the growth of Belize's aging population, and the limited access to care services outside of the home. There are local efforts by HelpAge and the government to provide some residential elderly care for the elderly, but these are still limited and bear some costs. At the same, there is a prevailing culture, that frowns upon institutional care for the elderly, especially if they have children. Culturally, it is expected that care, especially for aged parents should be provided in the home but this responsibility typically falls disproportionately to females. However, men and women experience caring for the elderly differently. Anecdotal evidence suggests that male breadwinners are more likely to pay for these services, but females are less likely to do so, and they take on the responsibility of full-time care for elderly family and relatives.

Females generally take on care roles despite their significantly limited economic and financial resources and social support systems. Note for instance the finding of the 2015 -2016, Multiple Indicator Cluster Survey (MICS) by UNICEF which shows that the percentage of children age 36-59 months whose biological father was engaged in four or more activities to promote learning and school readiness was 23.5% for fathers compared to 67.6% for mothers. Given that women tend to be overly represented in care provision, they are also challenged to access jobs outside of the home, take on leadership and political roles and participate in community activities. These activities carry economic and social costs for women's over-representation in 'non-economic'[69] activity. There is very little shift in the division of labor among men and women, and this is especially common in rural households. This means that females are generally severely time constrained. Project interventions must, therefore, enable their greater participation in, and contribution to, clearly defined time-sensitive outputs.

ACCESS AND CONTROL OVER RESOURCES

Households in Belize are generally governed by the decisions of the male head. Decisions regarding major financial activities and expenditures in the home tend to be led by the male head of household. Men tend to maintain dominance in this role owing to their earning capacity and greater access to financial and physical resources. Social and cultural norms also dictate that men should make the final decisions on these types of decisions. On this, socio-cultural practices may bear more on household decision-making than the influence of financial status or income generation. A look at MICS 5 (2015/2016) shows that as families become richer, the head of household tends to be a woman. In the richest quintile, the head of households were 20.1% female and 19.8% male. In the poorest household, the head of households were 21.4% male and 18.6% female. Where households include a man and woman, income and earning power, may not always be sufficient to influence who makes decisions in the home.

Table 3.1 Wealth Quintiles[70]

[68] National Women's Commission, Part 2. The Revised National Gender Policy (Updated Version 2013).
[69] UNICEF (2011) Situation Analysis of Children and Women in Belize: An Ecological Review, describe child care among others as non-economic factors.
[70] Percent distribution of the household population by wealth index quintile, according to area of residence and regions, Belize MICS, 2015-2016

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Sex of Household Head	Poorest	Second	Middle	Fourth	Richest	Total
Male	21.4	20.1	19.6	19.0	19.8	100
Female	18.6	20.0	20.4	20.9	20.1	100

Women are not excluded from decision-making in the home but even here, the decisions they make tend to be for the day-to-day management of domestic activities. Mostly they make transactional decisions in the home including for food and meals, children and familial care, household hygiene, home upkeep, care for subsistence plots and small animals, and ensuring utility payments. These domestic roles are highly visible because women are active in maintaining order and structure in their households. Yet, it must also be recognized that there is value in this level of influence that women have in the home. To this end, the project can support the advocacy roles of females since they have a clear position of influence in the home. Project activities including rule-following and protocol implementation will be greatly enhanced from the joint participation of men and women and women more than men can ensure the participation of other members of their household.

This level of influence is not abundantly transferred into the wider society. Though women have made some educational and economic gains, such as higher educational attainment, and greater leadership roles in some public-sector positions, their participation, and presence in public and political leadership at all levels, remain low and stagnant. Given their absence in political leadership, women are also woefully under-represented in the highest-decision making body in Belize – the legislature. Since Belize's independence in 1981, no more than two women have served together in the National Assembly.

The situation is marginally different for local government leadership. Men maintain leadership roles as mayors and as councillors but here, women seem more prepared to contests mayoral and councillor positions. The Situational Analysis of Women and Politics in Belize (2012) locates women's participation in local government as such:

> Prior to 2000, women generally represented about 12-16% of candidates and about 10-16% of those elected. (An exception was seen in 1981 when just over 20 percent of elected town board members were female.) Since then, however, women have represented about 18-24% of candidates and 20-26% of elected town board members.[71]

Despite incremental progress in local government elections, women do not maximize these gains by participating in national elections. Men, on the other hand, enter both national and local elections with fewer apprehensions. However, the low levels of women's representation in political leadership, mask their high levels of participation in mobilizing and canvassing for the election of mostly male candidates. Women use their domestic and household management skills to galvanize and mobilize support for the election of their political leaders. These leaders tend to be male.

In other public leadership spaces, such as community-based and non-government organizations the gender representation is more varied but also interest related. Community organizations such as parent/teachers associations, craft groups, welfare, and social support tend to have greater participation by women than men. In these groups, women can easier transfer the skills they already use to carry out their domestic responsibilities. This same rationale can also be used to explain the kinds of leadership spaces that men tend to be involved in. Generally, men tend to lead as well as join community organizations and groups that also advance their interests. These may be economic and agriculture-related organizations, such as cooperatives, producers' and growers' associations, and ecotourism groups. Generally, these groups command significant authority and power in the communities and outside projects, as well as other types of interventions, must seek approval and endorsement from these groups' even if their interests are not being served.[72] Hence, it is also important that the project engage with male leaders to advance endorsement and support of the project. This project offers an unique opportunity to promote and facilitate some female participation and inclusion in economic spaces that are typically dominated by males.

[71] UNDP/ Belize (2012) Toward Equality of Opportunity for Equality of Results: A Situational Analysis of Women and Politics in Belize.

[72] A look at the project's stakeholder analysis shows that groups led by women were rarely located in the quadrants that represent high power, or high power and high interests combined.

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Based on the issues they support, the bargaining positions of women and men especially in public spaces tend to be closely related to the issues they align themselves with, the organizations they participate in and their access to, and ownership of resources. Given that women tend to lead and support issues that are essentially an extension of household duties and responsibilities, the extent of their influence is issue-specific and confined to their immediate surroundings. These issues are typically addressed by specific institutions and organizations with defined human, financial and other technical responsibilities. For instance, children and welfare issues, or educational concerns are typically within the purview of Ministry of Human Development and Social Transformation, Ministry of Education and a small number of district-specific or national non-government organizations. In these entities, women's bargaining power is minimal if not non-essential because these organizations have standard budgetary allocations, procedures for funding disbursement, human resource alignment, and partnerships arrangements. Essentially, the public spaces in which women tend to align themselves with, merely enable them to access information and support rule implementation. Women's engagement in public spaces at this level, thus limit their abilities to bargain for and substantively influence far-reaching decisions.

Men also have bargaining power that is supported and enhanced by the issues they align themselves with. Men tend to organize around livelihood issues, income generation and political matters and these have far-reaching effects beyond their immediate communities. What is more, these issues also have some ripple effect into other critical matters in the economy. For instance, issues about agricultural product pricing and payment to farmers in one region of the country can directly impact imports to the country. Men are more likely to raise issues about the prices of local agricultural produce and as male farmers predominate in this sector, they are usually vocal about these matters. Crucially, men tend to be highly represented in the organizations and bodies where key and far-reaching decisions are made about the issues that matter most to them.

This would suggest that making economic decisions requires access to resources and finance, as well as participation and presence in important decision-making spaces. Women do not typically have substantive access to such assets and resources necessary for commercial production.[73] In situating women's general economic position in Belize, the CGA offers the following:

> Females in Belize hold less land titles than men (where statistics are unavailable to specifically outline land ownership), own less businesses (particularly in the formal economy), and access less loans. Women's lower access to productive resources underscores their limitations in ensuring adequate living standards, ensuring food security, and alleviating household poverty.

On this assessment, females in Belize do not have significant bargaining power because they lack access to economic resources, representation in key decision-making spaces and high-level participation in the productive sectors driving Belize's economy. As the project aims to enhance production landscapes, females and smallholders are marginally positioned because they mostly do not own or control land or livestock of significant sizes and value. As stakeholders, they may be highly interested in supporting the project outcomes, but their current political, economic and social positions constrain them from having any major influence on outcomes that can challenge the status quo. Notwithstanding the limited power position and presence of women in decision-making and public spaces, this is precisely what the project can focus on to advance women's participation in productive landscapes so that benefits accrue to them equally as they do for men.

This project on its own is unlikely to reverse the myriad challenges that females and smallholders face, specifically in the natural resource and environment sector. However, it can build on the existing roles of females and expand their participation and inclusion in the domains of influence that can augment their access to and maintenance of global environmental benefits. To do so, the project should seek to tap into, and strengthen the following roles which are especially common to females: community organizing, household management, formal training, entrepreneurship, and value-added experimentation. On this basis, females and males can benefit from capacity building, technical assistance, and resources that will improve their effective uptake of all components of the project.

KNOWLEDGE GENERATION AND CAPACITY

[73] Of note, at the meeting of the Belize River Valley communities, women voiced that they cannot join Livestock Producers Associations because membership requires that a cattle rancher owns more than ten heads of cattle. Hence, women with less cattle cannot join these groups.

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Knowledge generation and capacity as a process of gendered interactions is herein assessed based on educational attainment, locating how males and females contribute to the growing sectors in the Belize economy, their employable skills and the knowledge gap that exists between men and women in the production landscape of BRW.

Nationally, primary education access and attainment rates for boys and girls in Belize are outstanding. All children are expected to be enrolled in school by age five and are legally expected to remain in school up to the age of 14 years. The UNICEF MICS (2015/2016) shows that the literacy rate for males and females between the ages of 15 -24 years, males and females was relatively comparable at 91.2% and 93.0% respectively. And though Belize has a net primary school attendance rate of 96.3%, less children completed primary school since the national primary completion rate was ten percent lower in this period and stood at 86.3%. Still, the overall high literacy and completion rates, mask some of the gender disparities among boys and girls which emerge as early as primary school. The trend is that there are more girls who complete primary education than their male cohort; the UNICEF MICS documents this ratio at 1.01. The gender parity index or gender gap in education widens even more as children progress to secondary school. Here, the gender parity stands at 1:09, and at tertiary levels, the gender parity gap is severe at 1.66.[74] Hence, while males and females start out having almost similar access to primary school, as they progress in their educational journey, more females tend to stay in education than males.

It should then be that because females tend to stay longer in education and formal training, and males tend to spend less time in either, their respective skills and knowledge should command commensurate value. That is, that with more education and skills, females should be accruing greater economic value from their investment in education. Yet, even as males spend less time in formal education, this has not diminished their employability. Indeed, the lower retention of males in education has not translated to a lowering of their unemployment rates. In almost opposite fashion, women's longer retention in education has not translated - at least not immediately - to enhanced employment opportunities. What is crucial here, is that the value placed on women's and men's respective knowledge and skills is determined as much by the economic landscape, job market demands, the job preferences that males and females have, and societal expectations.

For instance, tourism, which is the fastest growing industry tend to absorb and value the skills and knowledge of women differently. The CGA (2016) show that females are mostly engaged in domestic-type jobs in this industry but males access varied employment opportunities including resort ownership and management; building and grounds maintenance; tour guiding, taxi driving, and culinary roles. When compared to women, men employed in the tourism industry have representation across all income levels, which is unlike their female counterparts.

Summarily, the Gender Assessment (CGA) conducted by the Caribbean Development Bank aptly points out that, Belize's economy is driven principally by primary agricultural products (sugar, citrus, bananas, and marine) and tourism as the most important foreign exchange earner; manufacturing (led by crude oil production which has increased significantly since 2005); and international business services. Apart from the former economic driver, these sectors of primary production generally do not require massive labor inputs with significant specializations. This boom in tourism, specifically Belize's brand of ecotourism, demanded labor for several entry-level jobs including tour-guides, front-desk administrators, culinary and domestic staff, etc. But they usually require higher levels of mobility, field, and outdoor activities and this may explain why there is greater uptake for these jobs among men. The particular focus on the tourism industry as a generator of jobs, livelihood and income generation opportunities has specific implications for how gendered knowledge and skills are valued in the workplace and in the development of the country.

A look at recent underemployment levels can also elucidate how the skills and capacities of women are valued in the wider economy. The LFS Summary Report (2018) explains that females were twice as likely to be underemployed, with about 20% of this segment of the labor force falling within this category compared to the 10% of their male counterparts. Rural women and females were more likely to be underemployed, and they comprised 16.5% of employed persons working less than 35 hours per week as compared to 11.4% in the urban areas.

Earning capacity is a key indicator of how knowledge and skills are valued in the economy. The employment of women across the different productive sectors offer some insight on how primary, secondary and tertiary industries engage with and utilize the skills and knowledge of males and females. Here, the findings of the CGA are also

[74] Ministry of Education Youth and Sports data as documented for MDG3 target achievement in the MDG 2012 Scorecard Report.

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instructive and they show that the Belize economy is skewed toward male labor across all levels of production. Notably, this assessment finds that Belize is unique among the Caribbean Development Bank borrowing countries in that:

> Belize has a significantly sex-segregated and male-dominated labor force, exemplified in part by male participation in the primary industries outnumbering female participation by nearly 19 to 1. The male to female employment ratio diminishes from primary to secondary, to tertiary industries, at 3.9 to 1 in secondary industries, and 1.2 to 1 in tertiary industries respectively.[75]

The CGA further explains that male earnings reflect their participation in the formal labor force, and they tend to have greater earnings than females. This report documents that the average annual income for females is estimated at BZ$4,475 while it is BZ$10,317 for males. The key drivers of the economy – sugar production, citrus, fisheries, and tourism - benefit significantly from the labor and skills contribution of males. At the community level, however, there is also emergent issue relating to male labor that is worth considering. Male participation in the agriculture sector as smallholders is abundant in the Cayo district and many men use farming as their primary source of livelihood even as the local markets in the district is glutted with products. Farmers in Valley of Peace, for example, lament that the abundant supply, mostly of vegetables, tend to drive the costs of these produce downwards because farmers often undercut each other in order to unload their supplies[76]. In doing so, their profit margins are reduced to levels that are negligible. These market dynamics cause frustration and wariness for male farmers whose job and employment opportunities are limited to this sector. The implication here is that males in the agriculture sector are vulnerable to the constantly changing market prices for local produce. This, in turn, lends for even more demand on small plots of land to produce more in order to offset costs and boost profits. On this issue, the project can support an increase in market awareness, pricing, consolidation of farmers' groups, training and soil preparation skills. The latter action is particularly important to strengthen the capacity of farmers to utilize production landscapes that reduce their vulnerability to price fluctuations which are also brought on by the seasonality of their produce. And here too the project can aid farmers with greater access to training and technical assistance that improve year-round yields through efficient and environmentally friendly cultivation practices and farming techniques.

The farming activities of smallholder in the project communities is a family or household livelihood activity. Males lead on planting, soil management, and the tending of the crops including sourcing water for irrigation. Females have very definitive roles in rural, farming households and are less likely to be engaged in actual field actions Though some females and women do have small farms, they tend to have greater roles during harvesting and post-production efforts. In these efforts, they are primarily responsible for the separation, cleaning, and packaging of the products before these are transported to the markets in nearby towns and cities. Additionally, and specific to Valley of Peace, women lead in attendance at farmers' group meeting and in business decision-making for their consumer cooperative. Women serve as a valuable resource on consumer preferences and needs.[77] These are all important roles that offer other kinds of opportunities for women to be engaged in the production landscape. For these contributions to be strengthened, women and men will need specific training opportunities that are applicable to understanding the market, pricing, and consumer needs. For instance, more females can be supported with storage planning and pricing because they handle the products more frequently after harvesting. During interviews and field visits in this community, the men reiterated the need for ongoing technical training and soil management skills. In the Belize River Valley, for instance, there is very little interaction between the productive roles of men and women. Typically, men are engaged in small-scale cattle ranching, but women do not tend to work in close partnership with male heads of household on this. There is very little production or business-type knowledge exchange between males and females in the Belize River Valley than was observed in Valley of Peace, for example.

This project should not anticipate a major shift in the gendered interactions of farming households in the priority region. Yet, knowledge management, production, and dissemination offer a key opportunity for females to support messaging, best practice dissemination and dissemination of technical and other types of information that will be useful to the farmers and the partner communities. Women and men have different knowledge capacity and dissemination needs because their roles in the production landscapes of the BRW are different. On this, women can

[75] Caribbean Development Bank, Country Gender Assessment, 2016.
[76] Informal interview discussions held with farming groups in Valley of Peace.
[77] Informal interview with female member of the Valley of Peace Consumer Cooperative.

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especially take an active role to promote sustainable practices, monitor related actions, report on progress made, and form strong communities of practice. This action can improve the technical and practical knowledge of farmers and ranchers thereby reducing the knowledge gap that exists between males and females in the Belize River Watershed.

Annex 1: Population Distribution in the Priority Region

		Total	MALE	FEMALE
Eastern Block (Belize River Valley)	BERMUDIAN LANDING	183	87	96
	DOUBLE HEAD CABBAGE	406	206	200
	FLOWERS BANK	121	67	54
	ISABELLA BANK	143	82	61
	RANCHO DOLORES	217	109	108
	SCOTLAND HALFMOON	259	128	131
	ST. PAUL'S BANK	153	79	74
	WILLOWS BANK	185	97	88
Western Block	BLACKMAN EDDY	533	287	247
	CAMALOTE	2,562	1,276	1,286
	ESPERANZA	1,262	641	621
	GEORGEVILLE	922	464	458
	MORE TOMORROW	154	96	58
	ONTARIO	775	394	381
	ROARING CREEK	1,974	965	1,009
	SPANISH LOOKOUT	2,253	1,151	1,102
	TEAKETTLE	1,746	886	860
	UNITEDVILLE	971	476	495
	VALLEY OF PEACE	2,111	1,091	1,021

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Gender Action Plan

Component/Activities	Indicators	Target	Budget (USD)*	Responsible institution	Period of Implementation
Outcome 1: Component 1: Enabling environment (policies, financial mechanisms, and institutional capacities) for delivering multiple global environmental benefits (GEBs) through the sustainable management of production landscapes					
– Recognize women as key watershed stakeholders (Readiness) – Include women and youth from the BRW productive landscape in the drafting and implementation of a Water Management Plan for this project region. – Build the capacity of women and men to enable inclusive decision-making and informed consent – Ensure that women's representation on project management decision making bodies in this project isn't limited to nominal position – Establish and support actions to strengthen capacities of women, men, and youth beneficiaries to participate in watershed management – Strongly encourage and promote the collection of sex-disaggregated data throughout the project process, and the use of gender analyses to inform key policy and strategy documents – Apply safeguards to ensure women's rights are included in subsequent changes to laws, policies and strategies enabled by the project – Promote the equal participation of men, women, and other marginalized groups in the development of the Belize River Watershed Integrated Management Plan. – Train staff from the project's Executing Agency and their partners in strategy, conceptual frameworks, and practical tools for implementing the focus on gender.	– Percent of women on: Policy harmonization committees	At least 35%	277,000	MSDCCDRM, MNR, PMU	2019 – 2024
	– Percent of BRW Task force participating in meetings or events related to governance in PAs, corridors, water, forests, and land are women.	At least 35%			
	– Increase in participation of women as leaders, including indigenous women, in leadership positions of the structures, organizations, and platforms of governance in the PAs, corridors, water, forests, and land.	50%			
Component 2: Delivering multiple GEBs through sustainable production and improved value chains for key agricultural and forest products from the Belize River watershed					

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– Enable full and effective consultation and participation of women and men in all stages of component planning and delivery – Provide women and men with equal access to information regarding all aspects of projects – Involve women in all monitoring, reporting and verification (MRV) and Monitoring and Evaluation (M&E) activities, and provide the necessary tools and knowledge needed for women to engage meaningfully. – Female and male producers, including youth have consistent access to community-based training that promote biodiversity conservation, integrated watershed management, SLM, and resilience building to climate change. – Strengthen the incorporation of the gender focus to improve women's participation in commodity value chains and sustainable production systems. – Strengthen existing extension support and services to design and deliver gender-sensitive information to both female and male farmers. – Agriculture field school curriculum expanded to include traditional "female" crops – Ensure that women have the option to participate in all types of formal and non-formal training and education, in order to increase their technical capacity to engage in project activities. – Ensure micro-grant criteria allows for the equitable distribution of benefits; paying special attention to cultures and traditional practices that entrench inequality and could exclude women from engaging the mechanism – Incorporate gender focus into all training, educational, and awareness-raising processes associated with project implementation. – Facilitate the contributions of women, male and female youth in the design and implementation of community-based monitoring systems for water resource, biodiversity, and land use.	– No. of male and female producers who receive technical assistance/and or training.	450	724,500	MSDCCDRM, PMU	2019 – 2024
	– Proportion of educational and training actions that include information about the importance of equal participation of men and women in managing the production landscapes.	100%			
	– No. of conservation agreements that reflects a clause that addresses the rights of women, including indigenous women, and the equal distribution of benefits.	At least one			
	– Percent of the micro-grant or other types of incentives that promote the sustainable management of their farms and production processes and/or contribute to the connectivity and management of the corridors are given to women and youth beneficiaries.	At least 40%			
	– Percent of business plans and strategies written for women owned enterprises	50%			
	– Percent of women farmers who receive technical support from the project and adopt more sustainable production techniques and practices for managing landscapes.	At least 35%			
Component 3: Knowledge Management and Learning					

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– Maintain a registry of participation disaggregated by gender and ethnicity for training, education, and awareness-raising events, farms, families benefiting from other services under this project output. – Develop and disseminate communication materials that incorporate gender perspectives which informs the wider public about the environmental and socioeconomic benefits of sustainable production practices at household, community, and societal levels. – Support communities of practice among all stakeholders, including men and women in the BRW. – Design and implement sustainable production landscape management field internships programs for senior, female and male graduate students at the University of Belize. – Establish a gender-balanced research teams from the Faculty of Science and Technology conduct research on natural resource management, production practices and water quality in the BRW. – Organize, coordinate and launch research seminars on at least one (1) of the key aspects of the BRW productive landscape (biodiversity, land management, water quality, recharge areas, policy implementation, livelihood, etc.) which have implications for male and female producers. – Conduct community level research complete with sex disaggregated baseline data and socio-economic information that provides for a comprehensive profile of each community benefitting from an incentive project.	– No. of knowledge products produced, which addresses gender dynamics within the BRW	At least three (3)	461,000	MSDCCDRM, PMU	2019 – 2024
	– Percent of project communications that reflect gender perspectives	100%			
	– Percent of research fellowship benefiting female youths	50%			

* Supporting Activity Cost is as represented within the project Total budget and Workplan.

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EXPECTED ACCOMPLISHMENTS:

EA1: Enhanced inclusion and representation of women and youth in the governance and management mechanisms for the BRW.
EA2: Female and male producers, including youth have consistent access to community-based training that promote biodiversity conservation, integrated watershed management, SLM, and resilience building to climate change.
EA3: Males and females in the BRW are aware of and publicly articulating the benefits of sustainable production practices on biodiversity, land and water resources.
EA4: Male and female producers in the BRW have the capacities to contribute to knowledge, data and information generation that inform sustainable production practices, and the maintenance of global environmental benefits in the BRW.
EA5: Male and female producers are incentivized to implement sustainable, and environmentally friendly production practices.

Budget

Item	Consolidated Associated Cost** (USD)
EA1	32,000
EA2	245,000
EA3	397,500
EA4	327,000
EA5	371,000
Monitoring and Evaluation	90,000
Total	**1,469,500**

**** Supporting Activity Cost is as represented within the project Total budget and Workplan**

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Annex H: UNDP Risk Log

#	Description	Date Identified	Type	Impact & Probability	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update	Status
1	Limited cooperation among government agencies with competency for biodiversity conservation and SLM/water management limits the delivery of results	At PIF	Organizational/ Political	Needed policy reforms will be achieved and there will be limited monitoring and enforcement of existing laws and regulations regarding biodiversity conservation, SLM, and IWRM. P = 2 I = 4	The project was designed with the active involvement government agencies. Inter-agency cooperation will be promoted through the project including the signing of a agreement between the MNR and MSDCCDRM that will allow for join programming, resource sharing, information exchange, etc. 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.	Project Manager and PMU Staff	UNDP	At CEO Endorsement	No change
2	Limited institutional capacities for planning, management, and monitoring	At PIF	Organizational	Limitations exist in the capacities of national governmental agencies that may prevent adequate support biodiversity conservation, SLM, and IWRM in in the target area in the BRW. P = 3 I = 3	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. During the PPG a capacity/needs assessment for key government agencies was conducted and a baseline of capacity needs was established. Capacity gaps will be addressed during implementation as part a multi tiered training program that will target decision makers, financing institutions, landowners and farmers (including women), community groups, among other stakeholder	UNDP Project Manager and PMU Staff	UNDP	At CEO Endorsement	No change

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					to build the necessary skills for successful project implementation.				
3	Limited benefits for the producers who adopted environmentally friendly practices maintains the pressure on biodiversity, forests, soils, and water resources	At PIF	Financial/ Operational	Landowners and farmers may be willing to implement sustainable production limiting the sustainability of the project outcomes and may lead to further biodiversity loss and land degradation. P = 3 I = 3	A prefeasibility analysis for the incentives for landowners and farmers was conducted during the PPG in, as well as an analysis of the interest of the potential users to adopt environmental-friendly production practices. The incentives selected by for implementation are the most feasible from a economic and environmental perspectives. Additional analyses will be conducted during the first year of project implementation. 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.	MSDCCDRM MNR Project Manager and PMU Staff	UNDP	At CEO Endorsement	No change
4	Climate change affects forests and hydrological resources, which are essential to ecological sustainability in production landscapes There could be disruption of project processes	At PIF	Environmental	Adverse impacts of extreme climatic events (e.g., hurricanes and drought) can affect project interventions in the field and the livelihoods of local communities	Projects proponents have introduced climate risk management as a key element of risk management and in execution. The project in its response to corridors and species habitat protection allows for the consideration of changes in species ranges and habitats as a result of climate change on the natural environment. This technical consideration will be included in the analysis informing	MSDCCDRM MNR Project Manager and PMU Staff	UNDP	At CEO Endorsement	No change

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	and sustainability of project investments linked to climate triggers.			living in the target area in the BRW P = 3 I = 3	all management mechanisms introduced by the project. The Project addresses production systems within the BRW. The lower and central reaches of this watershed have in the recent past showed extreme vulnerabilities to climate change, with triggers ranging from sea level rise/ water intrusion to reoccurring extreme hydrometeorological events. In its design, the project has introduced climate smart actions as a means of climate proofing of production systems. Project functionaries are expected to include examination of climate risks on all project interventions and to set in place systems to address and adaptively manage risks during activity design and implementation. In addition, the project includes upgrading the network of meteorological/hydrological stations in the BRW improving the capacity for forecasting.				
5	Poorly designed or executed project activities could damage critical or sensitive habitats environmentally sensitive areas, including KBAs, including through restoration activities	At CEO Endorsement	Operational Organizational Political Regulatory Strategic Other	Poorly designed or executed project activities could result in further loss of biodiversity and land degradation. P = 2 I = 3	This risk has been managed through the design of the project through the selection of sites for the implementation of activities through a rigorous technical process in consultation with national environmental experts. In addition, the project has been designed to include activities with minimal or no risks of adverse impacts to damage critical or sensitive habitats environmentally sensitive areas,	MSDCCDRM MNR Project Manager and PMU Staff	UNDP	At CEO Endorsement	No change

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					including KBAs; however, limited or focused environmental impact assessments may be developed during project implementation as determined necessary.				
6	The project could restrict the access of small farmers to natural resources (land and water) due to increased enforcement of landscape protections and new approaches to land management, potentially causing economic displacement	At CEO Endorsement	Environmental Financial Operational Organizational Political Regulatory Strategic Other	Project credibility may be in question locally and delivery of GEBs may be limited P = 3 I = 3	During the development of the project, small livestock farmers and cohune oil producers were closely involved and engaged, and an assessment of their livelihoods was undertaken. This risk will be managed through the Stakeholder Engagement Plan and management measures will be developed with full, meaningful engagement, and consultation, as required.	Project Manager and PMU Staff	UNDP	At CEO Endorsement	No change
7	Vulnerable or marginalized groups, including indigenous people (e.g., Belizean Creole and Mopan Maya), might not be involved in project implementation and therefore not engaged in, supportive of, or benefitting from project activities.	At CEO Endorsement	Environmental Financial Operational Organizational Political Regulatory Strategic Other	Project credibility may be in question locally and delivery of GEBs may be limited P = 3 I = 3	This risk was partially addressed during the project design though a feasibility analysis conducted that included consultations with indigenous people which determined the project activities including the proposed financial incentives that are in line with traditional livelihood, social, and cultural practices that promote improved and sustainable production practices. During project implementation this risk will be managed through the Stakeholder Engagement Plan, as part of the Plan a grievance mechanism will be established and published so that all stakeholders, including indigenous peoples, are aware of its existence. The Project Manager will be responsible for documenting all grievances and	UNDP Project Manager M&E and Safeguards Expert	UNDP	At CEO Endorsement	No change

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					ensuring they are addressed in a timely manner. This project aims to strengthen the longevity of the relationship that indigenous people have with the land and their culture. The project does not displace or require the resettlement of the indigenous populations in the BRW. It does not impinge on any of the cultural, religious or spiritual practices of this population. The actions in the project do not result in any changed status of indigenous peoples to their land or to their means of livelihood. Contrastingly, the project promotes actions that improve livelihood opportunities and strengthen sustainable use of the land on which many indigenous households depend. Collectively, these diversified financial incentives, training and technical assistance available to indigenous populations stand to improve their socio-economic status, knowledge and sustainable production practices.				
8	The proposed project may have adverse impacts on gender equality and/or the situation of women and girls, including women farmers.	At CEO Endorsement	Environmental Financial Operational Organizational Political Regulatory Strategic Other	The project may not achieve the goal of promoting gender equality and empowering women P = 2 I = 3	This risk will be managed through the Gender Action Plan developed during the PPG following a gender analysis for the target landscape. In addition, the Project Results Framework includes gender-based indicators. Project mechanisms are such that delivery of benefits targets specifically women and youth beneficiaries. Formal mechanisms provide the	UNDP Gender Expert	UNDP	At CEO Endorsement	No change

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					opportunity for greater women involvement in decision-making, creating spaces for female leaders from the communities and the expression of the voices of male and female producers. Production incentives are focused at the household and smallholder producer' levels improving the opportunity for women access.				
9	Policy changes could have unintended negative social and/or environmental impacts if poorly designed or executed	At CEO Endorsement	Regulatory/ Strategic	Project credibility may be in question locally and further loss of biodiversity and land degradation may increase P = 1 I = 3	With the application of diverse strategies and policies within the BRW, lack of true synchronization and coordination can negate desired conservation benefits. A crucial delivery of this project is a mechanism for coordination among regulatory agencies as well as a mechanism for the monitoring of the efficiency of legislation and policies supporting the realization of the primary objective of realizing GEBs. These structures allow for better analysis of local circumstances and the application of an integrated policy management mechanism ensuring harmonization of actions in advancing singular goals.	UNDP M&E and Safeguards Expert	UNDP	At CEO Endorsement	No change
10	Field activities related to sugar cane production in large farms could inadvertently result in the release of pollutants to the environment or the application of	At CEO Endorsement	Environmental Financial Operational Organizational Political Regulatory Strategic Other	The delivery of GEBs may be limited in terms of reducing the pollution of soils and surface and groundwater and the credibility of the	The project will only promote and support sustainable production practices that include the reduced use of pesticides and fertilizer in the participating farms. Farmers will be trained to make use of Good Agricultural Practices (GAP) on farm as part of the project strategy to promote sustainable production.	Project Manager and PMU Staff	UNDP	At CEO Endorsement	No change

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	pesticides that may have a negative effect on the environment or human health.			project may be in question P = 1 I = 3					

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Annex I: Results of the capacity assessment of the project implementing partner and HACT micro assessment

Include as a separate attachment at prodoc signature

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Annex J: UNDP Project Quality Assurance Report

Included as a separate attachment at prodoc signature / project implementation workshop

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Annex K: List of people consulted during project development

No.	Date	Name & Role	Comments/Purpose for Contacting
1	03.06.18	Elmer Requena - Fresh Water Biologist, TIDE	Discussion of Human Impact Mapping of the Belize River Watershed
2	04.06.18	Dr. Santos Chicas – University of Belize	Lessons learned from research in the Rio Grande Watershed in southern Belize, i.e. on approach to study.
3	29.10.18	Mr. Hugh O'Brien – Agronomist	Discussion on grain production in the Belize River Watershed.
4	31.10.18	Mr. Arden Edwards – Member, BLPA Board of Directors	To gauge BLPA's interest in the project.
5	01.11.18	Mr. Elston Wade – Chairman, Belize Livestock Producers Association	Discussion on how best the project can obtain BLPA's input. Recommended that contact be made with the office and he would direct for assistance to be provided. No firm response despite numerous calls.
6	06.11.18	Dr. Carlos Itza – Integrated Pest Management Specialist	Discussion on role of integrated pest management and bio-fertilizers as part of climate-smart agriculture. Agreed that attention needs to be given to import substitution as well as on lifecycle of agrochemical containers.
7	07.11.18	Dr. Abel Carrias and Dr. Pio Saqui, University of Belize	Discussion on the Belize River Watershed Management Plan and possible opportunities for collaboration under the GEF 6 project[78]. Done along with the GEF 6 PPG Team.
8	09.11.18	Ms. Ina Sanchez, Research and Innovation Coordinator, Ministry of Agriculture	Role of the Agriculture Department on working with vegetable producers in the Valley of Peace area.
9	09.11.18	Mr. William Can, Extension Officer, Ministry of Agriculture	To arrange field visit to meet with Valley of Peace Village.
10	12.11.18	Valley of Peace farmers / vegetable producers.	Field Visit along with the rest of the PPG Team as part of Situation Analysis.
11	13.11.18	Mr. Conway Young – Coordinator, Community Baboon Sanctuary	To arrange field visit with CBS Womens Conservation Group, farmers and community representatives from the Belize River Valley.
12	13.11.18	Mr. David Moody. Livestock Producer and Representative of the Belize River Valley Grain Producers	Invitation to meeting at CBS and to discuss activities on grain production.
13	13.11.18	Mr. Clinton Rhaburn – Chairman, Flowers Bank Village	Invitation to meeting at CBS.
14	14.11.18	Silvan Kuffer, Director, Solar Energy Solutions of Belize	As a landowner, SESB is a stakeholder in the BRW.
15	18.11.18	Meeting in CBS/BRV	Participated in meeting along with other PPG team members.
16	21.11.18	Dr. Victoriano Pasqual – Ministry of Agriculture	
17	22.11.18	Ms. Michelle Alvarez – Director, Department of Natural Resources and UNCCD Focal Point	Discussion on work pertaining to Land Degradation/UNCCD in Belize

[78] Follow up meeting held on 22.11.18.

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No.	Date	Name & Role	Comments/Purpose for Contacting
18	22.11.18	Dr. Luciano Chi - Research Coordinator, Sugar Industry Research & Development Institute	Effect of Long-Term Sugarcane (*Saccharum Spp*.) Cultivation on Chemical and Physical Properties of Soils in Belize
19	23.11.18	Dr. Roxanna Alvarez – Director, University of Belize Central Farm Campus	Curse offering as part of the B. Sc. in Agriculture and possible opportunities for collaboration with the project.
20	27.11.8	Ernest Banner – Head of Department, Rural Development	Synergies between the GEF 6 and the work of the RD Department.
21	28.11.18	Beverly Burke - Santander	Arrange meting
22	28.11.18	Sabi – Manger, Big Falls Famer	Attempted to arrange meeting….
23	28.11.18	Dr. Wendell Parham	
24	28.11.18	Noel Jacobs – Land Use Policy Consultant	To source copy of the draft new Land Use Policy.
25	28.11.18	Antony Mai, DOE	Gaps in legislation, regulations and guidelines for SLM.
26	29.11.8	Dr. Elma Kay – Environmental research Institute	ERI's work in the Central Biological Corridor options to work with Big Falls Farm.
27	29.11.19	Mr. Michael Myvette – Chairman, More Tomorrow Village Council	
29	30.11.18	Phillip Tate – Ministry of Agriculture	To obtain national production statistics for Agriculture
30	03.12.18	Evaristo Avella	Past reports for the UNCCD.
31	03.12.18	Osmany Salas	Past reports for the UNCCD.
32	03.12.18	Mr. Earl Green	Past reports for the UNCCD.
33	03.12.18	Mr. David Tzul	Discussion on work done in the BRV with livestock producers.
34	04.12.18	Santander Farms	Meeting with representatives to discuss possible collaboration.
35	10.12.18	Belize River Valley	Follow-up field visit to meeting with livestock producers and identify specific sites for possible interventions. Meet with Mr. Naaman Gillett and Mr. Lorenzo Herrera.
36	11.12.18	Mr. Dennis Jones – Executive Director, Belize Enterprise for Sustainable Development	
37	18.12.18	Valley of Peace farmers	Field visit to discuss possible interventions, targets, etc.
38	18.12.18	Mr. Earvin Gentle – Agro-processing Unit, Ministry of Agriculture	Possibility of collaboration with the project in training/capacity building on agro-processing to improve livelihoods and for food security, especially in view of climate change.
39	10.01.19	Mr. Jan Meerman – Technical Advisor, Biodiversity Monitoring and Climate Change in the Selva Maya Region (GIZ)	Synergies between the GIZ project and the GEF 6 project.
40	11.01.19	Mr. Rafael Manzanero – Executive Director, Friends for Conservation and Development	Possible role of FCD as a project partner on awareness activities.
41	24.01.19	Mr. Ambrose Tillett – Public Utilities Commission	General discussion of tariff structure for Santander, possible incentives, i.e. electricity generation vs sugar production.
42	28.01.19	Ms. Maxine Monsanto – Department of Environment	Possible synergies between the GEF 6 project and the MAR2R project.

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Annex L: Legal/institutional assessment

Legal, Policy, and Institutional Framework related to Integrated Water Resource Management

Policy

Integrated Water Resource Management (IWRM) policy development for Belize dates back to 1994. A Pro Tem Water Commission facilitated national consultations in 2006 and 2007, ultimately recommending some changes to the policy proposed in 1994. Belize Enterprise for Sustainable Technology (BEST) drafted an IWRM policy and made it available for review in 2008.

The main proposed policy to which specific policies relate was "Belizeans have a fundamental right to water and it is hereby declared that the policy of the Government is to bring about the planned development, coordinated management, sustainable use and protection of Belize's water resources consistent with the social, economic and environmental needs of present and future generations, and to ensure that all Belizeans have access to affordable, safe, adequate and reliable water."

The NIWRM Policy is grounded in the human rights-based IWRM principles outlined within the Millennium Goals. The main IWRM principles for Belize as documented by BEST (2008) include: a) GoB "declares that: all water resources are vested in the state on behalf of the people" to regulate equitable use; b) Inform planning, decisions, and management actions by setting up and maintaining "a comprehensive database of the country's water resources and adopt and be guided by an integrated management system in terms of the quantity and quality of all surface and ground water resources."; c) GoB "declares that it will govern and manage the national water resources using a decentralized and integrated approach to include adequate public consultation, subscription as well as participation…"; d) GoB will "Establish a permanent National Water Commission with responsibility for integrated water resources management…formulate and develop national plans, such as the National Water Resources Master Plan - prepared on the basis of river basin planning, groundwater management plans, coastal zone management plans…monitoring and control of water resources; e) The "national water policy will recognize the impacts of climate change in all areas of water resources management and direct the efforts to…conserve the nation's water resources at standards of quality appropriate to use… Institute standards and mechanisms for enforcement… Mainstream and increase public awareness about conserving the national water resources by efficient use and pollution prevention."; f) The national water policy will promote through public awareness and education an understanding by Belizeans of the economic and social benefits of water in the country. These include benefits to be derived from the use of the water resources for living things particularly biodiversity sustenance, economic and industrial development; g) GoB will "Establish a water commission to carry out a regulatory and national management role"; and h) GoB will "enter into cooperation agreements with our neighbors for the protection of source, quality, quantity and access in the trans-boundary areas.

Legislation and Legislative Mandates

Very limited legislative protection exists to protect freshwater systems directly. Different pieces of legislation addresses pollution control, well construction, public health issues, and water abstraction. The Land Utilization Act addresses protection of watersheds and the National Lands Act and National Lands (Amendment) Act discusses protection of land adjacent to streams, rivers, and open water. Each piece of legislation addressing water related issues assigned responsibilities to various government agencies. Each piece of legislation addressing water related issues assigned responsibilities to various government agencies (Table 1).

Table 1. GoB Agencies and the Water-related Responsibilities of Each.

GoB AGENCY	WATER-RELATED RESPONSIBILITY
Agriculture Department Irrigation Unit	Overseeing water abstraction from wells and surface water bodies for irrigation of crops
Coastal Zone Management Authority and Institute	Monitoring water quality of marine ecosystems, marine pollution
Department of the Environment	Detecting, regulating, and monitoring pollution and waste streams discharged into surface waters
Department of Lands and Surveys	Delineating water bodies, wetlands, and 66 ft. buffer along streams and rivers on property plots

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Fisheries Department	Managing marine conservation areas
Forest Department	Managing Inland PAs, including headwaters of nine watersheds, and inland wetlands and waters research permitting
Geology and Petroleum Department	Overseeing water well permitting and drilling, maintaining well log data, permitting in-stream gravel mining
Hydrology Unit	Monitoring stage and discharge of major rivers, hydrological data analysis and archiving
Lands Information Center	Delineating watershed boundaries
Ministry of Health	Monitoring quality of potable water and potable water sources, sewage waste management, water borne diseases
Public Utilities Commission	Overseeing water companies supplying water and sewage services to the general public
Rural Development	Providing water supply to rural communities

The NIWRM Act was an attempt to more completely address the water issues of Belize and to bring water management from the GoB perspective under one agency or at least establish a coordinating agency that could promote collaboration among 10 GoB agencies, all with different missions and objectives. The NIWRM Act established the NIWRM Authority, defining the composition, responsibilities, and capacities of the Authority. The stated purpose of the Authority is the enforcement of GoB policy for development and use of the country's water resources, conservation and protection of those resources future generations, and to provide safe and reliable supply of water for the general populace.

The Authority shall be empowered to determine the safe yield of any aquifer, permit abstraction limits and water use. It shall ensure that the watershed of water resources is protected as a forest reserve or national park as provided in the Forests Act and the National Parks System Act. In this capacity, the Authority may call upon the Ministry responsible for Forestry to take action under the Forests Act or National Parks System Act, the Ministry of Health under the Public Health Act, and/or any other relevant agency or Ministry as may be required. The Authority may delineate groundwater recharge areas for protection.

Many of these responsibilities heaped onto the Authority are currently performed by staff in the various GoB agencies listed in Table 1. To be fully functional, the Authority will require a large staff with training in various areas of water resource management, or be able to work collaboratively with other GoB agencies in the execution of these duties.

According to the NIWRM Act, the Authority is expected to prepare and submit a draft National Water Resources Master Plan for Belize based on the GoB water policy to the Minister for approval. The Authority is authorized to collect information and data relative to water quality and water use, and to conduct any studies required to develop the Master Plan. Where practical the Master Plan should be coordinated with water management plans of any other GoB agency or NGO working within Belize.

The Master Plan must include provisions for conservation, development, and use of water resources, considering economics, sustainable use, public health protection, people's safety and welfare, and environmental values. The Plan is expected to provide an inventory and description of water resources, giving the quantity, availability and quality of each resource; listing current water uses, and identifying water-dependent activities that will be affected by water use. It is to also expected to project future water needs for the Nation and make recommendations as to water resource development; the control, abstraction, storage, supply distribution, and ultimately disposal of water. Finally, the Plan must include cost analysis, a budget, and action plan with timeframe, and strategies for implementation.

Institutional Set-up

Currently there is no NIWRM Authority in place, nor is there expectation for such to happen in the near future given the large expense of establishing, equipping, and staffing an office. However, it is envisioned that the Hydrology Unit, already identified in the NIWRM Act to become a primary component of the Authority, to assume some of the above mentioned responsibilities. This would require the addition of staff rather than establishing an entirely new office.

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Also, the Hydrology Unit is already well established and collaborates with all agencies, organizations, corporations, managers, and researchers requiring hydrological data for Belize.

The Hydrology Unit can only be expected to adopt those tasks for which the unit is designed to handle, provided appropriate staff, workspace, and budget are made available. The rest of those responsibilities are already scattered out among the various GoB agencies listed in Table 1. It is envisioned that those duties will continue as usual, but with greater collaboration among those agencies sharing IWRM responsibilities, this coordination being one of the key roles of the NIWRM Authority once enacted.

The NIWRM Act mandates that the Authority submit a National Water Resources Master Plan for Belize as described and including the components named. The Act also calls for detailed information on all of the major surface water bodies and implies the need for more detailed information on groundwater resources, particularly identifying and protecting recharge areas (which include wetlands). These are very extensive tasks that require ample time to complete. Further, each of these initiatives, the Master Plan and rapid assessments of each major watershed and water bodies, requires teams of experts and field/lab technicians specializing in a range of water-related fields. A key step in developing these components is actual on-site consultation with community-based stakeholders, including small-scale farmers, large-scale farmers, businesses, and corporations. Only with the involvement of such a wide range of people can a Master Plan actually address the issues, engage stakeholders, and make progress toward achieving the mission of the Authority.

It is very possible to achieve these mandates because Belize has a history of rapid assessment, documenting baseline descriptions of many watersheds and water bodies around the country. There is a wealth of mapped, GIS-based, and documented information on Belizean fauna, flora, ecology relevant to watershed-level assessment. This information is scattered in personal, GoB, and NGO hard copy and electronic libraries and on the internet, and needs to be compiled and archived in a central, generally accessible electronic library. Perhaps this is more a task for those experts employed by the National Library Service rather than for environmental agency technicians focused on other agendas.

There is also an under-utilized wealth of professional expertise within Belize and strongly affiliated with Belize from international locations around the world. Master and doctoral-level Belizean scientists, engineers, technologists, managers, and educators are returning from their academic pursuits abroad with the expectation of applying their skills and knowledge here. These are people who have been trained in the latest methodologies, have experience with the more recent tools and capacities, and who are up to date on the latest theories, strategies, and challenges.

The analytical capacity of the country is growing as water quality laboratories are being established in GoB agencies, the University of Belize (Faculty of Science and Technology), and private companies. Laboratories are being upgraded with new and higher capacity equipment. Technicians are receiving more training, and initiative is underway to collaboratively move toward achieving standardization of methodologies and pursue certification.

Mechanisms Supporting Water Resources, Biodiversity Monitoring and Conservation

Belize has ratified about 30 major international conventions that address the protection of the environment and have relevance to IWRM in some capacity (DoE, 2013). The primary conventions include:

- The Convention on Wetlands of International Importance Especially as Waterfowl Habitat, 1971
- The Convention on the International Trade in Endangered Species of Wild Flora and Fauna, 1975
- The Convention on Biodiversity, 1992
- The Convention on World Heritage Sites, 1992
- The United Nations Framework Convention on Climate Change, 1992
- The United Nations Convention to Combat Desertification, 1994

One major convention that Belize has not endorsed is the Convention on Migratory Species, 1979. This is highly applicable to Belize given that the country lies within the primary migratory flyways and accommodates many migratory bird species (DoE, 2013). Other conventions deal with pesticides, hazardous chemicals, persistent organic pollutants, oil pollution, also highly relevant to IWRM.

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There are several key GoB initiatives, policies, plans, and acts that support IWRM initiatives. Some of these include the National Protected Areas Policy and System Plan, the National Forest Policy, and the Solid Waste Project (implemented through the Solid Waste Management Authority. The National Development Framework for Belize 2010-2030 (Horizon 2030) is important in promoting sustainable use of natural resources, sustainable development strategies, quality environmental impact assessment, effective waste management, comprehensive land use and zoning to protect vital ecological resources, reforestation initiatives, and wetland protection and management.

The 2014-2024 National Environmental Policy and Strategy (DoE, 2013) list various other national policies and plans that support directly and indirectly IWRM that focus on climate change adaptation, sustainable land use, energy, tourism, and poverty alleviation. The Belize National Climate Change Policy (MFFSD) encourages development of IWRM programs for watersheds, protecting catchments and groundwater resources, restoration of ecosystems, prevention and control of pollution, and for introducing water harvesting as a strategy. Prominent that has been drafted addressing national PAs, integrated chemicals management, and fisheries resource management, and several acts passed, including the National Integrated Water Resources Act and amendments to the Environmental Protection Act.

Legal, Policy, and Institutional Framework related to Land Degradation.

Policies

National Land Use Policy (NLUP). The NLUP is the primary policy that outlines the intent and aspirations of the Government of Belize for the governance and management of land resources in Belize. The first NLUP and its accompanying National Integrated Planning Framework for Land Resource Development was completed in 2011. The vision was: *"A National Land Use Policy that guides Belize towards an environmentally and socially responsible use of land resources that enables national development".* The objective of the 2011 NLUP as stated therein, were:

1. To provide guidance and direction in institutional, economic and legal reforms that will lead to improved land governance at national, local and community levels while ensuring that land is put to its most suitable use,
2. To provide a participatory platform for the people of Belize to partake in decision making regarding the use of, and equitable access to, land resources through an accountable and transparent process;
3. To establish a firm and consensual basis on which development can take place and provide maximum local and national benefit;
4. To facilitate economic growth and social progress by ensuring the development of land is founded upon feasible and sustainable grounds.

The 2011 NLUP expired in 2014 and work is presently underway for the elaboration of an updated National Land Use Policy and Planning Framework and an Action Plan for their implementation. An initial draft of the updated NLUP reflects various policy statements grouped into thematic categories, of which No. 9 pertains to Land Degradation. It is expected that process will be will be completed in the first half of 2019 and will serve to create an enhanced enabling environment for the implementation of the IMPLP.

National Agricultural and Food Policy 2015 – 2030 (NAFP). As stated in the NAFP, agriculture in the 'Bedrock of the Economy'; as such, the objective of the NAFP is to "provide an environment that is conducive to increasing production and productivity, promoting investment, and encouraging private sector involvement in agribusiness enterprises in a manner that ensures competitiveness, quality production, trade, and sustainability. The framework, therefore, provides a platform to guide the development of actionable proposals to transform the Agriculture and Food Sector into a modern pillar of economic growth and development in the country. The NAFP identified five pillars to aid in achieving the goal, objectives, and targets therein: a) Sustainable Production, Productivity and Competitiveness; b) Market Development, Access and Penetration; c) National Food and Nutrition Security and Rural Livelihoods; d) Sustainable Agriculture and Risk Management; and e) Governance Accountability, Transparency, and Coordination

In view of the fact that the geographic focus of the project is on production landscape in the BRW, where agriculture is a major economic activity (as well as for local livelihoods), the NAFP is of great importance to the IMPLP.

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National Forest Policy: The vision of the National Forest Policy (NFP) is "*a thriving and integrated forest sector, where the forests of Belize are valued for their significant economic, socio-cultural and environmental benefits, and are sustainably managed for the lasting benefit of the nation*". Objectives of the NFP are:

1. Enhance the quality and productivity of Belize's forests thereby ensuring environmental integrity and a sustained flow of goods and services to meet the development needs of the people;
2. Encourage the participation of all stakeholders in the planning and decision making process for effective protection, security, management and development of the forest resources;
3. Ensure equitable access to and use of forest resources by all persons within the confines of any over-riding public interest, acknowledging the equal and inalienable rights of all Belizeans;
4. Raise awareness and maintain a high level of consciousness among the public and government agencies on the functionality of forests and benefits to be derived from appropriate forest resource conservation and sustainable forest management;
5. Enhance applied research and investigation into all aspects of the forest's flora and fauna, including the influence of forest cover on the maintenance of water and soil resources, and the contribution of forest goods and services to the national economy, so as to provide for evidence-based management decisions;
6. Provide guidance for actions to be taken with regards to the direct and indirect threats posed by global climate change on forests and forest dependent people in order to reduce their vulnerability, increase their resilience and adapt to climate change.

Various strategies under the NFP are aimed at striking a balance between utilization of lands for the forest sector and for by other sectors that could be more productive there. The overall policy is conducive to addressing land degradation.

Legislation

According to the 2014 National Action Programme (NAP) of the United Nations Convention to Combat Desertification, the main laws that have a bearing on land management in Belize include:

National Lands Act – this law empowers the Minister with responsibility for lands to approve grants, titles and leases on such terms and conditions of occupancy and use at such rates as he deems fit. The law enables persons to achieve ownership of land through development, which includes removing and keeping clear of bush.

The Land Utilization Act - provides for the establishment of a Land Utilization Authority that advises on the subdivision of all land in Belize, among other functions.

Belize Land Development Authority Act - This Act provides for the appointment of an Authority to acquire and develop land and to enforce the pattern, restriction and extent of land use. It is administered by the Ministry of Agriculture.

Mines and Minerals Act - The Mines and Minerals Act29 is administered by Geology and Petroleum Department [GPD]. It governs the dredging and extraction of any non-renewable resources except for petroleum from land and in marine areas and

Forest Act - The Forest Act empowers the Minister with responsibility for forest to declare areas as forest reserves in an attempt to manage and protect the resources through controlling the removal of timber species and vegetation cover. This function is within the ambit of the Forest Department [FD].

Environmental Protection Act - This act provides the department with a wide range of responsibility including the continuous assessment of natural resources and pollution, the protection of the environment by monitoring development, control of littering and pollution, collaboration of other institutions to ensure protection of the environment, among others.

Institutional Framework

The institutional framework for matters pertaining to land degradation can be considered a subset of the larger institutional framework for land utilization in Belize. As shown in the subsection above on legislation, the responsibility for allocation, titling and sub-dividing of lands falls under the purview of the Ministry of Natural

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Resources, via its various departments and units. The Ministry of Agriculture, via the Belize Land Development Authority Act, is empowered to *acquire and develop land and to enforce the pattern, restriction and extent of land use*. Indications are that whereas the Act provides for an Authority to carry out the responsibilities as per the Act, no such Authority is presently in operation.

Once lands have been issued, planned developments that meet a certain threshold must first undergo an environmental screening. Thereafter, an EIA may/may not be required. An EIA that is approved is followed by an Environmental Compliance Plan (ECP) agreed to by the developer and the Department of the Environment. The ECP sets the requirements that must be met by the developer, for example, no clearing of slopes above 25^{o}. Thereafter, the DoE carries out monitoring and enforcement of the ECP.

There is no formal mechanism in place to coordinate actual utilization of lands, i.e., to lead measures to avoid land degradation/promote sustainable land management. There is however, provisions in the NAP for the appointment of a seventeen-member National Coordinating Body by the Minister responsible for Natural Resources.

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Annex M: Target landscape profile

Location and Description of the Belize River and Its Watershed

The BRW, shared between Belize and Guatemala, is comprised of a number of sub-watersheds of which the most important are the Mopan, Macal, Roaring Creek and Labouring Creek. It is estimated that approximately 71% of the watershed is located in Belize. The **Upper BRW** is characterized by forest cover of 89% because of the large network of PAs. The Macal sub-watershed has an estimated area of 129,341 ha or 84% of watershed surface in PAs while 100% or 104,439 ha of the Chiquibul River sub-watershed is protected. The deforestation rate within the Macal sub-watershed is 0.23 %/year, the lowest within the entire BRW; consequently, the Upper BRW is the least degraded part of the BRW. Aside from PAs, the main economic activities in the upper BRW are sustainable timber extraction, tourism and hydro-electricity generation.

In addition to the high level of PAs coverage in the upper BRW, illegal transboundary incursions for traditional agricultural and livestock (cattle) encompass around 5% of the surface area. The main threat in this area is therefore the illegal incursions from Guatemalans who engage in a number of illegal activities including farming, gold mining, hunting, looting and logging. In 2016, 134 illegal active agricultural fields (pasture and crops), covering 730 ha, were documented in the Chiquibul National Park; this is 338 ha more than in 2015. Within the larger Chiquibul forest, over 156 patches or forest, covering 532.42 ha was cleared in 2017. This suggests that despite management presence in PAs, the agricultural incursions move to areas with minimal enforcement. Continued forest degradation also continues in the VFR, including a section that is adjacent to the Macal River (Fig. 7), where over 1,700 ha were deforested in recent years (FCD, 2013). In addition to the illegal gold mining by Guatemalans, there has been some impact by a legal mining operation in the region. While this operation was initially small, in 2018 an Environmental Impact Assessment (EIA) was approved for expanded activities. It remains to be seen what the impact of the expanded operations will have. In the lower parts of the Upper BRW, the Macal River includes three hydro-electricity facilities that influence water flow, volume, water quality, biodiversity and human health due to the high levels of methylated mercury (> 0.5 mg/kg), and sediment transport.

The **Middle BRW** encompasses all municipalities and communities from the border with Guatemala to Belmopan, inclusive of the twin towns of San Ignacio and Santa Elena and areas such as Spanish Lookout, Valley of Peace, and Banana Bank, Barton Creek and Labouring Creek sub-watersheds. The estimate population is approximately 50,000. Major economic activities include tourism, large scale mono-cropping agriculture and vegetable production. The Middle BRW is the most degraded part of the BRW due to the increasing agricultural development and expansion. Agricultural expansion is the single largest threat to land degradation in the Middle BRW, where over 45% of the watershed surface is being used for intensive and mechanized agriculture for livestock (small and large), grains (corns and beans), and sugar cane. This degradation is primarily because of the scale of these activities and the fact that land degradations is often exacerbated by mono cropping and not necessarily because the area is unsuitable for agricultural activities.

Agricultural expansion for grains/crops and livestock have resulted in significant destruction of riparian forests throughout the Middle BRW resulting in increased erosion, sedimentation, decline in water quality and loss of biodiversity. In this area, the majority of riparian forests has been lost or is severely degraded. Consequently, this area of the BRW is under significant threat from riparian deforestation, overgrazing, pollution from pesticides and fertilizers and increased sedimentation, wetland degradation and water extraction for irrigation and water diversion in the case of Santander Farms. The recent acquisition of almost 55,000 acres (22,267 ha) of land by the Spanish Lookout Community Corporation Ltd. seems to suggest that deforestation will increase in this section of the watershed. Additionally, deforestation due to large-scale agriculture expansion has resulted in adjacent land holdings being more adversely impacted by stronger winds as natural windbreaks have been destroyed. Anecdotal evidence also seems to indicate that the microclimate in the area has been undergoing some small, but significant changes. Whilst the major impact of the industrial agriculture expansion to date has been due to land conversion (primarily clearing of broadleaf forests) and erosion (bank failure) due to clearing of riparian forest, farmers in Valley of Peace Village indicate that they have observed decline in soil fertility in lands that have been under cultivation over the past three decades. Over the past decades there has been an increase in the population in the BRW. Anecdotal evidence indicates that this increase has been in part due to refugees being granted permission to settle in the region in the 1980's, local migration to the area for employment purposes, and recently an influx of workers from neighboring

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countries to work on farms such as Santander. The result has been clearing of additional lands for housing and related purposes. Additionally, rural and urban growth results in increased wastewater, which affects soil and water resources.

The **Lower BRW** encompasses the section east of Belmopan to Belize City, the main commercial hum of the country, and comprises 26 communities with an estimated population of 66,000. This region is characterized by predominance of urban, coastal wetlands and savannas; however, significant riparian buffer degradation also exists. The alluvial plain located between Belmopan and the wetland of Crooked Tree is characterized by small farms producing basic grains and artisanal livestock, with the exception of Big Falls Farm, which is a relatively large cattle company.

Some of the ecosystem remnants of the lower reaches of the watershed are highly important in their role as biological corridors, allowing connectivity among PAs in the western and southern Belize (including the Maya Mountains) with PAs in northern Belize (Rio Bravo) (Figure 1). The Central Belize Corridor (CBC) is located within the lower reaches of the BRW. The CBC is considered an important corridor because it provides biological connectivity to the Belize NPAS; connecting Belize's two largest forest blocks: the privately managed northern forest block (Rio Bravo Conservation and Management Area KBA, Yalbac, Laguna Seca and Gallon Jug) and the Maya Mountain Massif KBA in the south. In addition, it includes other KBAs as the the Crooked Tree and associated wetlands.

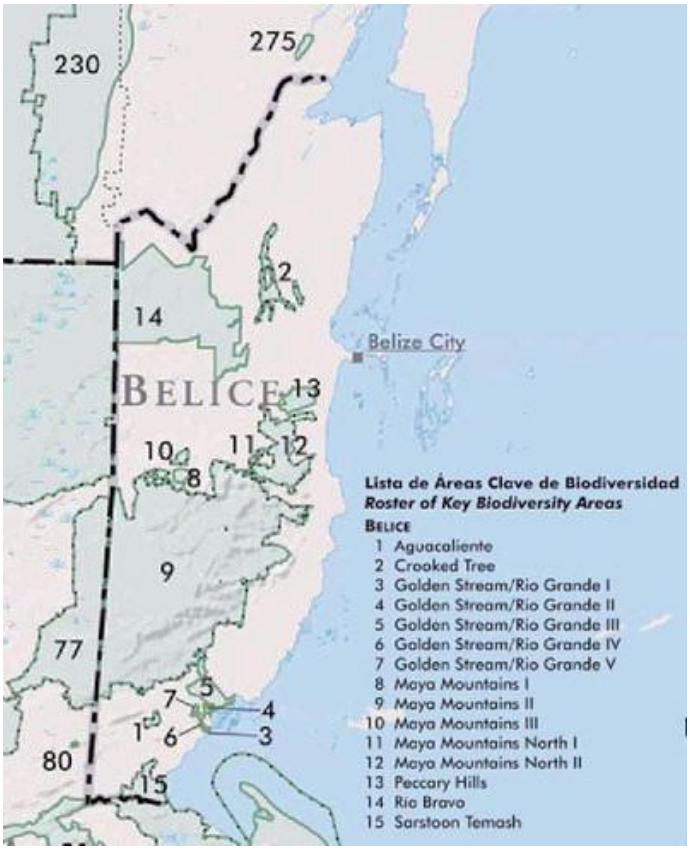


Figure 1: Belize's KBAs

As with the Middle BRW, the upper portions of the Lower BRW are comprised of soils that are suitable for agricultural activities and have low land degradation potential. In recent years there has been rapid expansion of large-scale agricultural activities via such farms as Big Falls Farm and Belize Sustainable Agriculture Limited (BSAL). In other portions of the Lower BRW, there is high rate of bank river failure related to the high rates of riparian deforestation occurring within the Community Baboon Sanctuary (CBS). Importantly, this area falls within the critical Central Biological Corridor. Unlike the area between Spanish Lookout and Big Falls, the agricultural expansion in the lower parts of the BRW, i.e. between Big Falls and Flowers Bank, within the CBS, is characterized by small-scale agriculture and cattle ranching.

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Of the 289 livestock producers in the Belize District, approximately 30 of these live in the Belize River Valley region. These producers estimate that altogether they are rearing some 1,500 animals on approximately 1,215 ha of land. The challenges faced by these farmers are numerous and whilst in recent years there has been some investments to improve management practices, e.g. forage banks, better watering systems, etc., the fact that the ratio of pasture to animals is about 2:1, as compared to the generally accepted ratio of 1:1, indicates that there is much room for improvement. Sub-optimal management practices, access to water, etc. results in reduced productivity and increased stress on soils, riparian forests, etc.

Land degradation situation in the Belize River Valley is directly linked to the development of the communities some of which were established in 1800's and 1900's. During the time when the log-wood industry was active in Belize, the labourers would travel up-river cutting trees and as they moved, settlements would be established. Survival in part depended on slash-and-burn farming for planning of corn, rice and other staples. Once these were harvested, the area would be allowed to turn to grassy areas for pastures by natural processes. At that time, there were no consideration for leaving trees for shade, recycling of nutrients, etc. as leaving trees were considered wasting good land.

Notwithstanding the fact there is abundant alluvial deposits in these flood plains, over time the soils have gotten extremely degraded due to the original slash-and-burn, overgrazing, etc. Moreover, there has been limited attention to planting improved and climate tolerant varieties of grass and other practices such as forage banks, inputs into the land, etc. The impacts of degraded lands have been compounded by erratic weather patterns (severe and/or prolonged dry periods, extreme rainfall and flooding and increasing temperatures). While the low productivity due to land degradation has been affecting ranchers, another issue that has been emerging over the past decade is the invasion by *Mimosa pigra*. As a leguminous species, *M. pigra* thrives well in degraded land and is extremely difficult to eliminate. As it is not eaten livestock, at times some pastures have had to be abandoned.

Land Use Land Cover

Between 1980 and 2010, agriculture expansion in the BRW was approximately 44,110 ha while forest cover decreased in approximately 81,456 ha. Data for 2016 from the University of Belize indicate that forests cover approximately 68% of the BRW while agriculture covers 21%. The remaining land is covered by savannas (7%), urban areas (2%), water bodies (1%), and other land uses (1%) (Figure 2). Most of the expansion of agriculture over the past 16 years, and even more so in the past five years, has been in the middle and lower portions of the watershed, primarily by large land holders. These large operations are primarily for the export market and fit in well with the national macro-economic environment of growing the economy in part through the agriculture sector.

Erosion and Soil Loss

IARNA (2014) estimated water erosion in the BRW using the Revised Universal Soil Loss Equation (RUSLE) that relies on assessing the loss of average annual soil per unit area (tons/ha/yr) caused by water phenomena (e.g., runoff and impact of raindrops). At the level of the BRW, soil loss potential varies throughout the watershed and ranges from 0-6,612 ton/ha/yr (Figure 3) with an average loss of 12.4 ton/ha/yr that is considered high (IARNA, 2014). Of note, 60% of the BRW is classified as "very low" (< 2 tons/ha/yr) for erosion potential, while 20% is ranked high (10-50 tons/ha/yr), 2.3% very severe (100-500 tons/ha/yr) and only 0.3% ranked as catastrophic (> 500 tons/ha/yr). Within the level of the sub-watersheds, the erosion potential is ranked high Chiquibul River (25.4/tons/ha/yr), Roaring Creek (20/tons/ha/yr), for Barton Creek (17/tons/ha/yr) and Macal (15/tons/ha/yr) and moderate in Middle Belize River sub-watershed (5/tons/yr).

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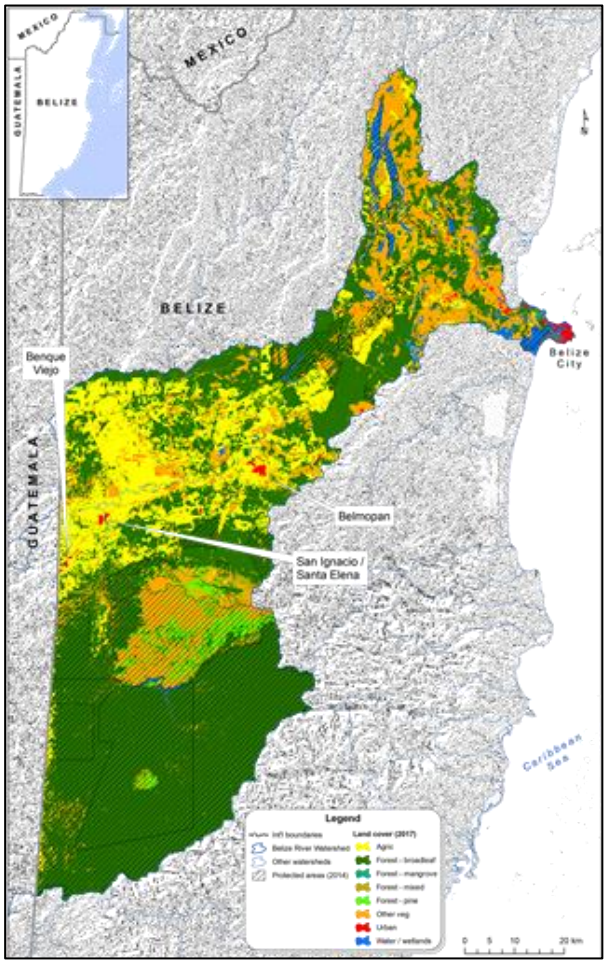


Figure 2: Land Use and Land Cover in the BRW.

While the erosion potential is lower in the middle BRW, mainly because of topography, the high degree of agricultural development and expansion in this area increases the erosion potential as is evidenced by the high rate of bank failure within the middle and lower sections of the BRW as well as the high rates of runoff. IARNA (2014) characterized the Middle and Lower part of the BRW as 'very high' run off potential in the area adjacent north of Spanish Lookout, Belmopan and More Tomorrow, while the lower section is characterized by 'high' to 'moderate' runoff potential.

Water Resources

The BRW, essentially a land/water integrated ecosystem, can be divided into several general and convenient units based on topography, geology, ecological characteristics, and resource use patterns. These watershed units are proposed in consideration for the need to focus on human-induced stressors threatening biodiversity and ecosystem services of the watershed, the challenge to identify the key geographical area where impact is the most severe, and implement strategies for intervention actions that can have the greatest positive impact. Watershed units are clustered under the broad categories of Subsurface Waters and Surface Lotic Waters, and Surface Limnetic Waters, recognizing that these units are actually strongly interconnected and overlap, sometimes over wide ecotones.

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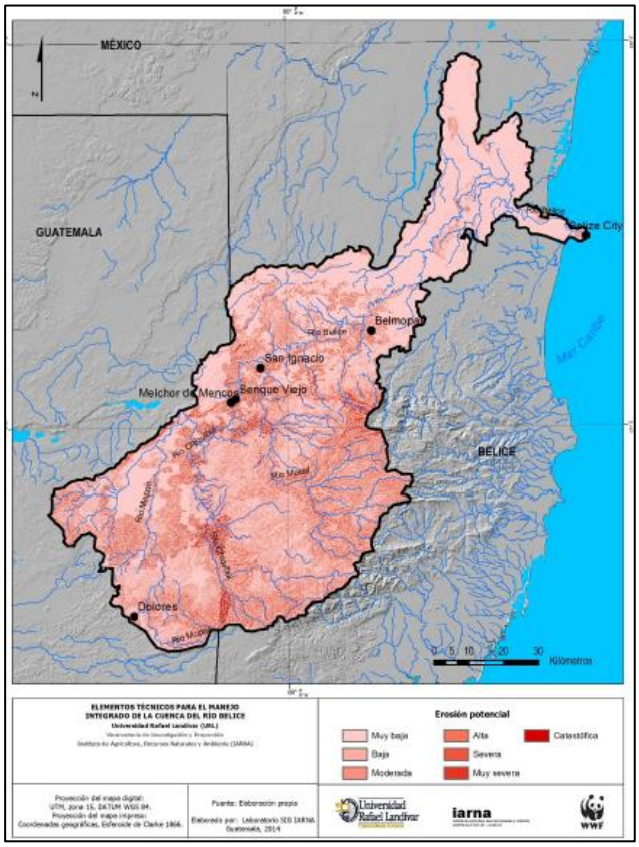


Figure 3. Soil Loss Potential for the BRW.

Subsurface Waters: Unconfined aquifers have a very large recharge zone, the soil cover of the landscape. Soil water that percolates through soil layers to reach the water table becomes part of the unconfined aquifer. Wetlands often contribute water to these unconfined aquifers, often occupying low areas where the water table rises above the soil. Because of the vastness of the unconfined aquifer recharge zones within this agricultural landscape, and the shallowness of the water table, this subsurface water resource is subjected to significant pollution input. Unconfined aquifers include perched aquifers such as formed by clay pans beneath some wetland savannas. These aquifers discharge into surface waters during the dry season and absorb and store infiltrated waters during the wet season.

Confined aquifers are subsurface waters contained in porous layers of rock or sediments sandwiched between layers of non-porous or less porous sediment or rock layers. These aquifers are recharged at sites where the porous layer is exposed at the surface, typically through geologic uplift. We have several confined aquifer regions in Belize but these are poorly known and their recharge zones are not adequately identified. Often confined aquifers contain water that may have infiltrated and remained in porous layers for tens to hundreds of years, with movement through the aquifer medium being slow. Contamination can occur where the porous layer is exposed and pollutants may take many years to move through the aquifer. Typically these aquifers are tapped by wells, some of which are used for irrigation water. We know very little about the yield potential and limits of draw-down for these aquifers, even as more villagers and farmers are drilling new wells and abstracting increasing volumes of water from these subsurface resources.

Lotic Surface Waters: Headwaters of the BRW include more acidic streams that drain the Mountain Pine Ridge (MPR), an area of uplifted and exposed granite intrusions dating from about 400 to 200 million years ago, and include the surrounding metamorphic rocks (slates, quartzite, marble) and remaining rock from the ancient uplifted seafloor (Sana Rosa Rock Group). These waters include the headwaters of Roaring River and the drainages entering the Macal River from its eastward side where the river wraps around the southern and western edge of the MPR. Headwaters draining the southern and western side of the Macal River and the headwaters of the Chiquibul River drain karstic landscapes, discharging into the Mopan River.

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The MPR is also referred to as an upland savanna, composed of pine trees, associated oaks and other woody vegetation, and an understory dominated by sedges and grasses and other plants similar to lowland savannas. Just as with the lowland savannas, this area is very fire-prone, a situation that is enhanced by the presence of large patches of the invasive running fern (*Pteridium caudatum*) that forms a thick layer of dead leaves beneath a layer of light green leaves, a fuel layer that greatly increases fire potential. Often being more acidic, waters draining the MPR typically erode limestone more aggressively, resulting in sinkholes and hanging watersheds at the base of escarpments.

Karst drainage basins typically support more broadleaf tropical forests. Karstic waters are typically more neutral to basic and contain large amounts of dissolved calcium carbonate and other carbonate minerals. Much of the water is flowing through karstic aquifers (solution channels and caves) and discharge into surface streams as cold, hard water. The Chiquibul drainage contains one of the largest cavern chambers in this hemisphere and one of the longest cave systems. It is actually part of the headwaters for the Mopan River. The western headwaters of the Mopan originate in low karstic hills within the Peten District of Guatemala.

Mid-reach river sections are typically wide but are generally shallow river reaches, at least during the dry season, and are often shallow enough and with enough break in the canopy above the river that aquatic plants can take root and grow. The terrain through which mid-reach sections flow is covered with the alluvial materials deposited by the river over eons. These reaches typically have flow patterns that include gravel/cobble riffles and cobble/boulder rapids separated by pools and runs, and some meandering. Riffles and rapids are also sites of water exchange with the hyporheic zone (the upper layer of unconfined aquifers that is typically rich in microbes and exchanges water with surface water bodies). An alluvial fan usually builds in upper mid reaches where the rivers leave the mountains and level out, depositing their load of sand and gravel at the base of the mountains or the break in slope.

Mid-reach river sections within the BRW include the downstream reaches of the Mopan River, Macal River, and Roaring Creek sub-basins, as well as the upper end of the Belize River Valley down to the area where the river is deeper, dominated by exaggerated meanders, and has very few rapids (roughly around the area of Big Falls Farm). The beds of these mid-reach rivers are typically cobble and sand and gravel overlying bedrock material which changes from granite in the upper end of the system flowing over the lower edge of the Maya Mountain pluton to limestone with layers of conglomerate material formed by gravel cemented together with iron oxides and calcium carbonate.

The lower reaches include the lower end of the watershed from the lower mid-reaches to the coastal zone, in the case of the BRW. This section of the watershed contains lotic waters that are typically deeper, and the river bed is covered in medium to fine sand. Meanders within the lower reaches are often very sinuous given the ease in which the finer sediments can be eroded and the large volume of water, accumulated from throughout the watershed, that is moving down slope. The lower end of the lower reaches flow into the coastal zone through the intertidal zone (that area from the highest reach of the high tides to the lowest reach of the low tides). This area includes estuaries, water bodies where freshwater and salt water meet and mix (mangroves, salt wedge estuary).

Lentic Surface Waters: Lentic or non-flowing surface waters include lakes, lagoons, wetlands, reservoirs (artificial lentic systems created by dams), and estuaries. Within the headwaters wetlands are not as extensive, often consisting of micro-wetlands within the MPR formed by rock seeps where subsurface waters seep out of horizontal cracks in the granite rock and pool in patches of saturated soils covered by a shallow layer of surface water. These areas are populated by small aquatic and semi-aquatic plants (*Uricularia* spp., small sedges and grasses, and sundew or *Drosera capillaris,* algae, and cyanobacteria). During the dry season, these small wetland patches dry up, leaving a black, brittle crust of algae, cyanobacteria and associated organisms.

Wetland areas expand in size moving downstream, and include large back pools that may form within low areas within the landscape, secondary channels, or around oxbow lakes created when river meanders separate from the main river flow. In sections where the river becomes braided, created by flowing water carrying an excessive amount of sediment that drops its suspended and bed load as flow slows down. This clogs the main channel, forcing water to carve alternative channels, some of these smaller channels becoming wetlands during the low water season. These wetland areas support a higher diversity of aquatic and semi-aquatic plants and will often build up into a densely vegetated system until removed by floodwaters. Karstic lakes and cenotes, such as the row of cenotes connected through Cenote Creek west of the Yalbac Hills, are often also found in the mid-reach sections. Whitewater Lagoon is a very unique lagoon/wetland system fed predominately by the discharge of subsurface waters, forming a very clear

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artesian wetland. Many of the wetlands formed in depressions and around oxbow lakes have been cleared within the agricultural landscape.

Wetlands and lagoons become far more extensive in the lower reaches. There are many more oxbow lakes lying adjacent to the lower river reaches, their edges surrounded by wetlands. There are also long abandoned channels left behind when the river changes it course. Oxbow lakes and abandoned channels tend to fill in over long periods of time as wetland communities slowly extend to the center of the water bodies. Eventually these systems may become forested. The lower reaches of the Belize River flow through a flood plain, many parts of this area being inundated by water during floods and high flow conditions. Depressions within the floodplain near the river often support wetland communities until the dry season converts these areas to terrestrial habitats.

An important wetland system includes Cox Lagoon, Mucklehany Lagoon, Cooks Lagoon, and associated swamp forests and marshes, connected to the lower Belize River through Mussel Creek. Wetlands within this area represent a hydrological corridor connecting the lower BRW to the lower Sibun River Watershed through Hector Creek and Hector Creek Lagoon.

Lowland savannas occur along the Belize River lower reaches. Upslope savannas are typically dry land areas, but those savannas occurring closer to the river and lagoons or that lie over perched aquifers may become saturated during the wet season as the water table rises, or even completely submerged, with terrestrial plants becoming dormant and aquatic and wetland plants thriving until the dry season.

Crooked Tree wetland system, surrounded by savannas, is the largest wetland complex within Belize and is a very important component of the BRW. It absorbs, retains, and slowly releases the floodwaters of the Belize River. It is the hydrological corridor linking the New River Watershed to the Belize River. This system is composed of several large lagoons surrounded by wetlands, and is an extremely productive system providing outputs to downstream communities. Included in this wetland system are blackwater steams, such as Black Creek that flows out of the Southern Lagoon. East of the highway is Mexico Lagoon and Jones Lagoon that are connected to the Belize River by Mexico Creek.

Forest Types Associated with the Water Resources of the BRW

Water resources must be considered in connection with the catchment basin within which they set and the forests that cover that catchment, or perhaps once covered the catchment. Several forest types are important in determining the water quality and quantity within a watershed stream network. Steep-slope forests occupy areas of the landscape that are often not used for agriculture, having soils that are relatively thin and nutrient poor, and that suffer from water stress conditions during the dry season. These forests are important for wildlife and they help stabilize the landscape, control erosion, and contribute to transpiration of rainwater. Steep slope forests include thin upland savanna/pine forest, cloud forests, and dry tropical broadleaf forests.

Valley floor forests are typically more productive, having thicker and richer soils. These forests are responsible for a large percentage of transpiration, trees essentially working as water pumps, pulling water from the soil and releasing it back to the atmosphere through leaf stoma. A healthy, forested watershed may effectively transpire a third or more of the precipitation back to the atmosphere, water that would have otherwise been transported by the drainage network.

Riparian forests are vital to maintaining many of the functions of a watershed drainage network, and protecting the integrity of that network. Riparian forests, the root soil matrix, and associated microbial communities are essentially the filter systems of the landscape. Nutrients, pesticides, and other pollutants conveyed by surface flow are reduced or eliminated as the water passes through intact riparian forests. Besides fortifying the stream bank, serving as wildlife corridors, providing wildlife foods during the dry season, and shading streams and river edges, riparian forests provide the bulk of detritus entering flowing water systems that serve as the base for detrital processing. Wetland forests, or swamps, are also very important landscape components, as discussed earlier.

Climate Change and Water Availability

IARNA (2014) estimated that the water balance (difference between water availability and value of consumption) within the BRW. Potential consumption was 321.15 million cubic meters with an average per capita availability of 19,849 m^3. The current water surplus within the BRW is 3,428.5 m^3, with the greatest surplus located in the Macal

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and Chiquibul sub-watersheds. However, climate change may have significant impact on the availability of water within the BRW with more pronounced impact at the level of sub-watersheds. It is estimated that by 2020 and 2050, temperature will increase by 1.4 degrees and 2.9 degrees resulting in a decrease of precipitation of 8.3% and 23.4% by 2020 and 2050, respectively.

The projected decrease in precipitation in the BRW is expected to reduce water availability within the BRW by 22.6% and 57.4% by 2020 and 2050, respectively with potentially serious economic and social impact. The water availability in the BRW will decrease from 3,428.5 m3 to 2529.6 m^3, a 26.2% decrease, by 2020 and by 2050, the water availability is projected to decrease further to 811.9 m^3, representing a 76.3% decrease from 2014 study period. A water deficit is projected to occur by 2050 in both the Lower BRW and Lower Mopan watershed by 2050 with potentially serious impact on livelihoods of communities as well as on agricultural and industrial users of water.

Within the proposed intervention area (Middle BRW), the water availability is expected to decrease by 21.4 and 53.2% by 2020 and 2050, respectively because of climate change. Similar reduction in water availability is expected to occur at the level of the sub-waters within the Middle BRW. Water availability in the Labouring Creek sub-watershed is expected to decrease by 27.7% by 2020 and by 63.1% by 2050. Similarly, Roaring Creek sub-water see experience a 21.7% and 57.3% decrease by 2020 and 2050, respectively.

The decrease in water availability within the BRW will have serious implications on the per capita water availability. By 2020, the per capita water availability will decrease from 19,849 m^3 to 10,236.3 m^3. By 2020, the per capita water availability would decrease 2,889.3 m^3, representing an 85.4% decrease since 2014. Accordingly, groundwater assessment to identify aquifer and recharge areas are critical to improve decision making related to water use. Within Belize, the lower Mopan, Labouring Creek and Lower Belize River sub-watersheds will be most impacted.

Identification of Priority Areas for Conservation and Restoration in BRW

Introduction

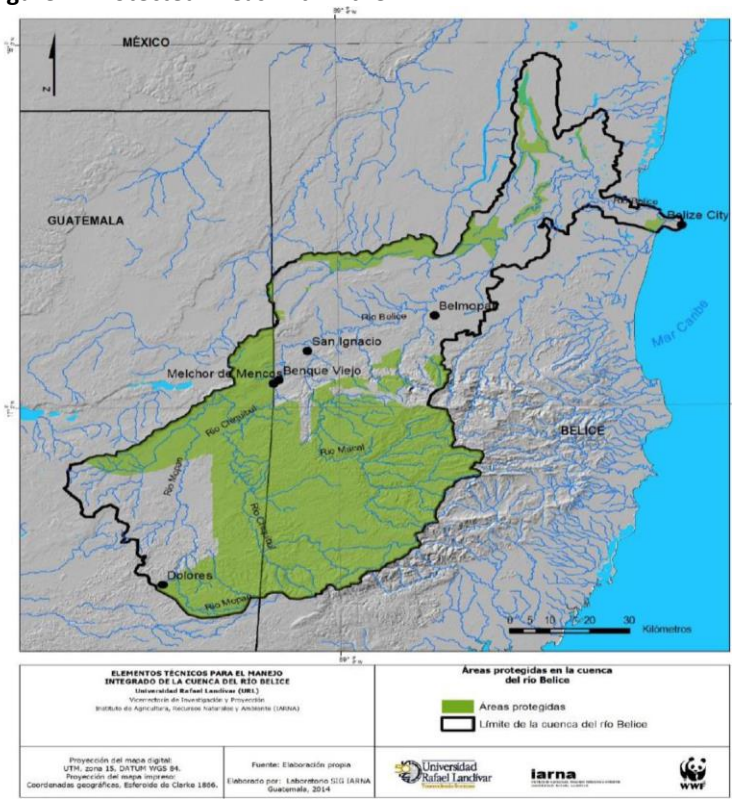
The BRW, based on previous work (IARNA79, 2014), has been divided into the three sections: the Upper watershed, middle watershed and lower watershed.80 The Upper watershed comprises the Macal and Chiquibul watersheds and encompasses 14 communities with an estimated population of almost 21,000. The upper watershed, on the Belizean side, is well protected with almost 90% in protected areas (Fig., 1). The middle watershed extends from the Guatemala border to Belmopan, includes both the Barton Creek and Labouring Creek sub-watersheds, two major towns (Santa Elena/San Ignacio) and 56 communities with an estimated population of almost 50,000 while the Lower watersheds encompasses that section of the river from Belmopan to the river mouth in Belize City which comprises 26 communities with an estimated population of 66,000 persons.

[79] Instituto de Agricultura, Recursos Naturales y Ambiente, Universidad Rafael Landivar

[80] IARNA, 2014. Technical Elements of Sustainability for the Integrated Management of the Transboundary Belize River Watershed. World Wildlife Fund

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Figure 1. Protected Areas within the BRW



For the project "**Integrated Management of Production Landscapes to Deliver Multiple Global Environmental** Benefits," (The Project), it is recommended that we adopt IARNA's categorization of the BWRS to allow easy reference and harmonization with previous and ongoing work (e.g., WWF-UB Belize River Watershed Management Plan).

The following sections identify important areas articulated in the PIF regarding key components of the SLM and Biodiversity components:

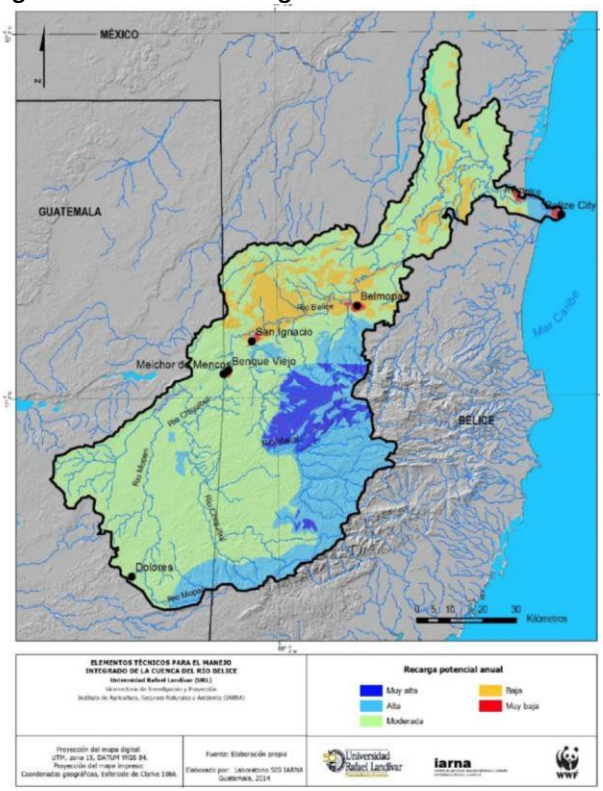
Recharge Areas

In terms of BRWS recharge areas within the Belize portion of the BRWS, the Maya Mountains and Mountain Pine Ridge ranked very high (> 300/mm/yr) and high (100mm- 300mm/yr) as recharge areas because of soil type and high forest cover (Fig. 2), while the Middle and Lower Sections were ranked very low (< 2mm/yr), low (2-20mm/yr) and moderate (20-100mm/yr) as recharge areas.81 However, the latter section of the watershed is the most degraded from deforestation from agriculture and urbanization (IARNA, 2014).

[81] IARNA (2014) calculated potential recharge areas by subtracting the flows from current evapotranspiration and runoff.

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Figure 2. Potential Recharge Areas BRWS



IARNA (2014) estimated that the potential recharge for the BRWS is 105.2 mm/yr. Of this amount, the Macal River sub-watershed (237.7mm) and Roaring Creek (156.8mm), Chiquibul River (140.2 mm) constitute 12.5% and 7.8% or the recharge potential, respectively.

Despite the fact that groundwater provide 95% of the supply to Belizeans, it has never been systematically studied throughout the country (Ballestero, et. al, 2007), except for the recent study to map groundwater in southern Belize (Stibitz, et. al, 2014). In terms of the BRWS, no such studies exist (Ed Boles, personal communication).

According to Boles (personal communication) and IARNA (2014), knowledge of groundwater recharge areas of the BRW is poorly known. Despite the obvious presence of unconfined and confined aquifers, inferred by presence of wells, no maps exist for aquifers or aquifers boundary, or aquifer recharge zones (Boles, 2018). Effective IWRM necessitates the identification or groundwater so as to better inform SLM activities within the watershed. As such, it is recommended that the project, in the first 6 months, commission a groundwater assessment or recharge site survey, similar to Stibitz, et. al, (2014) of the priority areas within the BWR, particularly in the areas ranked high for intervention/restoration or that have high human impacts from agriculture, pesticides and herbicides that has potential to pollute groundwater source.

Groundwater assessment and the identification of recharge zones are key component to enhance the resiliency to climate change within the BRWS. According to Boles (2018, unpublished), groundwater are integral components of watershed because of the contribution to baseflow that maintains flow of streams and rivers in the dry season. IARNA (2014) projected that by 2020 and 2050, precipitation in the BRW will decrease by 8.3% and 23.4% with serious implications for water availability. Consequently, it is imperative that the groundwater and recharge areas are identified and mapped, threats identified and mitigated in an effort to improve resiliency to changing precipitation levels.

BRWS Baseline Erosion Rates

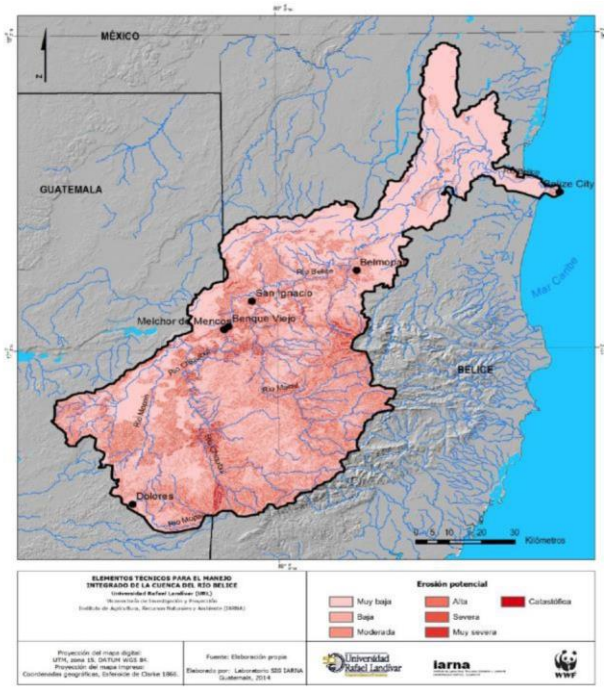
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IARNA (2014) estimated water erosion in the BRW using the Revised Universal Soil Loss Equation (RUSLE82) that relies on assessing the loss of average annual soil per unit area (tons/ha/yr) caused by water phenomena (e.g., runoff and impact of raindrops). At the level of the BRW, soil loss potential varies throughout the watershed and ranges from 06,612 ton/ha/yr (Fig. 3) with an average loss of 12.4 ton/ha/yr that is considered high (IARNA, 2014). Of note, 60% of the BRW is classified as "very low" (< 2 tons/ha/yr) for erosion potential, while 20% is ranked high (10-50 tons/ha/yr), 2.3% very severe (100500 tons/ha/yr) and only 0.3% ranked as catastrophic (> 500 tons/ha/yr).

Within the level of the sub-watersheds, the erosion potential is ranked high Chiquibul River (25.4/tons/ha/yr), Roaring Creek (20/tons/ha/yr), for Barton Creek (17/tons/ha/yr) and Macal (15/tons/ha/yr) and moderate in Middle Belize River sub-watershed (5/tons/yr).

As previously, discussed 89% of the watershed surface of the Upper Macal and Mopan watershed are in protected areas and have 89% forest cover (IARNA 2014). While the erosion potential is lower in the middle Belize River watershed, coupled, with the degree on intervention, this area is very susceptible to increase erosion.

Figure 3. Soil Loss Map Belize River Watershed



The recent Human mapping exercise conducted as part of the BWR Management Plan process, identified significant bank failure/erosion from Laboring creek to Isabella Bank in the Belize River Valley (Ed Boles, personal Communication) that includes the villages (Big Falls to Flower's Bank) within the Community Baboon Sanctuary (Boles, personal communication). **Importantly, this area falls within the critical Central Biological Corridor**. This is consistent with previous work (Wyman, 2008; that mapped riparian deforestation with the CBS at 120 meter buffer (Fig 4). Between 1989-2004, the CBS experienced a 30% deforestation rate (Wyman and Stein, 2010), particularly along riparian forests.

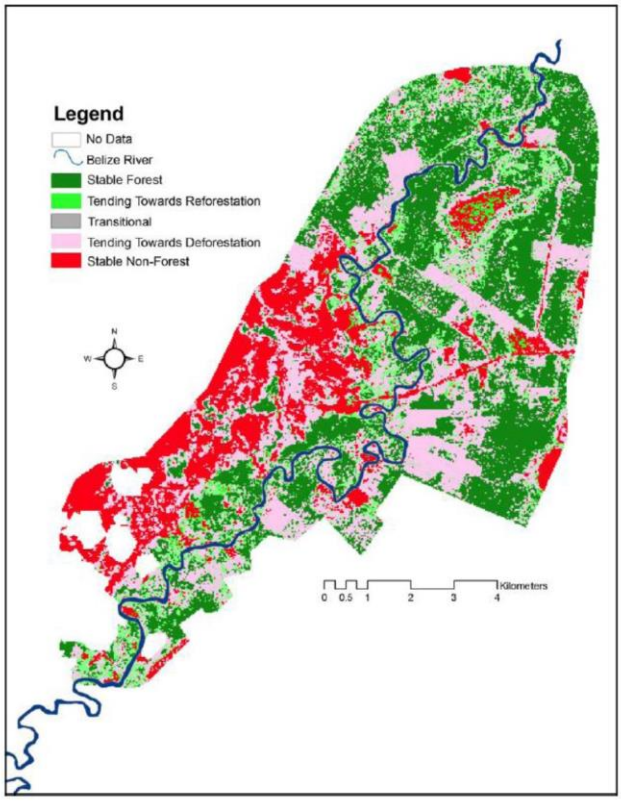
Wyman (2008) found no significant different in deforestation rates in riparian forest inside and outside the CBS. It would be instructive to compare the human impact mapping analysis that identified bank failure with Wyman and Stein (2010) map to better understand the relationship between riparian deforestation and bank failure/erosion.83

[82] RUSLE was also used in assessing erosion in the Rio Grande watershed in southern Belize (Chicas, 2017)

[83]The BRW Management Plan is not publicly available as yet; as such, the specific locations of bank failure are unknown at this time.

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Fig 4. Land Cover Change in CBS



Source: Wyman and Stein (2010).

Based on the increasing land degradation and deforestation occurring near the Labouring Creek/Big Falls area by Santander Farms and the high rates of Bank failure and riparian deforestation occurring within the CBS, the impact area for intervention/restoration should be extended to encompass the entire section of the river within the CBS, even though at the watershed level, IARNA (2014) ranked the erosion potential of the Laboring Creek sub-watershed (<2.5/tons/yr). Interventions should leverage the ongoing management efforts of the CBS.

State of Degradation of Soil and Water Resources in BRW

IARNA (2014) conducted water quality index at 11 sites within the BRW, with six (6) of those sites located within Belizean territory (Fig. 5). The WQI parameters used in the assessment included: pH (unit of pH), dissolved oxygen (% saturation), BOD (mg/L), turbidity (NTU), phosphates (mg/L P), nitrates (mg/L NO3-N) and total dissolved solids (mg/L). In general, the Water Quality Index (WQI)[84] at the level of the watershed ranked medium in Bermudian Landing (WQI =61.41) to good (WQI =80.78) in Upper BWR watershed. However, the generalization of these results are constrained because they are based on one sample at one point in time. (NEED TO GET BWS AND BOWEN DATA OR HYDROLOGY DEPT). Meerman et al., (2013) took water quality samples in the laboring creek that drains into the Belize River. CODs range from 6-16, cholrine 0.02, Dissolved oxygen (4.36-5.62), nitrate (0.9-1.8), pH (7.7-7.9), phosphate (1.48-1.97) and sulfate (6-600).

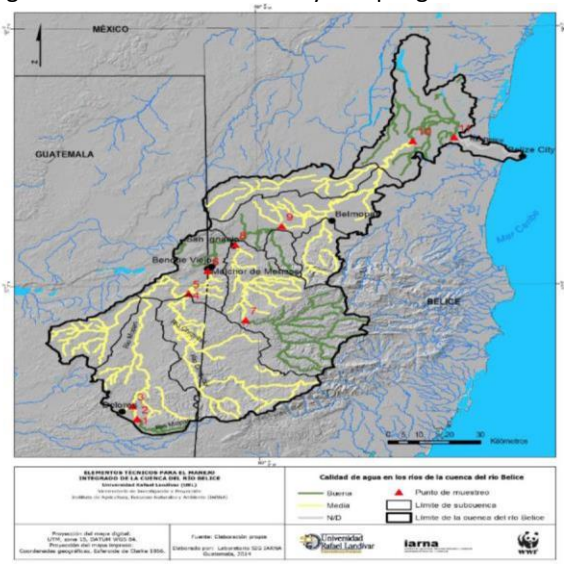
Within the middle BRW, the municipalities of Santa Elena/San Ignacio lack sewage facilities completely while only a portion of Belmopan city is connected. Nevertheless, the sewage system drains into sedimentation tanks that discharges into the Belize River via Mount Pleasant Creek resulting in health implications and fecal contamination of

[84]The WQI was calculated using the following parameters: pH, conductivity

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the river water. The situation is similar in Belize City where only 60% of the city is connected to the sewer system (BWS, 2018).

Fig 5.Location of Water Quality Sampling Stations



Identification of Priority Sites with BRW

In terms of the livelihood indicators, the Upper Watershed, in Belize, has a forest cover of 89% mainly because of the extensive protected areas network and effective management by co-managers such as Friends for Conservation and Development (FCD). Only 5% of this area, mainly in the lower reaches, comprises agricultural/livestock, which supports 14 communities and a population of over 20,000 people. Alternatively, the Middle Watershed, extending from the border to Belmopan, is heavily degraded, especially in the Spanish Lookout area (landscape?), with only 57% forest cover. This area has the highest intensity of agriculture with 33% of the surface area modified (27% in agriculture and livestock, 6% mechanized agriculture) even though it supports 56 communities with a population of almost 50,000 residents. The Lower Belize Watershed has a forest cover of 72% supporting wetlands that comprise 6% of its surface area and supports almost 70,000 people. Approximately 6% of the surface area is being used for traditional agriculture/livestock farming and mechanized agriculture, particularly near Big Falls (IARNA, 2014). At the level of the Belizean portion of the BRW, 22% or 1,315 km2 is under agricultural production in 2016.

IARNA (2014) also classified the three sections of the BRWS based of two types prioritization scenarios: conservation and restoration - both of which are key outcomes of this Project. In terms of conservation priority, the Chiquibul and Macal sub-watersheds ranked **high** on conversation index with a forest cover of 89%. Within the Macal subwatershed, over 80% of the surface area is within protected areas. The sub-watershed has the lowest deforestation rate (0.23%/yr) of all sub-watersheds with in the BRW and as such, this sub-watershed is one of the most important recharge areas for the BWR. It provides critical environmental goods and services such as carbon sequestration, nutrient cycling, and maintenance of hydrological cycle. The lower Macal sub-watershed is impacted by three hydroelectric dams and deforestation from small agricultural and livestock land uses adjacent to Cristo Rey and San Antonio communities.

The lower end of the Mopan watershed is threatened by agricultural incursions and tourism development (that is not adequately planned?), especially near San Ignacio and Santa Elena. The Chiquibul River Sub-watershed, on the other hand, is transboundary. The Belizean side, however, is well protected because of the network of protected areas. As discussed above, the primary threats include illegal gold mining, illegal farming, hunting and logging. Similarly, Barton Creek, Laboring Creek, and Roaring Creek subwatersheds were ranked **medium-high** on the conservation index. Alternatively, the Chiquibul River, Lower Mopan River, Middle Belize River sub-watersheds ranked **high** for intervention/restoration with Barton Creek, Laboring Creek, Roaring Creek and Lower Belize River ranked **medium-high.**

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The Middle Belize River Sub-watershed is the most degraded part of the BRW and encompass municipalities of Santa Elena/San Ignacio, the Spanish Lookout community and Santander Farms and Belmopan. San Ignacio/Santa Elena correct lacks any sewage treatment facility; as such, this areas represents an important source of pollution into the Belize River. The situation is similar in Belmopan. Within the Middle section, however, significant riparian deforestation and degradation extends from Calla Creek on the Mopan River to Big Falls on the Belize River, with the greatest area of impact in and adjacent to Spanish Lookout down to Big Falls. The majority of riparian forests between Calla Creek and Branch mouth has been lost of severely degraded (Boles, personal communication). Lower down river, agriculture (livestock, grains, potatoes, corn, beans and sugar cane) comprise over 45% of the watershed surface and includes intensive and mechanized agriculture (IARNA, 2014). The riparian forests are highly degraded and in some instances 100% deforested (ED Boles, personal communication). Consequently, this area of the BWR is under significant threat from riparian deforestation, overgrazing, pollution from pesticides and fertilizers and increased sedimentation, wetland degradation and water extraction for irrigation and water diversion in the case of Santander Farms. The recent acquisition of almost 55,000 acres of land by the Mennonites suggest that deforestation will increase in this section of the watershed (Tunich Nah Consulting and Engineering, 2014).

The Lower Belize River Watershed, from Belmopan to Belize City, according to IARNA (2014), also encompasses the Labouring Creek Jaguar Corridor Wildlife Sanctuary (LCJCWS) that is a part of the Central Belize Corridor, an area comprising over 750 km2 of private lands, communities and protected areas and that extends into the Community Baboon Sanctuary (Fig. 6). The CBC is a part of the Mesoamerican Biological Corridor; it is considered the most critical and important corridor in Belize because if provides connectivity between Belize's two largest blocks of forests: Rio Bravo Conservation and Management Area and the Maya Mountain Massif. Further downstream, the Lower Belize River Watershed also encompasses the Crooked Tree Wildlife Sanctuary, a RAMSAR site, that plays critical role in flood control, water filtration, ground water recharge and the provision of livelihoods.

Fig 6. Central Belize Corridor



Areas for Intervention

Based on IARNA (2014), and the ongoing BRW management plan (2018), the priority areas for conservation and restoration has been identified (Table 1). In an effort to ensure both scale and impact on intervention, it is being recommended that this project focus on the area in the Middle Belize River Watershed from Succotz village to Big Balls and a small portion of the Lower Belize River Watershed from Big Falls up to Flower's Bank Village in the Community Baboon Sanctuary. The latter is key to mitigate the increasing level of deforestation, riparian deforestation and high levels of bank failure as identified in the human mapping exercise as part of the BRW Management Plan project.

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Within this area, specific restoration/conservation efforts should focus on the following areas based on google earth imagery, deforestation trends, inclusive of riparian forests: Calla Creek, Spanish Lookout, Santander Farms, Banana Bank, More Tomorrow and Big Falls.

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Table 1. Priority Areas for Conservation and Restoration in the Belize River Watershed

Watershed Area	Priority	Threats	Focus	Importance	Intervention Level
Macal [8]	high	Agriculture near main municipalities; erosion in lower parts	**Conservation**; 84% in PA; deforestation rate of 0.23%/yr - lowest of all watersheds ; located IN Belize	EGS & regulation of hydrological cycle; upperparts in main recharge areas for BRWS	**Low**; however, lower Mopan area high level of intervention needed (52.91 PI); wastewater discharge near municipalities source of pollution
Middle Belize Watershed (Guatemalan Border to Belmopan) -		High level of agricultural impacts (grain, riparian forest deforestation, overgrazing etc	**Restoration** esp. from Calla Creek to Belmopan extending to Big Falls intervention/restoration; subareas - Laboring	Recharge areas, regulation of hydrological services;	**High** - restoration esp in Spanish lookout area ; riparian forests, live barriers and retention ponds;

[8] Upper part of Belize watershed is formed by Macal Sub-watershed and Chiquibul sub-watershed; 89% of area forested

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includes Barton Creek and Laboring Creek sub-watersheds[85]		- 45% of watershed areas in agriculture; pesticide /pollution ; Sewage/pollution issues SL/San Ignacio and Belmopan; water extraction and diversion (Spanish Lookout and Santander farms)	Creek 38.32 on prioritization index ; roaring creek 41.18 PI; Spanish lookout area where 100% deforestation exists in some areas;	portion of the Central Belize Corridor that provides biological connectivity	Conservation efforts to ensure CBC connectivity
Lower Belize River (Belmopan to Caribbean Sea)[86]	Medium-High	Livestock, grains, sugar cane but less than in middle Belize watershed	Restoration riparian forests -CBS - to ensure CBC connectivity, prevent bank failure and erosion		**High** PI for conservation - 52.47 (M-H) and M-H for Intervention/restoration (40.26); Intervention around Crooked Tree; Central Biological Corridor areas

[85] 27% of the area is agriculture and 6% intensive agriculture dominated by grains, and livestock; tourism important around Xunantunich and San Ignacio; two urban areas Belmopan and SE/SI.

[86] Big Falls - large livestock and sugarcane operation; other areas mostly artisanal livestock - but see DiFore's estimates of riparian deforestation.

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